

Annual Report 2020-21



**Indian Institute of Information Technology
Allahabad**



Patron : Prof. P. Nagabhushan
Director, IIIT Allahabad

Advisory Board : Prof. Vijaishri Tewari, Registrar (Acting)
Prof. U.S. Tiwary, Dean (Special Developmental Affairs)
Prof. Tapobrata Lahiri, Dean (Academic & Research)
Prof. Shekhar Verma, Dean (Human Affairs)

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Contents

Sl.No.	Description	Page No.
01	Introduction	5
02	Charter & Mission	6
03	From the Director's Desk	7
04	The Chairman and Director's Profile	8
05	Director's Report 2020-21	11
06	Board of Governors (BoG)	16
07	Finance Committee, Building & Works Committee	17
08	Senate	18
09	Institute's Functionaries: Deans/Associate Deans/HoDs/Officers/Support Staff	20
10	Academic Programmes	24
11	Statistics	
	• Examination Results	27
	• Medals and Awards	29
	• Placement Data	31
	• Financial	33
12	Academic Departments	35
13	Faculty Profiles	47
14	Research and Projects	174
15	Scholarship/Fellowship/Assistantships	180
16	Memorandum of Understanding / Ranking	185
17	Infrastructure	187
18	Events	204
19	Gymkhana	209
20	Grievance Redressal Measures	218



INTRODUCTION



Introduction

Indian Institute of Information Technology Allahabad (IIITA) was established in 1999, as a center of excellence in Information Technology and allied areas. The institute was conferred the "Deemed University" status by Government of India in the year 2000.

The Institute has been conceived with the ambitious objectives of developing professional expertise and skilled manpower in Information Technology (IT) and related areas. As an apex nucleating institute in the area of IT, the establishment of IIITA, is a major step of Government of India towards strengthening the indigenous capability necessary for exploiting profitably and harnessing multi-dimensional facets of IT at all levels, and attaining expertise to enable the country to emerge as a leading player in the global arena.

The beautiful 100 acre campus, situated at Devghat, Jhalwa, designed meticulously on the Penrose Geometry pattern, is being further topped by fine landscaping to give an all round soothing effect to create a stimulating environment.

The campus is envisaged to be a fully residential one, with all its faculty, staff and students housed in different pockets. All academic and residential areas are connected to the Institute network.

Since the establishment, the institute evolved continuously and flourished under the abled leadership of the following Directors:

1. Prof. P. Nagabhushan, Director (Jun 2017 -)
2. Prof. G. C. Nandi, Director (Officiating) (July 2016 - May 2017)
3. Prof. Somenath Biswas, Director (May 2014 - July 2016)
4. Prof. G. C. Nandi, Director In-Charge (January 2014 - April 2014)
5. Dr. M. D. Tiwari, Director (August 1999 – December 2013)



Charter

To train and educate certificate, diploma, undergraduate and postgraduate levels, engineers of outstanding ability who may become leaders in the IT industry and profession.

To carry out advanced research and development in leading edge technology areas in Computer Hardware and Software which can be useful over comparatively on a long-term basis.

To develop and promote national and international linkages by way of adjunct faculty, partnership in research, student exchange, academic credit transfer and joint degrees.

To work for the creation and development of resource databases, associated software and courseware for all-important applications so as to ensure future availability of newer software technologies in English, Hindi and other Indian languages.

Mission

The mission of Indian Institute of Information Technology Allahabad (IIITA) is to be a unique and world class nucleating “Apex Centre of Excellence” in the area of Information Technology and Allied Sciences for enhancing India’s technological strength in Information Technology and for becoming a pace-setting institution for other similar institutes to be established in future.

IIITA shall seek to derive its strength from its linkage with sound Indian traditions of past centuries and also set out to create knowledge-based resources in regional languages of India.



From the Director's Desk



Indian Institute of Information Technology Allahabad is our sacred place of learning, where we learn and remain committed to lifelong learning with a focused objective that the outcome of learning is to accomplish notch class performance all through, and everyone who is associated thus should create a niche for him/herself. We stand to ensure **Quality in Excellence**. We pledge that there shall be '**Quality in the Show but certainly not Show in the Quality**'.

IIIT Allahabad aims to evolve an integrated ambiance of creative learning, researching for novelties, contributing to the growth of knowledge, mapping the knowledge into innovations, innovations in terms of innovative products, services and also in terms of re-engineering the education process itself, devising the newer tools and sophisticating the skills at higher level. The entire process of learning and researching should simply result in performing actions innovatively in and across the related faculties of Computer Science and Technology, Information Science and Technology, Electronics and Communication Technology, Applied Science and Technology, encompassing humanity. The faculty of Management Studies should add to the value of the glory that IIITA hopes to reach. Commensurate to this, IIITA should ensure to contribute in creating a strong second line for the World, for India and also to steer the institution locally; and in turn make the second line to commit itself to the responsibility creating a more powerful follow-up line to perpetuate lifelong learning, innovating and creating the future as infinite ripples.

In brief IIITA confirms that an **elite academic and research culture** shall prevail in the Institute.

Prof. P. Nagabhushan
Director, IIIT Allahabad

The Chairman and Director's Profile



Prof. P. Nagabhushan was born in Mysore (Karnataka), India. Prior to joining the IIIT Allahabad, he served as a Professor in Computer Science and Engineering Department at the University of Mysore. He had also held several administrative positions such as the Chief Nodal Officer, Choice Based Credit Pattern Continuous Assessment Education System; Director, Planning, Monitoring and Evaluation Board; Dean, Faculty of Science and Technology; Director, Centre for Information Science and Technology at University of Mysore. He has more than three and a half decades of teaching experience.

He was also distinguished Professor and Chairman at Amrita Vishwavidyapeetam, Amrita University, Coimbatore; Director, Bangalore Educational Society for Technology Advancement and Research and Principal, Bangalore Technological Institute, Bangalore. He is actively associated with various academic, statutory and professional bodies. He is the member of academic councils and Board of Studies of several universities. He has been serving as an active member in the Technical Advisory committee at the Indian Statistical Institute, Kolkata, School Board member of the Central University of Hyderabad and Academic council member of Islamic University of Science and Technology, Awantipora, Jammu & Kashmir. He is also a visiting Professor and acting as subject expert in many Universities and Institutes. There are various high profile committees of AICTE, UGC, DST, PSC, NBA, ISRO, DRDO, RECs (now NITs) where Prof. Nagabhushan was an active member. Prof. Nagabhushan has worked as an Investigator in several major funded projects.

He has also rendered his services in a number of foreign Institutions such as invited Professor at University of Dauphine, Paris, France; Visiting Professor, Tokyo Denki University, Japan; Exchange Professor, Saginaw Valley State University, USA; Visiting Scientist, INRIA, Rocquencourt, France; Invited Expert, Michigan State University, USA; Invited Expert for assessing programs of Computer Science and Technology, University of Medical Sciences and Technology, Sudan; Team member of Bilateral Indo-Russia Workshop, University of Moscow, Russia. He is Fellow of Institution of Electronics and Telecommunication Engineering (FIETE) and Fellow of Institution of Engineers (FIE). He is a Fellow of International Academy of Physical Sciences (FIAPS). He was offered the prestigious Visiting Professorship award of ISTE. He is also awarded ICCR 2008 Outstanding Academician and Researcher Award in appreciation of life time contribution to the field of Computer Science and Engineering; ICICOT 07 Outstanding Academician Award; IEEE– ICSIP– 06 Award in appreciation of life time contribution to the field of Signal and Image Processing. Recently he has been awarded:-



Lifetime Achievement Award-RTIP2R- 2016 for Outstanding Achievement, Global Leadership and Dedicated Service to the field of Image Processing and Pattern Recognition, Some of the journal papers were listed as the top papers of the respective years, Sponsored Project by ISRO on Dimensionality Reduction was regarded as the top project of the year, Highly Performing Alumina – Felicitation by Mahajana Educational Society's Mahajana Junior College, Mysore, National Merit Scholar throughout +2, graduate and post-graduate studies, Education Excellence Award by Dainik Jagran, Nov. 2019.

On the academic front, he has successfully guided 33 PhDs (5 more are ongoing), and has authored 537+ research papers (30% Journals, 30% International Conference Proceedings). More than 110 papers are highly acclaimed DBLP indexed). The citation index of 2799 with H-index of 28 and i10 index of 80 reflects his academic accomplishments.

Prof. P. Nagabhushan
Director, IIIT Allahabad, Prayagraj



DIRECTOR'S REPORT



Director's Report 2020-21

Respected, Honourable Chief Guest, Chairman of Narayana Hridayalaya, Padma Bhushan and Padmashree awardee, an accomplished Cardiologist of this era, Dr. Devishetty; Proud parents of the graduands; Well-wishers; Colleagues; Friends from the Press and Media; the young graduands; Brothers and Sisters.

Good Morning to all of you.

The Convocation of this institution is scheduled to be held on the Second Saturday of September. Accordingly today is a festive moment of the 16th Convocation. Because of COVID disruption, for the second year in the row, we are missing a get-together gathering over here, however the spirit is not dampened. Thank you all for your enthusiastic participation.

It is my privilege to recall the role played by our Chairman of the Board of Governors, Sri V. K. Modi. He is an industrialist of high repute, also an educationist with concern and a simple, sympathetic and an encouraging human being. He very recently has accepted the citizenship of a foreign nation. Therefore we miss him. We recognize his contribution in absentia now.

One request mail from our end, an immediate reply from that end, shows his concern and his greatness to value every happening around. This would just describe the love and affection he holds for every other person. He is our Chief Guest of the day Dr. Devishetty, a great Cardiologist of our time, an excellent human being, an epitome to the expression that the 'Busiest man finds time for everything, however small that could be'. Our institute welcomes Dr. Devishetty with all humility and we thank him for accepting our invitation to be the Chief Guest on this most important day of the institution.

We are very proud of our students and our colleagues, who devoted themselves and worked against all the odds of COVID disruption. The academic calendar of events has been maintained so perfectly, that there has not been an extension of the term even by a single day. This was possible because of progressive outlook that the institute adapted and inculcated, much ahead of the final recommendation made by the National Education Policy in 2020. The ethos of continuous learning and hence the continuous assessment taking place could realize the happening of the 'learning' process and therefore we are very proud to share that our students did not prepare themselves to complete the degrees but they learnt and thus they have reached the targets. We congratulate all our students who have made a big



difference to themselves involving themselves with 'learning' rather than 'preparing' for completing the examinations.

Today totally 465 are graduating and they are ready to soar into the sky. Of the total, 82 are ladies, who have distinguished themselves with the degrees.

While 144 receive B.Tech degree in Information Technology, 80 receive B.Tech-degree in Electronics & Communication Engineering. 125 graduate with a Master's degree in different specialization programs and 27 graduate with MBA. 65 are dual degree holders.

In spite of disruption, research studies did not take a setback. 24 are graduating today with Ph.D. degrees in Information Technology, Electronics & Communication, Applied Science and Management Studies. The total number of medals and merit certificate that decorate our achievers is 29 of which 11 are gold medalists.

Our on campus placement record is very impressive with an average of more than 85% inclusive all branches and all programs- Under graduate, Post graduate and dual degrees. Package on higher side is more than Rs. 50 Lakh per annum and the average is around Rs. 20 Lakh per annum.

Should getting placed with a job be an issue for our candidates? However our expectation would be that you, at least subsequently would take up such assignments where you could be contributing to the corpus of knowledge by becoming the knowledge creators, for which you are meant, and that is what Mother India hopes from you.

The progressive contribution made by our students, faculty, officers and staff have been responsible in enhancing the visibility of the Institution. IIIT Allahabad has made a respectful entry into the QS World Ranking, for the first time occupying a place in the 1000th rank band. This has implied that the institute has carved a position for itself in top 50 institutes (to be precise 25 to 40 band) from amongst India. It has registered its presence amongst the 'giant' institutions in India. The 'Education World' has put IIITA in top 30 institutions in India and the 'India Today' has ranked us at the Tenth position amongst all Government Engineering Institutions in India. These are accolades of which we shall be proud of, however we should not be complacent, because there are still greater commitments and greater echelons to be risen to.

During the COVID disruption period, the institution suffered its share of some set back. Yet that did not deter us. The institute has remained active with its research. A rapid diagnostic kit for the detection of Corona virus is designed. The kit is nanotechnology based. It is undergoing strict validation tests at KGMU Lucknow. The process takes less than 15 minutes to get the result and shall prove to be a very economical and an effective solution.



Also the autonomously propelled catalytic magnetic nanobots are designed for degradation of toxic industrial dyes in water bodies. This invention is useful for water treatment and this will not impose any secondary pollution within water bodies. Many COVID related research papers are contributed. Many research project proposals are submitted and are undertaken.

Despite COVID disruption our students have excelled in hackathons and other coding competitions. I feel happy to also share that Ms. Sneha Mishra received the prestigious ADOBE Women in Technology Fellowship 2021 and Ms. Kathar Sampada Manoj bagged Grace Hopper Celebration Fellowship 2021. We are proud of them.

The progress that we are proud of does not happen without somebody 'giving' his heart for the cause. The giving refers to volunteering, which involves giving of one's time, experience, knowledge and effort for the welfare of the society. It may be appropriate to quote Churchill in this context. "We make a living by what we get, but we make a life by what we give." Rockefeller's opinion also echoes the same -

"Think of giving not as a duty but as a privilege". So young friends - the young graduands, you should not look at what you get out of your degrees, but you should resolve to give your best to the world and the best will be given back to you. You will realize that what we give always lives, and goes a long way for a good cause.

This concept of 'giving a thought to giving' is inspired by my reading of an article in a Sunday Magazine section (August 1st, 2021) of the HINDU newspaper.

This attitude to give would get inculcated if our mind is creative and gets involved in learning, rather than merely getting prepared for an examination, for an interview, for a selection and so on. What today our National Education Policy 2020 has been trying to portray, has already been richly illustrated in our epic times. Even during the recent century, way back in 1954 Jiddu Krishnamurthy spoke these aspects with students. He shared, what today NEP also conveys. The following is reproduced from his 'Talks with students, Varanasi 1954' to enthuse our young graduates.

"The real purpose of education is to awaken that intelligence which will help students to face challenges of life. Education is not just passing examinations, but the whole implication of being educated".

Jiddu Krishnamurthy opines that the learners should focus on 'how to think' not on 'what to think'. In other words 'what to think' implies putting the efforts to prepare for a mechanical life whereas 'how to think' gears one to learn how to accept life. The one who accepts life can certainly give back to life.



Jiddu Krishnamurthy's voice could surely excite our young friends-

"The machinery of 'what to think' we call education and that education only makes you mechanical, dull, stupid, uncreative....

But if you know 'how to think' not What to think, then you would not be mechanical, traditional, but live human beings, you could be great revolutionaries... The revolution of knowing how to think rightly".

I am confident that our young graduands have received, such an education that they would understand that everyone of them is independent, that everyone follows the path of truth and every one shall be responsible in realizing the resolution of inculcating 'how to think' rightly.

It is our prayer and hope that our precious Globe will be safe in your noble and wise hands.

All the best and Thank you.

Prof. P. Nagabhushan
Director, IIIT Allahabad, Prayagraj



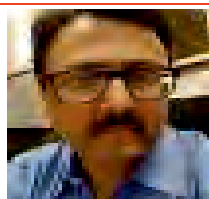
GOVERNANCE

GOVERNANCE

Board of Governors (BoG)



Prof. P. Nagabhushan
Chairman, BoG & Director, IIIT Allahabad



Shri Rakesh Ranjan
AS (TE), MoE



Dr. Jaideep Kumar Mishra
JS & Group Coordinator
(MoE) MeitY, New Delhi



Prof. Abhay Karandikar
Director, IIT Kanpur



Prof. Archana Shukla
Director, IIM Lucknow



**Padma Shri
Prof. Manindra Agrawal**
IIT Kanpur



Shri Rahul Singh
MD, GAPL



Dr. Anand Bulusu
DoECE, IIT Roorkee



Prof. Arvind Choubey
Director
IIIT Bhagalpur, Bihar



**Additional Chief
Secretary**
Dept. of IT & Electronics,
Govt. of U.P., Lucknow



Prof. Shekhar Verma
Dean (Human Affairs)
IIIT Allahabad



Prof. Tapobrata Lahiri
Dean (A&R)
IIIT Allahabad



Prof. Vijaishri Tewari
Registrar (Acting)
IIIT Allahabad



Finance Committee

Chairman	Prof. P. Nagabhushan Director, IIIT Allahabad
Member	Shri Prashant Agarwal Director (IITs/IIITs), MoE, New Delhi
Member	Shri Anil Kumar Director (Finance), MoE, New Delhi
Member	Dr. CA Phalguna Kumar CA & Managing Partner, M/s. E. Phalguna Kumar & Co. Tirupati, AP
Member	Shri Munish Malik Chief Executive Officer, NPS Trust, New Delhi
Secretary	Prof. Vijaishri Tewari Registrar (Acting), IIIT Allahabad

Building & Works Committee

Chairman	Prof. P. Nagabhushan Director, IIIT Allahabad
Member	Sri. Rajiv Garg Superintending Engineer, IIT Kanpur
Member	Prof. Vrijendra Singh Associate Dean (Planning, Monitoring & Evaluation)
Member	Sri. Anil Kumar Sharma Chief Engineer (Civil) CPWD (NZ-II), Lucknow
Member	Sri. Rajeev Kumar Singh Superintending Engineer, UPPCL, Civil Lines, Allahabad
Secretary	Prof. Prithish Kumar Varadwaj Associate Dean (Infrastructure, IWD, Estate)



Senate (As per IIITs Act, 2014)

Director of the Institute (Ex-officio)	• Prof. P. Nagabhushan Director, IIIT Allahabad
Deputy Director (Ex-officio)	• -
Deans (Ex-officio)	• Prof. Tapobrata Lahiri, Dean (A&R) • Prof. U. S. Tiwary, Dean (SDA) • Prof. Shekhar Verma, Dean (HA) • Prof. Anupam, Dean (AA)
Head of the Dept. of the Institute	• Prof. Pavan Chakraborty, HoD (IT) • Dr. Rajat Kumar Singh, HoD (ECE) • Dr. Ratan Kumar Saha, HoD (AS) • Dr. Shailendra Kumar, HoD (MS)
All Professors other than the Deans or HoDs	• Prof. G. C. Nandi • Prof. O. P. Vyas • Prof. Vijaishri Tewari • Prof. Neetesh Purohit • Prof. Madhvendra Misra • Prof. Vrijendra Singh • Prof. Manish Goswami • Prof. Pritish Kumar Varadwaj • Prof. Ranjit Singh
Three persons from amongst educationist of repute or persons from another field related to the activities of the Inst. Who are not in service of the Inst. Nominated by the BoG	• Prof. K. Sethupathi, IIT Madras • Prof. Shekhar Mazumdar, MNIT Bangalore • Prof. A. G. Ramkrishnan, IISc. Bangalore
Three persons who are not members of teaching staff co-opted by the Senate for their specialized knowledge	• Prof. Rajiv Tripathi, Director, MNNIT Allahabad • Dr. Sumit Ganguli, IIT Kanpur • Prof. K. Chindananda Gowda Ex-VC, Kuvempu University
Registrar of the Institute Ex-officio Secretary	• Prof. Vijaishri Tewari Registrar (Acting), IIIT Allahabad



INSTITUTE'S FUNCTIONARIES





Institute's Functionaries

Deans/HoDs

Prof. U. S. Tiwary , Dean (Special Development Affairs)
Prof. Tapobrata Lahiri , Dean (Academic & Research)
Prof. Anupam , Dean (Alumni Affairs)
Prof. Shekhar Verma , Dean (Human Affairs)
Prof. Pavan Chakraborty , HoD (IT)
Dr. Rajat Kumar Singh , HoD (ECE)
Dr. Ashutosh Mishra , HoD (AS)
Dr. Shailendra Kumar , HoD (MS)

Associate Deans/Chairperson/ Coordinator/Faculty In-Charge/CoW

Prof. Vijaishri Tewari , Registrar (Acting) & Chairman: Health Centre Advisory Committee
Prof. Madhvendra Misra , Associate Dean (MoUs National/International and Coordinating MoU based activities), and Grievance Officer
Prof. Vrijendra Singh , Associate Dean (Planning, Monitoring & Evaluation)
Prof. Manish Goswami , Associate Dean (AAA)
Prof. Neetesh Purohit , Associate Dean (RD) & Working Professional Scheme)
Prof. Prithish Kumar Varadwaj , Associate Dean (Infrastructure, IWD, Estate)
Dr. S. Venkatesan , Associate Dean (Networking, Computer Maintenance, HPC, Cloud services)
Dr. Manish Kumar , Associate Dean (Store & Purchase)
Dr. Pramod Kumar , Associate Dean (Health & Transportation)
Dr. Satish Singh , (Associate Dean Institute Ranking, GIAN like courses, Library, E-Library)
Dr. Shashi Kant Rai , Student Welfare Officer
Dr. K.P Singh , Chief Proctor
Dr. Sonali Agarwal , Chief Lady Warden & Lady Proctor
Dr. Sunil Yadav , Sports Coordinator
Dr. Sanjai Singh & Anurika Vaish , In-charge for Ministry of Education directed activities
Dr. Triloki Pant , Faculty In-charge (Campus Security & Outsourcing)



Prof. Krishna Mishra , Chairperson: Prevention of Harassment of Women at Workplace
Prof. Shekhar Verma , Faculty In-charge: PRC
Dr. Vijay Chaurasiya , Associate Dean (CoW & Students Affairs)
Dr. Sitangshu Bhattacharya , (Warden Boys Hostel-I)
Dr. Anand Kumar Tiwari , (Warden Boys Hostel-II)
Dr. Sintu Kumar Samanta , (Warden Boys Hostel-III)
Prof. Ranjit Singh , (Warden Boys Hostel-IV)
Dr. Sunny Sharma & Dr. Amresh Kumar Sahoo , (Warden Boys Hostel-V)
Dr. Pooja Mishra , (Girls Hostel-II)
Dr. Sangeeta Singh , (Warden Girls Hostel-I & Warden Girls Hostel-III)

Administrative Officers

Dr. Asheesh Kumaar , Joint Registrar (AAA)
Dr. Seema Shah , Joint Registrar (S&P)
Dr. Pavan Kumar Saini , Joint Registrar (Establishment)
Mr. O.P. Srivastava , Joint Registrar (PMEE)
Mr. Rajendra Kumar Jena , Deputy Registrar (Library)
Dr. Kanchan Kumar Tiwari , Assistant Registrar(SS)-(AAA)
Mr. Ranjeet Banerjee , Assistant Registrar (R&D)
Mr. Niranjan Kumar , Assistant Registrar (S&P)
Mr. Vivek Nagar , Assistant Registrar (F&A)
Mr. Jayant Biswas , Assistant Registrar (Audit)

Technical Officers

Dr. Mithilesh Kumar Mishra , Technical Officer (SS)
Mr. Ajay Kumar Tiwari , Technical Officer
Mr. Abhinaba Basu , Technical Officer

Support Staff

Sh. Mukesh Rawat , Superintendent
Sh. Rajeev Kr. Bhatia , Superintendent
Sh. Subhash Kumar , Superintendent (Hospitality)



Sh. Prashant Kumar Srivastava , Technical Superintendent
Sh. Yogesh Kardam , Technical Superintendent
Sh. Anil Bhadauria , Assistant Engineer
Sh. Gaj Raj Singh , Assistant Engineer
Sh. Akhilesh Kumar , Junior Engineer
Sh. Satya Prakash Sahu , Junior Engineer
Sh. Avinash Mishra , Junior Engineer
Sh. Sanjay Kumar , Junior Superintendent
Sh. Sunil Kashyap , Junior Superintendent
Sh. K. S. Aeron , Junior Superintendent
Ms. Ankita Jaiswal , Junior Superintendent
Sh. Rajendra Singh Bisht , Junior Superintendent
Sh. Sandeep Kumar Keserwani , Junior Superintendent
Mohd. Saleem Ansari , Junior Superintendent
Mrs. Asha Shukla , Junior Superintendent
Ms. Jagriti Bajaj , Junior Superintendent
Mrs. Archita Rai , Junior Superintendent
Sh. Neeraj Srivastava , Junior Superintendent
Sh. Kapil Srivastava , Junior Superintendent
Sh. Abhishek Pandey , Junior Superintendent
Sh. Sarvesh Kr. Mishra , Junior Superintendent (Library)
Sh. Atul Tripathi , Junior Superintendent (Library)
Sh. Durgesh Kumar , Junior Technical Superintendent
Sh. Santosh , Junior Technical Superintendent
Sh. Shailendra Singh , Junior Technical Superintendent
Sh. Kaushal Kr. Singh , Junior Technical Superintendent
Sh. Ashutosh Shukla , Junior Technical Superintendent
Sh. Rajit Ram Yadav , Junior Technical Superintendent
Sh. Himanshu Pandey , Junior Technical Superintendent
Sh. Santosh Kr. Mishra , Junior Technical Superintendent
Sh. Pankaj Srivastava , Junior Technical Superintendent



Sh. Girish Kr. Dixit , Junior Technical Superintendent
Sh. Pramod Narayan Tripathi , Junior Technical Superintendent
Sh. Upendra Kashniyal , Junior Technical Superintendent
Sh. Santosh Kr. Yadav , Junior Technical Superintendent
Dr. (Mrs.) Pallavi Dixit , Junior Technical Superintendent
Mrs. Priya Pal , Staff Nurse
Mrs. Blessy Anie Shaiju , Staff Nurse
Sh. Vinod Narayan Tripathi , Pharmacist
Mohd. Izhar , Pharmacist
Mrs. Pratibha Verma , Senior Technician
Sh. Pankaj Mishra , Senior Assistant
Sh. Sumit Kr. Shukla , Senior Assistant
Sh. D. N. Shukla , Senior Assistant
Sh. Manish Khare , Senior Assistant
Sh. Manoj Kumar Upadhyay , Senior Assistant
Sh. Deep Narayan Das , Senior Assistant
Sh. Abhishek Kumar , Senior Assistant
Mrs. Prabha Verma , Senior Assistant
Mrs. Ritu Srivastava , Junior Assistant
Sh. Jay Singh , Junior Assistant
Sh. Vaibhav , Junior Assistant
Sh. Raj Kumar Rawat , Driver
Sh. Satish Kumar , Driver

Medical Officers

Dr. Rajendra Dayal , Medical Officer
Dr. Kaushlesh Dwivedi , Medical Officer
Dr. Ashok Kumar Singh , Medical Officer
Dr. K.S. Pandey , Medical Officer



Academic Programmes

Sl. No.	Name of Programme	2020	
		Approved Intake Including DASA/NRI/SN/SAARC	Actual Intake
1	B. Tech (IT)	267+5*	264+5*
2	B. Tech (ECE)	132+5*	132+2*
3	B. Tech (IT-Business Informatics)	40+5*	40+5*
4	M. Tech – BI	M.Tech. BI Approved Intake: 20	17
	M. Tech - BI Integrated PhD		
	M. Tech. – IS	M.Tech. IT Approved Intake: 125	124
	M. Tech. - IS Integrated PhD		
	M. Tech - SE		
	M. Tech - SE Integrated PhD		
	M. Tech - HCI		
	M. Tech - HCI Integrated PhD		
	M. Tech - RO		
	M. Tech - WCE Integrated PhD		
	M. Tech - CLIS		
	M. Tech - CLIS Integrated PhD		
5	M. Tech - MI	M.Tech (ECE) Approved Intake: 30	26
	M. Tech - MI Integrated PhD		
6	MBA (IT)/MBA	95	48
	MBA (IT) Integrated PhD	NA	NA
7	5 Years Integrated M. Tech (Biomedical Engineering)	NA	NA
8	5 Year Dual degree Btech(IT) & M.Tech(IT) Spl. (Software Engineering)	NA	NA
9	5 Year Dual degree Btech(IT) & M.Tech(IT) Spl. (Wireless Communication Engineering)	NA	NA
10	5 Year Dual degree Btech(IT) & M.Tech(IT) Spl. (Intelligent Systems)	NA	NA



11	5 Year Dual degree Btech(IT) & M.Tech(IT) Spl. (Robotics)	NA	NA
12	5 Year Dual degree Btech(IT) & M.Tech(IT) Spl. (Human Computer Interaction)	NA	NA
13	5 Year Dual degree Btech(IT) & M.Tech(IT) Spl. (Bio Informatics)	NA	NA
14	5 Year Dual degree Btech(ECE) & M.Tech(EE) Spl. (Micro Electronics)	NA	NA
15	5 Year Dual degree Btech(IT) & M.Tech(IT) Spl. Cyber Law & Information Security)	NA	NA
16	5 Year Dual degree Btech(ECE) & MBA(IT)	NA	NA
17	5 Year Dual degree Btech(IT) & MBA(IT)	NA	NA

*Admission under DASA/NRI/SAARC Category.

** Data are exclusive of Ph.D intake.



STATISTICS



Examination Results

Under Graduate

Academic Session	Name of Courses	No. of Students Passed				
		Boys		Girls		Total
		With Honors	Without Honors	With Honors	Without Honors	
July 2017-June 2021	B.Tech. (IT)	51	78	09	05	143
Previous Years	B.Tech. (IT)	00	01	00	00	01
July 2017-June 2021	B.Tech. (ECE)	26	43	05	04	78
Previous Years	B.Tech. (ECE)	00	02	00	00	02
TOTAL		77	124	14	9	224

Post Graduate

Academic Session	Name of Courses	No. of Students Passed				
		Boys		Girls		Total
		With Distinction	Without Distinction	With Distinction	Without Distinction	
July 2019 - June 2021	M.Tech. (IT)	14	23	11	01	49
	M.Tech. (IT) (spl. CLIS)	05	09	01	01	16
	M.Tech. (IT) (spl. MLIS)	15	00	01	01	17
	M.Tech. (IT) (spl. SE)	11	04	01	01	17
July 2019 - June 2021	M.Tech. (ECE)	00	02	00	03	05
July 2019 - June 2021	M.Tech. (ECE) (Spl. Micro-electronics)	04	05	05	02	16
July 2019 - June 2021	M.Tech.(AS) (spl. BI)	01	02	02	00	05
July 2019 - June 2021	MBA	07	07	08	05	27
TOTAL		57	52	29	14	152



Dual Degree

Academic Session	Name of Courses	No. of Students Passed			
		Specialisation	Boys(s)	Girl(s)	Total
July 2016 - June 2021	Dual Degree BTech and MTech	BI	5	1	6
		CLIS	6	1	7
		HCI	4	2	6
		IS	6	1	7
		RO	7	0	7
		SE	7	0	7
		WCE	7	0	7
		MI	3	1	4
		BME	2	0	2
July 2016 - June 2021	Dual Degree BTech and MBA	ITM	4	2	6
		ECM	1	0	1
		DD TOTAL	52	08	60
Previous Years	Dual Degree M.Tech. (IT) and Ph.D.	BI	1	0	1
		CLIS	4	0	4
September 2021	Ph.D.		16	08	24
PG TOTAL					152
UG TOTAL				+	224
GRAND TOTAL					465



Medals and Awards

Chairman's Gold Medal for the Year 2021



Sahil Goyal
(IEC2017086)

B. Tech. (IT)

Students recommended for Award of Institute Medals Academic Batch
July 2017 – June 2021



Gold

Druv Agarwal
(IIT2017131)



Silver

Aayush Chaudhry
(IIT2017135)



Bronze

Rahul Birendra Jha
(IIT2017100)

B. Tech. (ECE)

Students recommended for Award of Institute Medals
Academic Batch July 2017 – June 2021



Gold

Sahil Goyal (IEC2017086)



Silver

Abdul Ahad Siddiqui
(IEC2017023)



Bronze

Shivansh Srivastava
(IEC2017054)

M. Tech. (IT)

Students recommended for Award of Institute Medals
Academic Batch July 2019 – June 2021



Gold

Mohammed Afzal Ansari
(MIT2019072)



Silver

Bhisikar Siddhant Sanjyot
(MIT2019074)



Bronze

Mitali Singh
(MIT2019045)



M. Tech. (ECE)

Students recommended for Award of Institute Medals Academic Batch July 2019 – June 2021

		
Gold	Silver	Bronze
Akriti Srivastava (MEC2019012)	Swarnika Shruti (MEC2019007)	Pratibha Singh (MEC2019008)

MBA

Students recommended for Award of Institute Medals Academic Batch July 2019 – June 2021

		
Gold	Silver	Bronze
Himanshi Khandelwal (IMB2019032)	Shivanshu Kulshrestha (IMB2019001)	Tina Munjal (IMB2019002)

5 Years Dual Degree B. Tech. – M. Tech.

Students recommended for Award of Institute Medals Academic Batch July 2016 – June 2021

		
Gold	Silver	Bronze
Anupam Prakash (IHM2016002)	Yalakuchi Sandeep Kumar (IRM2016502)	Prakhar Chaturvedi (IHM2016001)



Placement Data-Campus Recruitment in 2020 -2021

B. Tech. & Integrated

S. No.	Company name	No. of Students	S. No.	Company name	No. of Students	S. No.	Company name	No. of Students
1.	T-Systems	2	29	Mediatek	1	57	Paytm	5
2.	Expedia Group	5	30	Quantiphi	4	58	Delhivery	4
3.	Cure.fit	2	31	Udaan	3	59	Airtel Wynk	2
4.	Amazon	9	32	Gojek	1	60	Zopsmart	6
5.	Optum	1	33	Linkedin	2	61	Chalo	3
6.	Walmart Labs	6	34	Innovacer	2	62	MAQ	3
7.	PayU	1	35	Trifacta	2	63	Swiggy	3
8.	Arcesium	1	36	Cisco	6	64	Logic Fruit	2
9.	Cisco	5	37	MCQdb	1	65	Oyo	2
10.	Headout	2	38	Sabre	1	66	ABB	6
11.	Sprinklr	4	39	Flipkart	2	67	Wipro	1
12.	Qualcomm	1	40	Zomato	5	68	Docquity	2
13.	GEP Solutions	1	41	Oracle	9	69	ICICI Bank	2
14.	Intuit	1	42	Samsung Semiconductor	1	70	TCS	5
15.	UBS	2	43	Walmart Labs	2	71	Nykaa	1
16.	Goldman Sachs	4	44	D-Bank	5	72	Publicis Sapient	2
17.	Adobe	2	45	Urban Company	6	73	Deloitte	2
18.	Clumio	1	46	JIO	4	74	Snapdeal	1
19.	SAP Labs	1	47	Rupeek	2	75	Carnation	1
20.	Tekion	5	48	Citi Bank	3	76	Zeta	2
21.	Axtria	1	49	PayU	2	77	Vyom Labs	2
22.	Flipkart	1	50	Google	2			
23.	SAP labs	4	51	Airtel XLabs	4			
24.	Atlassian	5	52	Airtel Payments Bank	3			
25.	Qualcomm	2	53	ZS	1			



26.	Acko	4	54	Splash Learn	1			
27.	AppDynamics	3	55	Publicis Sapient	3			
28.	Hevo Data	1	56	Mindtickle	1			

M. Tech.

Sl. No.	Company Name	No. of Students	Sl. No.	Company Name	No. of Students
1.	Qualcomm	5	18.	Oracle	5
2.	Goldman Sachs	1	19.	Amazon	4
3.	SAP labs	2	20.	Walmart Labs	1
4.	Cisco	4	21.	Anand Rathi	1
5.	Payu	1	22.	Axtria	6
6.	ZS	1	23.	Paytm	3
7.	Mediatek	1	24.	Zopsmart	1
8.	Quantiphi	3	25.	MAQ Software	1
9.	Sony	10	26.	TCS Innovator	9
10.	TCS Digital / Intel	1	27.	HashedIN	3
11.	indiamart	3	28.	Intel	10
12.	micron	1	29.	vyom labs	2
13.	Infosys	1	30.	carnation	7
14.	Dealshare	1	31.	fifty five	1
15.	Prinstine Care	4	32.	X-epic	2
16.	IMS Gaziabad	2	33.	Synopsys	2
17.	Micron Technology	1	34.	Singularity Dynamics	2



Financial Statistics for the year 2020-21

CAPITAL (OH: 35):-

The **MoE, GoI** sanctioned and released Grant-in-aid Creation of Capital Assets (OH: 35) of **Rs. 714.00 Lakh only** during the **Financial year 2020-21** to IIIT Allahabad. Provisional expenditure is **Rs. 871.76 Lakh only**.

Salary (OH: 36):-

The **MoE, GoI** sanctioned and released Grant-in-aid Salary (OH: 36) of **Rs. 2605.00 Lakh only** during the **Financial year 2020-21** to IIIT Allahabad. Provisional expenditure is **Rs. 2493.05 Lakh only**.

General (OH: 31):-

The **MoE, GoI** sanctioned and released Grant-in-aid General (OH: 31) of **Rs. 2404.00 Lakh only** during the **Financial year 2020-21** to IIIT Allahabad. Provisional expenditure is **Rs. 3298.28 Lakh only**. Excess expenditure was met out from internal resources of IIIT Allahabad

An aerial photograph of a university campus. On the left, a large, light-colored building with multiple windows is visible. To its right is a green lawn with some trees and a small orange flag. A wide, paved walkway runs diagonally across the lower half of the image, with several people walking on it. To the right of the walkway is another green field with some trees and a small white flag. In the background, there are more buildings and a clear blue sky.

ACADEMIC DEPARTMENTS



Department of Information Technology (<https://it.iiita.ac.in>)

About the Department

The Department of Information Technology is a vibrant department that witnesses a large pool of students at the under-graduation, post-graduation and doctoral levels. The department's activity includes providing quality teaching and research to these young and sharp minds, with a lot of emphasis on undertaking innovative projects. The department also stands tall towards undertaking quality research by timely creating new laboratories and expanding the existing ones. The last year saw an effective teaching and research attributed to the strategic and timely decisions of the department. The creation of a pool of electives, upgradation of laboratory facilities have resulted in enhanced research and making strategic partnerships have enhanced the department profile.

The department has also been very active in getting projects from external agencies which has continued throughout the year. The department hosts several activities to benefit the community, ranging from faculty development programs, international conferences to internship programs. The students have been placed in all leading IT companies, who continue to reserve earliest slots for recruitment from our campus.

Teaching, Research and Development

The department opened a new Centre of Excellence entitled Centre of Intelligent Robotics under the chairmanship of Prof. G.C. Nandi. The center has already established several strategic collaborations to make it grow effectively. The center is also given an able support to expand its research infrastructure. The Centre of Cognitive Computing under the chairmanship of Prof. U. S. Tiwary has expanded rapidly since its creation with improved research facilities and research projects.

Dr. Sonali Agarwal and Dr. Triloki Pant along with other international collaborators have succeeded in getting the international grant for the consortium project "Teal2.0 Erasmus+ Capacity Building in Higher Education". Dr. Bibhas Ghoshal and Dr. Jagpreet Singh got the research grant from Ministry of Electronics and Information Technology (MeitY) for the consortium project titled "Research Constrained AI". Dr. Vrijendra Singh has successfully completed a research project from RESPOND, ISRO, Govt. of India titled "Speaking Geo-GP Assistant", an android app that helps the policy makers to optimally plan the Gram Panchayat based on Geo-data received from the ISRO satellites with voice support in



multiple local languages. Prof. Shirshu Varma and Dr. Vrijendra Singh have successfully completed first phase of the Classified Signal Project for Govt. of India.

The department received a pleasant feedback about the conduct of the B. Tech. (IT) with specialization in Business Informatics program with the first batch of students admitted. The students of the program shall now start getting a richer flavor of the specialization specific courses, which is a matter of great excitement.

The department continues to support all existing laboratories by enhancing their research infrastructure. The department purchased numerous research-intensive systems to support research. The department has also been more active than ever towards the conduct of an internship program.

The department has been organizing numerous conferences, workshops and faculty development programs and the numbers are ever increasing, which showcases a very active fraternity. Prof. G C Nandi, Prof. ShirshuVarma, Dr. Vrijendra Singh, Dr. Manish Kumar, Dr. Satish Kumar Singh, Dr. Rahul Kala, Dr. Triloki Pant etc. who have successfully conducted self-financed courses. Each of these courses received a high participation.

Academic Re-structuring

The calendar year came after a successful implementation of the new CCLCAA ordinance that has been planned, initiated and implemented under the leadership of the current HOD-IT. During COVID-19 Pandemic, the new ordinance has given strong support in continuation of the academic activities without any hurdle and maintaining the academic calendar strictly. During Pandemic, the classes, laboratories and assessments are being held online.

The department also made strategic steps towards upgradation of the quality of masters theses at the post-graduation level, which is important since it is the first batch of post-graduate students under the new ordinance. The steps included giving a fair weightage of marks to the publication of a paper and encouraging students to submit or at least, draft papers ready for submissions before the schedule of the final theses defence. This will increase the research outputs as well as the total number of peer reviewed publications of the department.

The Head of the department also constituted a high level committee to propose a new specialisation on Data Analytics/Engineering in M. Tech. Programme, which is highly demanded by the students, the industries and the research organisations.



The department is also closely working towards means to recruit more PhD scholars, despite the limited Government funding. The department realises the importance of having a good pool of research scholars to showcase the brand value and increase the research output and is towards making strategic steps for sorting out the problem of the limitation of sanctioned seats.

Concluding Remarks

The department of Information Technology is continuously striving to provide the highest quality of teaching and research by facilitating the faculty members associated with the department. The department is rigorously improving the quality of teaching and research by continuous feedback from the faculty and students and making strategies for operating amidst the existent constraints. The department has made a big progress all around in the areas of teaching, learning, research and development and outreach activities etc. that is clearly visible by the placement statistics of the students and further by the plethora of achievements of the students and faculty.

Prof. Pavan Chakraborty
HoD-IT

Department of Electronics and Communication Engineering (<https://ece.iitit.ac.in>)

About the Department

The department of Electronics and Communication Engineering at Indian Institute of Information Technology, Allahabad was established in 2006 with a vision towards interdisciplinary research with other departments of the Institute. The undergraduate and postgraduate students of ECE students get good exposure in the state of the art technologies with the latest tools and technology design kits. The department offers B.Tech.(ECE), MTech.(ECE), M.Tech.(ECE) with Microelectronics/Communication Engineering specialization, and PhD programs as well. The department provides healthy environment to the Students and Faculties to carry out their collaborative research in the specializations of Microelectronics, VLSI Design, Signal Processing, Microwave Engineering, Wireless Communication, Photonics, Instrumentation & Control, etc.

Faculty Recruitment

The department is actively involved to attract quality faculties, and for this, selections through rolling advertisement have already been done by the department. This process is still going on to improve the teachers/students ratio. We have recruited a large number of faculties in last few selection processes.



Administrative and Academic initiatives

In addition to the regular entry at PhD level, the department of ECE has encouraged taking PhD students under Vishvesvaraya PhD scheme also for availing external funding and expanding the strength of research scholar. The department has organized workshops in VLSI design, Thin film Transistor, PCB Design, Wireless Communication, 5G and IOT to increase the awareness and to add more manpower in the related areas.

The department of ECE has collaborated with United Microelectronics Corporation (UMC), High Performance Microelectronics (IHP) and Semiconductor Laboratory (SCL) for receiving support for chip fabrication. The department has encouraged the students to participate in the design contests and national conferences to improve the quality of the UG/PG projects.

The training and placement cell has actively participated in overall placement activities, and through Industry-Institute partnership, 100% of the registered students have been placed in national and multinational companies. A team of faculty members are continuously improving the website with all updates of course curriculum, research areas, publication, projects etc. The lab staffs have been recruited to support the proper functioning of the laboratory. Some of the UG and PG courses have been streamlined based on the need of R&D and applications in industries. The placements have been improved with the academic initiatives through UG project and skill development courses. Experts from academic and industry have been invited in workshop and to teach courses to the students to bridge the gap between Industry and Academia. The departmental undergraduate committee (DUGC) and departmental postgraduate committee (DPGC) have addressed the issues of UG and PG students. CCLCAA Scheme has been incorporated in the curriculum structure from the entry batch of 2018 for UG and PG both.

Research Development

The faculty members of the department have published over 32 Journal papers and 9 Conference papers in reputed peer reviewed International/National Journals and Conferences during 2020-21. Currently, 36 PhD and 44 M.Tech. students are working in the department of ECE. The breadth of the research area in ECE department is expanded with the help of the initiatives of Faculty members. The prototypes of several products such as heart rate sensor, object tracking system and drug delivery system have been developed.

Training and Placements

The students of B.Tech.(ECE) and M.Tech.(ECE) had registered for the campus placements which were opened in July-August 2020. The departmental placement coordinator and



institute's TPO along with student placement team interacted with various companies and their HR teams. Companies were invited from July-2020 onwards to fill up online "Job Notifications Forms" which is opened to students registered for placements from early August. Pre-placement talks by companies provided an avenue for interaction and familiarization of students with recruiting organizations and their work profile as a run up to formal placements. The recruiters appreciated the knowledge and training of our students. A majority of our recruiters held their faith in our students' abilities and came to recruit in large numbers. The placement activities during the academic year 2020-21 for B.Tech./M.Tech.(ECE) students were conducted and 75% placement has been attained with highest CTC of 51 Lac/annum and average CTC of 20 Lac/annum for UG, whereas 31% placement has been attained with highest CTC of 31 Lac/annum and average CTC of 17 Lac/annum for PG. Few of the recruiters who allowed ECE students to appear in the final round are:

S.No.	Company	S.No.	Company	S.No.	Company
1.	Jio	23	Mathworks	45	PayTM
2.	Publicis Sapient	24	SAP Labs	46	UnDosTres
3.	Mediatek	25	Cisco	47	Hevo Data
4.	Quantiphi	26	Sabre	48	Clumio
5.	Chalo	27	Oracle	49	Zomato
6.	Anand Rathi	28	Commvault	50	Axtria
7.	Citi Bank	29	Walmart	51	Codenation
8.	Zopsmart	30	D-Bank	52	MCQdb
9.	Qualcomm	31	Urban Company	53	Airtel XLabs
10.	Trifacta	32	Rupeek	54	Airtel Payments Bank
11.	Postman	33	PayU	55	Airtel Wynk
12.	Accenture	34	ZS	56	Eigenlytics
13.	Goldman Sachs	35	Mindtickler	57	Flipkart
14.	Atlassian	36	UBS	58	RBS
15.	Tekion	37	Siemens Healthineers	59	Acko
16.	AppDynamics	38	Delhivery	60	Udaan
17.	SplashLearn	39	Mathworks	61	Gameskraft
18.	Lynk Logistics	40	Optiver	62	Expedia
19.	Adobe	41	Headout	63	Amazon
20.	Gojek	42	Qualcomm	64	Logicfruit
21.	ABB	43	ICICI Bank	65	Deloitte
22.	Wipro	44	TCS	66	Carnation



Concluding Remarks:

The department has provided a healthy environment to the students, staff and faculty members for quality education and research. Under the leadership of Director, IIIT-A, the department has attained significant improvement in curriculum, research, administration and student's placement. Collaboration with other pioneer institute and industry was also initiated. For creative learning environment, minor/major and tutorial enabled academic credit system has been initiated by the department. Under the digital India programme, the department has initiated certain steps in terms of prototype development, controlled facility for autonomous operation and academic assessment.

Dr. Rajat Kumar Singh

HoD-ECE

Department of Applied Science (<https://as.iiita.ac.in>)

About the Department

Department of Applied Sciences (DAS) is an integral component of IIIT-Allahabad's academic ecosystem. The DAS contributes two master programs, VIZ., Bioinformatics (BI) and Biomedical Engineering (BME). It also offers PhD programs in the above-mentioned areas as well as in Computational Biology, Mathematics & Statistics and Physics. The DAS also contributes to various core courses running in other Departments. Further, to cater the current focus of the Government of India and its funding agencies on innovations in Bioinformatics, Data sciences, Telemedicine, Tele-health and ancillary areas, DAS is doing various multidisciplinary research works in the above mentioned areas. With multiple funded projects, consultancy and industry backed project; DAS is currently developing high performance computational biology facilities to establish itself as an apex unit at IIIT-Allahabad.

Administrative and Academic initiatives

DAS offers postgraduate (MTech) and doctoral (PhD) programs. The department intends to contribute to the society through these highly qualified students, who aim to specialize in frontier areas of research and development. DAS is involved in several collaborative and interdisciplinary work.



Currently Department of Applied Sciences doing research works in following areas

- Spintronic and Magnetic Materials
- Device fabrications (Diode/MOSFET/OFET)
- Photonic Crystals and Meta Materials
- Structural Biology
- BioMEMS and nanotechnology
- Bio-Nanotechnology
- Signal processing
- Photoacoustic imaging and tomography
- Data Science and its applications
- Commutative Algebra
- Topological Graph theory
- Number theory
- Functional Analysis
- Survival Analysis
- Algorithms & Tools Department
- Systems Modeling & Simulation
- Genomic Big Data Analytics
- Mathematical & Computational Physics
- Gravitational waves & Astronomy

Student strength in different programs:

- 1) M .Tech: 42
- 2) PhD: 40
- Total: 82

Departmental publications in journals (2020-2021): 70

Departmental projects (External Funded by DST, MeITY, DBT, etc):

- *Dr. Ratan Kumar Saha has obtained an externally funded (ICMR) project. Total Sanctioned amount is INR 20,00,000.*
- *Dr. Amaresh Kumar sahu has obtained a DBT project. The sanctioned amount is INR 14,22,000.*



- Dr Srijit Bhattacharjee has received a grant from SERB-DST to conduct an Internship program under the aegis of the Vritika scheme. The sanctioned amount is INR 50,000.

Books and book chapters published: 18

Research papers published in the conference proceedings (as a full paper): 12

Training program organized: 12

Patents filed: 6

Departmental patent/IPR Initiatives: 06

Dr. Ratan Kumar Saha
HoD-AS

Department of Management Studies (<https://mba.iiita.ac.in>)

General Information

The sudden outbreak of Covid-19 shook the entire world as a result of which the education system across the world was challenged and this forced us also to shift to an online mode of teaching.

All the teaching-learning and various other administrative processes like admission, examinations, assessments etc were performed online. There was a shift of normal classrooms into e-classrooms, thus we also shifted our entire pedagogical approach to tackle new conditions and adapt to the changing situations.

Students were admitted in online mode to the two-year MBA degree program, full time PhD program, MBA and PhD (for Working Professionals)

The professionals from reputed organizations like DRDO, CSIR, SBI, Airtel, Indian Air Force, Indian Army, Apollo Hospital along with Government officials were admitted to the MBA (working professionals) and PhD (Working Professionals) program.

In line with the NEP, IIITA has adopted the new Institute “Choice and credit Linked Continuous Assessment and Award” (CCLCAA) ordinance three years before which is an articulation of the Institute’s commitment towards the need of a “continuous assessment”. The Department of Management Studies has taken several initiatives to align its courses to the new assessment



system and well suited as per the Industry Requirement. All the courses including electives have been redesigned in the LTP format to ensure tutorial/practical aspects are embedded in every course. The first batch of MBA under the new ordinance has been graduated in June 2021.

Extra-Curricular Activities

- 1) Various guest lectures of eminent speakers from Industry/academics for the student of MBA were organized.
- 2) Prof. Madhvendra Misra as Resource Person- Invited Keynote address and session chair in “9th IEEE International Conference on System Modelling & Advancements in Research (SMART-2020)” being organized by Faculty of Engineering & Computing Sciences (FOECS), Teerthanker Mahaveer University (TMU) Moradabad, UP, India on 4-5 December 2020
- 3) Prof. Madhvendra Misra as Resource Person- Invited Lecture on “General contours of e-learning paradigm and way to augment as the same as effective pedagogical intervention.” 19th January 2020 at Department of Economics University of Allahabad
- 4) 3rd Workshop on Behavioral finance topic Investment Psychology. Delivered talk by Prof. Vijaishri Tewari, from 15-19 Sep 2020
- 5) DST Sponsored Training programme (FDP) For Making Self Sufficient Entrepreneurs & Innovators. Delivered talk by Prof. Vijaishri Tewari on 18/02/2021, from 12-23 Feb 2021

Academic Activities

- 1) A Project on HRM based Assignment, Role: PI, funded by: Prateek Realtors India Pvt. Limited, from: 20 Nov 2020 to 20 Apr 2021 by Prof. Vijaishri Tewari
- 2) HR Consultant, Role: PI, funded by: Ambalika Construction Limited, from: 16 Dec 2020 to 17 Dec 2021 by Prof. Vijaishri Tewari
- 3) “Colloquium on Information Flux and Its Impact on Societal Resilience: A Cause of Conflict or Concord”. Technically co-sponsored by IEEE CIS UP section Details - Held at IIIT-Allahabad, August 22-23, 2020, was organized by Dr. Anurika Vaish.
- 4) DST Project On “Training Program on Entrepreneurship”, By Dr. Pragya Singh.
- 5) AICTE ATAL Sponsored FDP on Emotional Intelligence in Online Mode at IIIT-Allahabad, from 13-17 September 2020 was conducted by Dr. Pragya Singh.



- 6) DST Sponsored Training Programmes “FDP on Making Self Sufficient Entrepreneurs and Innovators” For Two Weeks in Online Mode at IIIT Allahabad from 12-23 Feb 2021 & 01-12 Mar 2021, coordinated by Dr. Pragya Singh.
- 7) A 3-day Workshop on the topic **“Crafting Research”** on 17th -19th December 2020 at Department of Management Studies, Indian Institute of Information Technology (IIIT-A) Allahabad was Organized and Conducted by Dr. Shailendra Kumar
- 8) Social Awareness for COVID-19 through AI based mobile app., funded by: DST GOVT.OF INDIA, from: 15 Feb 2021 to 31 Mar 2022 was organized by Dr. Shashikant Rai as the PI.
- 9) Project on Assessment and Measurement of Academic Stress among the Student of IIIT Allahabad: An empirical study, funded by: IIIT-ALLAHABAD, from: 18 Feb 2021 to 19 Feb 2024 by Dr. Shashikant Rai as the PI.
- 10) Workshop on Entrepreneurship Development organized at Department of Management Studies, IIITA from 07-11 December 2020 coordinated By Prof. Ranjeet Singh and Prof. Madhvendra Misra and Prof. Vijaishri Tewari.
- 11) Workshop on Innovation Management and Entrepreneurship Development organized at Department of Management Studies, IIITA from 20-24 July 2020 coordinated By Prof. Ranjeet Singh and Prof. Vijaishri Tewari.
- 12) 3rd Summer School on Behavioural Finance organized was held at DoMS, IIITA from 15-19 June 2020 coordinated by Prof. Ranjit Singh & Dr. Shashikant Rai.
- 13) IITA-SSUN, New Delhi jointly organized a seminar for celebrating “aatmnanirbhar bharat abhiyaan saptah” (25th Sept – 2nd Oct 2020)” on *October 01, 2020*, Thursday for brainstorming on the topic "The perspective of NEP2020 in Creating *Aatma-Nirbhar Bharat*". organized and coordinated by Dr. Vineet Tiwari.
- 14) Dr. Vineet Tiwari and Dr. Sudipta Das Organized a Self-Financed Course-cum Workshop on “Supply Chain and Logistics - Modeling and Analysis” during January 22-23, 2021, in Online Mode at IIIT Allahabad.
- 15) Prof. Madhvendra Misra and Prof. Vijaishri Tewari as Co-Ordinator and Resource Person- Invited Lecture in “5 Days FDP & Workshop on Creative Problem Solving & Critical Thinking” being organized by Department of Management Studies, Indian Institute of Information Technology, Allahabad, UP, India on 18-23 September 2020
- 16) Conducted self-financed short-term course titled: Online workshop on 'Women Equality Sensitization'. Duration 10-11 July 2020 by Prof. Vijaishri Tewari



Lab Development

- 1) Creation of Centre for Entrepreneurial Skill and Capacity Induction (CESCI) at IIIT Allahabad. The proposal is part of the Aatmnirbhar Bharat scheme of Government of India to bring a certain skill development program. The Neeti Aayog of the Government of India is also providing funding for these skill courses/practices. A committee has been constituted which will take care of this center. Dean (IPR) also suggested that a business model may also be adopted to earn some corpus. The centre should be run under the Bylaws of Centres which is already available, from 02 Jan 2021 to 02 Jan 2023
- 2) Business simulation and decision-making lab (BSDML) has been sanctioned and is currently under development (Department of Management Studies, IIIT Allahabad) by Dr. Saurabh Mishra.
- 3) A new Lab on "Supply Chain and Sustainability Research Lab" has been sanctioned and is under development (Department of Management Studies, IIIT Allahabad) by Dr. Vineet Tiwari.

Dr. Shailendra Kumar
HoD-MS



FACULTY PROFILE



Prof. G. C. Nandi

Department: Information Technology

Designation: Senior most Professor (HAG) of the institute

Experience (Teaching/Research): 34 years, **Industry:** 1 year

Research papers published in journals:

- Aswal, D., Shukla, P. & Nandi, G.C. Designing effective power law-based loss function for faster and better bounding box regression. *Machine Vision and Applications* 32, 87 (2021). <https://doi.org/10.1007/s00138-021-01206-5>
- Shukla, P., Kumar, H. & Nandi, G.C. Robotic grasp manipulation using evolutionary computing and deep reinforcement learning. *Intel Serv Robotics* 14, 61–77 (2021). <https://doi.org/10.1007/s11370-020-00342-7>
- Singh, A., Pandey, P. and Nandi, G.C. (2021), "Effectiveness of multi-gated sequence model for the learning of kinematics and dynamics of an industrial robot", *Industrial Robot*, Vol. 48 No. 1, pp. 62-70. <https://doi.org/10.1108/IR-01-2020-0010>

Average Impact Factor:

- a) International Journal of Service Robotics (SCI) -3.4
- b) *Machine Vision and Applications*(SCI)-1.6
- c) Industrial Robot(SCI)-1.12

Research papers published in conference proceedings (as a full paper):

1. P. Goyal, P. Shukla and G. C. Nandi, "Regression based robotic grasp detection using Deep learning and Autoencoders," 2020 IEEE 4th Conference on Information & Communication Technology (CICT), 2020, pp. 1-6, doi: 10.1109/CICT51604.2020.9312104.
2. G. K. Yadav, S. Jaiswal and G. C. Nandi, "Trajectory Learning for Stable Bipedal Walking Robots using Sequential Networks," 2020 IEEE 7th Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON), 2020, pp. 1-6, doi: 10.1109/UPCON50219.2020.9376558.
3. G. K. Yadav and G. C. Nandi, "Development of Adaptive Sampling Based strategy for Human Activity Predictions Using Sequential Networks," 2020 IEEE 4th Conference on



- Information & Communication Technology (CICT), 2020, pp. 1-6, doi: 10.1109/CICT51604.2020.9312097.
4. Bhagyashree, V. Kushwaha and G. C. Nandi, "Study of Prevention of Mode Collapse in Generative Adversarial Network (GAN)," 2020 IEEE 4th Conference on Information & Communication Technology (CICT), 2020, pp. 1-6, doi: 10.1109/CICT51604.2020.9312049.
 5. S. Jaiswal, S. Misra and G. C. Nandi, "Attention-Guided Context-aware Emotional State Recognition," 2020 IEEE 7th Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON), 2020, pp. 1-6, doi: 10.1109/UPCON50219.2020.9376440.
 6. S. Jaiswal, A. Jain and G. C. Nandi, "Image based Emotional State Prediction from Multiparty Audio Conversation," 2020 IEEE Pune Section International Conference (PuneCon), 2020, pp. 77-82, doi: 10.1109/PuneCon50868.2020.9362475.

Seminars and invited talks presented:

- a) Delivered Online lectures as Expert, for Short Term Training and Certification Course in AI & ML conducted by Defence Institute for Advanced Technology, Pune.
Title: Robotics Research using Machine learning and Deep Learning
Organization: DIAT, Pune, Date: 1st September, 2020.
- b) Delivered Online Training and Certification Course in AI&ML, Batch 2 organized by DIAT, Pune, May 2021 (Batch -2).
- c) Delivered an invited talk on 24th September, 2020: "On Solving Basic Robotics Problems using Machine Learning and Deep Learning Techniques", during Short term training program cum workshop on "Intelligent Biomedical-Micro-Electro-Mechanical System", held from 22nd September, 2020 to 28th September, 2020 at the Indian Institute of Information Technology-Allahabad (IIIT-A), Prayagraj. UP-211015.
- d) Delivered Expert Lecture on "Machine Learning for IoT", on 10-12-2020, during the Faculty Development Program on the Internet of Things, held at IIIT Allahabad from 7th December 2020 to 11th December 2020 sponsored by AICTE, ATAL Academy.
- e) Delivered Expert Lecture on "Artificial Intelligence Applications", in the training program on "Artificial Intelligence and Deep Learning" at MANIT Bhopal, 17th May, 2021.

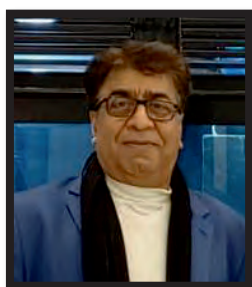


Conferences attended outside IIIT Allahabad:

Attended renowned International Conference, CVPR- 2020, June 14-19, 2020, USA(Virtual Mode)

Training programmes organized: Two.

- Host an interactive webinar on **Dexterity in Robotics** (presentation and panel discussion) with Dr. Samir Menon, Founder & CEO, Dexterity, Inc. Sept 6, 2020 (Jointly with Dr. Rahul Kala) under IEEE/RAS society chapter.
- Host an interactive webinar with Bhaskar Gupta, a Senior Software Development Engineer at Amazon in Seattle USA, on **Warehouse Robotics** 13 February, 2021 (Jointly with Dr. Rahul Kala) under IEEE/RAS society chapter.

**Prof. Om Prakash Vyas****Department:** Information Technology**Designation:** Professor**Experience (Teaching/Research):** 34 years**International Cooperation / Project:**

- Participated in 'Indo-French Academic Networking' event in New Delhi with representatives of 40 French Institutes / Universities (26th and 27th Feb 2021)
- The academic cooperation with University of Messina (Italy) in the field of 'Data Semantics in the Smart City environment' was completed with outcome of joint publication. (2020-21)
- The collaborative research work with 'Norwegian University of Science and Technology, Gjovik (Norway)' was continued with the augmentation project approved and sanctioned by DST-New Delhi & IIT Kanpur in the '*Resilience Framework with Data Science approach*'. (2020-21)
- The academic cooperation with University of Bielefeld, Germany was successfully completed under the funding scheme of DAAD-WISE with IIITA student successfully completing Summer Internship with German counterpart. (2021)

New courses developed:

Academic Scheme for new programme **B.Tech. (IT-Business Informatics)** was developed with various course outline ie FinTech (Financial Technologies), Digital Marketing etc. with various mandatory and Elective specializations finalized. Also the semester course "Business Analytics" for the new M.Tech. (IT) specialization in 'Data Engineering' was developed.

Books and book-chapters published:

S.No.	Author(s)	Book Title	Publisher	Year	Place	Page
1	Akhilendra Pratap Singh, Arun Kumar, Om Prakash Vyas, Shirshu Varma	Interoperability in IoT for Smart Systems	CRC Press	2020	India	171-194

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Vol/No.	Year	Page	IF
1	Ayush Sinha, Manasi Mohandas,	Cyber Physical Defense Framework for	FRONTIERS IN ENERGY	8	2021	407	4.008



	Pankaj Pandey, OP Vyas	Distributed Smart Grid Applications	RESEARCH				
2	Ashish Singh Patel, Giovanni Merlino, Dario Bruneo, Antonio Puliafito, OP Vyas, Muneendra Ojha	Video representation and suspicious event detection using semantic technologies	Journal of Semantic Web	1	2021	1-25	3.524
3	B Kumar, A Sinha, S Chakrabarti, OP Vyas	A fast learning algorithm for One-Class Slab Support Vector Machines	Elsevier Journal of Knowledge based Systems	228/C	2021	13	8.03

Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	Date-Month-Year	Page
1	Ayush Sinha, Sourin Chakrabarti, OP Vyas	Distributed Grid restoration based on graph theory	2020 IEEE International Symposium on Sustainable Energy, Signal Processing and Cyber Security (iSSSC)	16-17 Dec. 2020	1-6
2	Ayush Sinha, Raghav Tayal, Ranjana Vyas, O.P. Vyas	Operational Flexibility with Statistical and Deep Learning model for Electricity Load Forecasting	International Conference on Artificial Intelligence and Sustainable Engineering.	18-20 Jan 2020	
3	Jaya Singh, Yuvaraj Rajendra, Venkatesan Subramanian, Om Prakash Vyas	A Lightweight Authentication and Key Establishment Scheme for Smart Metering Infrastructure	International Conference on Cybersecurity in Emerging Digital Era	9 Oct 2020	102-114

Seminars and invited talks presented:

Invited Talks in various Seminars / FDPs at IIIT Allahabad, IIIT Naya Raipur, NIT Raipur, Bialspur University (CG), APS University, Rewa (MP) was delivered in online mode.

Conferences attended outside IIIT Allahabad:

Participated in the *Residential Training Programme on "Preventive Vigilance & e-Procurement, Key to Good Governance"* from March 22-26, 2021 at Goa.

Training programmes organized:

- 1) A short term course FDP organized in online mode under ATAL (*AICTE Training and Learning Academy, New Delhi*) in 'Cyber Security for Critical Infrastructure' of 5 days duration with over 100 participants. (2021)
- 2) A short term course on Big Data Analytics was organized under self financing scheme for ~125 students participating in 5 days event in online mode. (2021)

Any other important activity not specified above.

Write 'As the additional charge of 'Chief Vigilance Officer' coordinated with Ministry of Education (Govt. of India) and central agencies.





Prof. Uma Shanker Tiwary

Department: Information Technology

Designation: Professor

Experience (Teaching/Research): 34 years **Industry:** 2 years

New courses developed: 4

- Title: 1. Information Retrieval
2. Computer Vision
3. Cognition and Cognitive Process Modelling
4. Cognitive Systems

Books and book-chapters published:

Sl.No.	Author(s)	Book Title	Publisher	Year	Place
1	Tiwary, U. S.	Proceeding of the Seventh International Conference on Intelligent Human Computer Interaction(IHCI 2015)	Procedia Computer Science	2015	IIITA
2	Tiwary, U. S. and Siddiqui, Tanveer	Speech, Image, and Language Processing for Human Computer Interaction: Multi-Modal Advancements	IGI	2012	
3	Tiwary, U.S., Siddiqui, Tanveer, Radhakrishna, M and Tiwari, M.D.	Proceedings of the Second International Conference on Intelligent Human Computer Interaction	Springer	2010	IIITA
5	Tiwary, U.S., Siddiqui, Tanveer, Radhakrishna, M and Tiwari, M.D.	Proceedings of the First International Conference on Intelligent Human Computer Interaction	Springer	2009	IIITA
6	Tiwary, U.S., , Radhakrishna, M	Proceedings of the Third International Conference on Wireless Communication and Sensor Networks	IEEE	2008	IIITA
4	Siddiqui, Tanveer and Tiwary, U. S.	Natural Language Processing and Information Retrieval	Oxford University Press	2007	
7	Tiwary, U.S., Radhakrishna, M and Tiwari, M.D.	Proceedings of the Third International Conference on Wireless Communication and Sensor Networks	IEEE	2007	IIITA



8	Tiwary, U.S., Radhakrishna, M, Nandi, G.C. and Tiwari, M.D.	Proceedings of the Second International Conference on Wireless Communication and Sensor Networks	Macmillan Advanced Research Series	2006	IITA
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Research papers published in journals:

Sl. No.	Author(s)	Article Title	Journal Name	Year
1.	Malviya, S., Mishra, R., Barnwal, S. K. & Tiwary, U. S.	HDRS: Hindi Dialogue Restaurant Search Corpus for Dialogue State Tracking in Task-Oriented Environment.	IEEE/ACM Transactions on Audio, Speech, and Language Processing	2021

Average Impact Factor: *IEEE/ACM Transactions on Audio, Speech, and Language Processing* (Impact Factor: 3.398)

Research papers published in conference proceedings (as a full paper):

Sl. No.	Author(s)	Article Title	Conference Title	Period	Page
1	Mishra, R., Barnwal, S. K., Malviya, S., Singh, V., Singh, P., Singh, S., & Tiwary, U. S.	Computing with Words Through Interval Type-2 Fuzzy Sets for Decision Making Environment	IHCI-2019	12 April 2020	112-123
2	Singh, S., Malviya, S., Mishra, R., Barnwal, S. K., & Tiwary, U. S.	RNN Based Language Generation Models for a Hindi Dialogue System	IHCI-2019	12 April 2020	124-137
3	Mishra, R., Barnwal, S. K., Malviya, S., Mishra, P., & Tiwary, U. S.	Prosodic feature selection of personality traits for job interview performance	ISDA 2018	12 April 2019	673-682

Seminars and invited talks presented:

Title: Computing With Words: Type-2 Fuzzy Sets
Organization: IHCI-2019
Date: 12-Dec-2019

Training programmes organized:

- Winter Research Internship Program (WRIP 2019)
- Summer Research Internship Program (SRIP 2020)



Other Activities:

- (a) **Technology Developed:** Dialogue System (Ongoing), EEG (Ongoing)
- (d) **Patents:** An Assessment System for Developing Tracking Reporting an Individual's Learning Proficiencies (Under Process)
- (e) **Awards and Honors:**
- 1) Professor, IIIT Allahabad
 - 2) Dean (Human Affairs), IIIT Allahabad
 - 3) Head of SILP Lab, IIIT Allahabad
 - 4) Head of Center for Cognitive Computing, IIIT Allahabad
 - 5) Dean (Special Development Affair), IIIT Allahabad
- (f) **Continuing Education Activities**

Sl.No.	Course
1	Information retrieval
2	Cognitive systems
3	Computer vision
4	Cognition and cognitive process modeling

**Prof. Anupam****Department:** Information Technology**Designation:** Professor and Dean TPA/ AA**Experience (Teaching/Research):** 32 years

(Approx. 12 years in DRDO as Sr. Scientist followed by 20+ years at IIITA)

New courses developed:

Prepared the "Media Informatics" **Basket** courses and their syllabus for the B.E.S.T. UG/PG curriculum and submitted to the HOD(IT) on 27th Nov'2020.

Earlier on the instructions of Hon'ble Director IIITA, the complete Course structure for the new Program B.Tech. IT (Spl. in Media Informatics) was prepared after organizing a 2-day Workshop at IIITA where leading experts from different Universities (including an expert from the Ohio University, USA) were invited for their suggestions and Brain storming sessions which was further submitted to the Dean (A&R), IIITA.

Books and book-chapters published:

Sl.No.	Author(s)	Book/Chapter Title	Publisher	Year	Place	Page
1.	Gopal Chandra Jana, Shivam Shukla, Divyansh Srivastava and Anupam Agrawal	Book: Intelligent Computing and Applications Chapter: Performance Estimation and Analysis Over the Supervised Learning Approaches for Motor Imagery EEG Signals Classification	Springer: Advances in Intelligent Systems and Computing book series	First online: 30 September 2020. Volume: 1172	Springer, Singapore	125-141

Research papers published in journals:

Sl.No.	Author(s)	Article Title	Journal Name	Volume	Year
1.	Gopal Chandra Jana, Mogullapally Sai Praneeth and Anupam Agrawal	A Multi-View SVM Approach for Seizure Detection from Single Channel EEG Signals	IETE Journal of Research, Taylor & Francis. SCIE journal	Online DOI: 10.1080/03772063.2021.1913074	2021

**Average Impact Factor:**

Impact Factor: 2.333 (2020)

IETE Journal of Research, Taylor & Francis (SCIE journal)

Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	Paper No.	Date-Month-Year	Page
1.	Gopal Ch. Jana, Aditya Tripathi and Anupam Agrawal	EEG Channel Selection Approach for Seizure Detection Based on Integrated BPSO and ELM	IEEE 7th International Conference on Signal Processing and Integrated Networks (SPIN)	doi: 10.1109/SPIN48934.2020.9071106	Online available: 20-04-2020	856-861
2.	Gopal Ch. Jana, Ratna Sharma and Anupam Agrawal	A 1D-CNN-Spectrogram Based Approach for Seizure Detection from EEG Signal	Procedia Computer Science (Elsevier)	167	Online available: 16-04-2020	403-412

Seminars and invited talks presented:

Title: "2nd International conference on Advances in Electronics, Electrical and Computational Intelligence -2021" (ICAEEC-2021) - Preside over the Technical session on 09-03-2021.

Organization: IIITA, Prayagraj

Date: 9th Mar'2021.

Conferences/ Workshops attended outside IIIT Allahabad:

- Attended an Indo-US Online workshop on "Human Machine Teaming" Organized by INMAS (DRDO), Delhi on 2, 4, 9 & 11 March, 2021 (nominated by the Dept. of IT, IIITA).
- Attended a 5 Day online Workshop on "eLearning Content Creation" Organized by IEEE CS Madras, ACM Chennai & CSI Chennai and Conducted by CDAC, Mumbai during 13-17 July'2020.
- Attended one Week Capacity Building Workshop on "Outcome Based Education (OBE) and NBA Accreditation Processes" Organized by the BVICAM, New Delhi in collaboration with Computer Society of India (CSI), IEEE Computer Society Chapter (Delhi Section), ISTE Delhi Section, IITP, New Delhi and IETE Delhi Centre during 27th – 31st July, 2020.



Work done in project undertaken in the Institute:

One externally funded project proposal submitted & presented as one of the team members (on 30-06-2020, 24-08-2020 and final presentation on 21-01-2021). The result is likely to be announced soon.

Other Activities:

(a) *Technology Developed*

Contributed in preparation of the SRS Document for the **Academic Management System** (AMS) for Programs under Ordinances 2018 and 2020 at IIITA.

(b) *Software Developed*

i) Development of “PRAGYANAM” Software (A Multi-Institute enabled Admission Module under the ERP framework): Prof Anupam - PI and Dr Mithilesh Mishra - Co-PI of the project (approved by hon'ble Director, IIITA and supported by IIITA) during October'2019 to August'2020.

ii) Development of IIITA Alumni Website and Alumni Management system software (mentored and guided as Dean Technology and Promotional Affairs, IIITA during July'2019 to Jan'2021).

iii) Development of Human-Resource Management (Establishment) App/ Software Phase-I (mentored as Dean Technology and Promotional Affairs, IIITA during July'2019 to Jan'2021).

iv) Enabling faceless single window admission service in the IIITA admission system (in view of COVID-19 pandemic) mentored as Dean Technology and Promotional Affairs, IIITA.

v) Convocation Registration Management System (mentored as Dean Technology and Promotional Affairs, IIITA).

(c) *Industry visited and visits to other Institutes for research*

Industry/Institution Name, Purpose, Duration, etc.

(d) *Patents/ Copyright*

"EEG VMAC Toolbox", **Copyright** - Computer Software, Registration number: SW-14530/2021, Copyright Office, Government of India (App. dt. 24-12-2020).

(e) *Awards and Honors*

- Serving as a Member of “**Academic Council**”, BIET, Jhansi.



- Serving as an Expert member of the **RDC** (Computer Science) of Dr. A.P.J. Abdul Kalam Technical University, Lucknow.
- Serving as a Member of the **Senate**, IIIT Allahabad.
- Served as PhD Examiner of **CSVТУ Bhilai, KIIT University Bhubaneswar, AIIMS Delhi, NIT Durgapur and IIT Guwahati**.
- **Google Scholar** Citations Score: **2929** (as on 21-09-2021).

(f) Continuing Education Activities

Delivered lectures during the Training program on “Big Data Analytics, Artificial Intelligence, Block Chain Technology and IOT” for the ONGC personnel. Also served as a member of the Advisory Committee (2020).

(g) Participation in the High Level Industry, Academia Interaction Programme During Summer Programs

On advice of Hon'ble Director, as Dean (TPA) organized an Interaction program of concerned IIITA officials with the officials of the Software Industry/Company **M/S Logisys**, Bengaluru during 17-19 Nov.'2020 regarding cooperation in Academic Software development.

(h) Any other important activity not specified above.

- **Organized 3 Webinar talks at IIITA** (for the benefit of IIITA students, faculty members and alumni):

Alumni Webinar#1 (**17-10-2020**) Title: "Getting Connected Again" having 10 Alumni Speakers (and Hon'ble Director IIITA as the Chief Guest).

Alumni Webinar#2 (**21-11-2020**), Title: “From IIITA to Microsoft via UCSD: An Open Discussion with Dr. Siddharth about Research and Beyond”, Speaker: Dr. Siddharth, Microsoft USA (and Hon'ble Director IIITA as the Chief Guest).

Alumni Webinar#3 (**07-02-2021**), Title: “From Robotics to the Brain and Back: A Research Journey”, Speaker: Dr. Manish Sagar, Asstt. Professor, Stanford University, USA (and Hon'ble Director IIITA as the Chief Guest).

- Established a fully equipped **Audio-Visual Seminar room with Projector and motorized Screen** for Online Workshops, Meetings etc. at the 2nd floor, Room no. 1404, Admin Extension I, IIITA.
- Served as Coordinator of MTech Human-Computer Interaction Program at IIITA.



- Prepared the Ordinance for Center of Excellence at IIITA which was later approved by the Senate. It subsequently helped in establishing two Centers of Excellence at IIITA.
- Guided approx. 16 Summer and Winter Internship students during April'2020 to March'2021 having BTech students from IIT BHU, IIIT Bhubaneswar, IIIT Bhopal, IIIT Kalyani, IIIT Sricity, AMU Aligarh, Thapar Institute of Engg. & Tech., Jaypee Institute of Information Tech. and others.
- Development and organization of E-contents of the Courses (along with respective MindMaps) taught by me on the "Moodle" LMS Platform for effective Online Teaching and Learning due to COVID-19 pandemic. It also supports a very effective and innovative online assessment system.
- Creation of Database of **IIITA Alumni** profile with their working email IDs (starting from first batch of BTech IT in year 1999), Creation of six Alumni Chapters and "Sangam" – the Council of Chapters, Connecting IIITA alumni on various Social media platforms such as Facebook, Twitter, Instagram, LinkedIn, Almaconnect, Organizing Alumni talks and interaction sessions, Organized Physical as well as Virtual Alumni Meets etc as dean (Alumni Affairs).



Prof. Tapobrata Lahiri

Department: Applied Sciences

Designation: Professor

Experience (Teaching/Research): 31 years

New courses developed:

Title: Taken active part in developing the courses and syllabuses for the program M.Tech. in Data Science and Analytics, especially for the analytics part.

Research papers published in journals:

Sl.No.	Author(s)	Article Title	Journal Name	Vol./No.	Year	Page
1.	Pal, M.K., Lahiri, T. & Kumar, R.	ProtPCV: A Fixed Dimensional Numerical Representation of Protein Sequence to Significantly Reduce Sequence Search Time.	<i>Interdiscip Sci Comput Life Sci</i> 12 , (2020)	12/3	2020	276–287
2.	Joshi A., Mitra Ray N., Badhwar R., Lahiri T., Kaushik V.	Application Of Hmm-Viterbi Model For Identification Of Epitopic Signature Within Screened Protein-Antigens Of Hepatitis C Virus	<i>European Journal of Molecular & Clinical Medicine</i>	7/7	2020	4095-4102

Average Impact Factor: 1.283

Seminars and invited talks presented:

- Title: Biological Image processing to characterize rough vesicular cluster – a way to understand cell membrane integrity of RBC

Organization: TEQIP Sponsored ONE WEEK Faculty Development Program on “Bioinformatics, Big Data and Drug Discovery – Prospects & Challenges, scheduled on September 14 -18, 2020, organized at Computer Science and Engineering Department, G. B. Pant Institute of Engineering and Technology, Pauri Garhwal

Date: Sept 16, 2020

- Title: Biological Image processing to characterize rough vesicular cluster – a way to understand cell membrane integrity of RBC

Organization: Recent developments from molecular pathogenesis to theranostics (RDMT-2020), organized at Indian Institute of Information Technology



Date: November 8, 2020

- Title: The crucial role of data science to understand various activities and characteristics of biomolecules in relation to different pathophysiological conditions

Organization: AICTE-ATAL sponsored FDP on Potential Research Avenues in Computer Science and Biology at Department of Computer Science and Engineering, Malnad College of Engineering, Hassan, Karnataka

Date: January 23, 2021

- Title: Foundation of Machine Learning

Organization: AICTE-ATAL FDP on Advanced Research Applications in Artificial Intelligence (ARAAI-2020) (29 August- 02 September, 2020) organized at institute of Engineering & Technology, Sitapur Road, Lucknow, Uttar Pradesh, India

Date: Aug 29, 2020

Training programmes organized: Short Term Training Program on "Intelligent Biomedical-Micro-Electro-Mechanical System (i-Biomems)" started on 23-09-2020 at Indian Institute of Information Technology

Other Activities:

(a) *Technology Developed*

- Semi-empirical method for faster prediction of protein structure without compromising its accuracy.
- Representation of Protein sequence into fixed dimensional vector ProtPCV considering its ordered chemical property within the sequence.
- New pairwise protein similarity measure using ProtPCV which is better than existing BLAST in terms of both accuracy and speed.
- HMM-Viterbi based computational model to identify epitopes from their sequences

(b) *Software Developed: ProtPCV*

(c) *Continuing Education Activities*

"Intelligent Biomedical-Micro-Electro-Mechanical System (i-Biomems)" a 6 days Short Term Training Program(STTP) cum Workshop sponsored by CSVTU* TEQIP-3 (As member of Advisory Committee), Department of Applied Sciences, IIIT Allahabad, 6-days starting from 23-09-2020.

Profile of Participants: Please see the link:

https://iiita.ac.in/uploads/Flyer_Workshop_2020_ibiomems_IIITA753.pdf



(d) *Membership:*

- Selected as Member of Board of Governors of IIIT Allahabad by the Senate of IIIT Allahabad
- Selected as Nominated Member of Executive Council of HBTU, Kanpur by the Director, IIIT-Allahabad

(h) *Any other important activity not specified above.*

As Dean (Academics and Research) Served as one among the key-persons to design and frame NEP-inspired programs at IIIT Allahabad that have been recommended by the Senate and are currently under consideration by the BOG-IIIT-Allahabad



Prof. Shekhar Verma

Designation: Professor

Department: Information Technology

Experience (Teaching/Research): 26 years



Late Prof. Shirshu Varma

Department: Information Technology

Designation: Professor

Experience (Teaching/Research): 28 years



Prof. Vijayshri Tewari

Department: Management Studies

Designation: Professor

Experience (Teaching/Research): 14 years, **Industry:** 01 year

Research papers published in journals:

Sl.No.	Author(s)	Article Title	Journal Name	Volume	Year
1.	Richa Singh Dubey, Justin Paul, Vijayshri Tewari	The soft skills gap: a bottleneck in the talent supply in emerging economies	The International Journal of Human Resource Management	32/1-32	February 2021
2.	Shankar, S and Tewari, V	Impact of Collective Intelligence and Collective Emotional Intelligence on the Psychological Safety of the Organizations	Vision: The Journal of Business Perspective, Forthcoming	Forthcoming	2021
3.	B. Pandiya, V. Tewari, C.K.Upadhyay	Identifying the antecedents of employer branding for generation Y workforce in Information technology industry	Journal of Business Economics and Management	Forthcoming	2021

Average Impact Factor: The International Journal of Human Resource Management; 3.04

Invited/Delivered Talk:

- 3rd Workshop on Behavioral finance topic Investment Psychology. Delivered talk, from 15 Sep, 2020 to 19 Sep, 2020
- DST Sponsored Training programme (FDP) For Making Self Sufficient Entrepreneurs & Innovators. Delivered talk on 18/02/2021, from 12 Feb, 2021 to 23 Feb, 2021.

Work done in project undertaken in the Institute:

- Creation of *Centre for Entrepreneurial Skill and Capacity Induction (CESCI)* at IIIT-Allahabad. The proposal is part of the Aatmnirbhar Bharat scheme of Govt of India to and bring a certain skill development program. The Neeti Aayog of the Government of



India is also providing funding for these skill courses/practices. A committee has been constituted which will take care of this center. Dean (IPR) also suggested that a business model may also be adopted to earn some corpus. The centre should be run under the Bylaws of Centres which is already available, from 02 Jan, 2021 to 02 Jan, 2023

- HRM based Assignment, Role: PI, funded by: Prateek Realtors India Pvt. Limited, from: 20 Nov, 2020 to 20 Apr, 2021
- HR Consultant, Role: PI, funded by: Ambalika Construction Limited, from: 16 Dec, 2020 to 17 Dec, 2021

Training programmes organized:

Self-Financed Workshop:

- (a) Conducted self-financed short term course titled: One Week Workshop on Entrepreneurship Development. Duration 07 Dec, 2020 to 11 Dec, 2020

Objective of course:

- To understand the concept of Entrepreneurial Development;
- To understand the main components of Entrepreneurship Development;
- To understand the relationship between innovation and entrepreneurial development;
- To understanding the theories of innovation and entrepreneurial development

- (b) Conducted self-financed short term course titled: 5 day Workshop & Faculty Development Program (FDP) focusing on trivial issues of Creative Problem Solving & Critical Thinking. Duration 19 Sep, 2020 to 23 Sep, 2020

Objective of course:

- To understand and investigate the main components of Creative problem solving & Critical thinking.
- To explore and orient with tools and techniques in Creative problem solving and Critical thinking.
- To use Creative problem solving and Critical thinking in tandem to approach a problem and move towards a solution which transcends the current boundaries and not just satisfies the constraints

- (c) Conducted self-financed short term course titled: 5 Days Workshop on Innovation Management and Entrepreneurship Development. Duration Jul, 2020 to 24 Jul, 2020



Objective of course:

- To understand the concept of innovation;
- To understand the concept of Entrepreneurial Development
- To understand the main components of innovation and innovation management and Entrepreneurship Development;
- To understand the relationship between innovation and entrepreneurial development; To understanding the theories of innovation and entrepreneurial development;
- To know the various techniques of innovation and promoting entrepreneurial culture

- (d) Conducted self-financed short term course titled: Online workshop on 'Women Equality Sensitization'. Duration 10 Jul, 2020 to 11 Jul, 2020

Objective of course:

- Gender-based stereotypes practices
- Educate participants and sensitized about womens issues
- Some real solutions
- Anger management courses
- Anti-sexual harassment education
- Educate participants about the use of Gender-inclusive language
- Laws and policies
- Discrimination through social norms and practices.

Experiment conducted

- A team consisting of members from DRDO, academia, and Industry designed and conducted the social experiment to measure /study ' Identification of HCD intervention for enhancing the culture of Innovation in DRDO a GOI R&D Organization
- Social Experiment to measure the Cognitive Impact of the forced conformity in teenagers. Designed and Conducted a Social Experiment to measure the Cognitive Impact of the forced conformity in teenagers at Deveprayag School & College Prayagraj -211013. The mentioned experiment was successful and the data is being utilized to provide counseling and feedback to Students and Guardian

Any other important activity not specified above.

- Registrar (Acting) (Jan 2021 to continuing)



Prof. Ranjit Singh

Department: Management Studies

Designation: Professor

Experience (Teaching/Research): 18 years

Books and book-chapters published:

Sl.No.	Author(s)	Book Title	Publisher	Year	Place
1	Dr Ranjit Singh	मेरी पहचान अभी बाकी है	Notion Press	2021	Chennai

Research papers published in journals:

Sl.No.	Author(s)	Article Title	Journal Name	Vol./No.	Year	Page
1	Jayashree Bhattacharjee, Dr Ranjit Singh, Kajol	Risk Perception in Respect of Equity Shares: A Literature Review and Future Research Agenda	DLSU Business & Economics Review	30/1	2020	1-14
2	Dr Mousumi Choudhury; Dr Ranjit Singh	Identifying Factors Influencing Customer Experience in Bancassurance: A Literature Review	Journal of Commerce & Accounting Research	10/2	2020	10--22
3	Mousumi Choudhury, Ranjit Singh, Kajol & Shashikant Rai	Empathy of the Bancassurance Channel: An Empirical Study	Indian Journal of Finance and Banking	4/4	2020	30-47
4	Kajol; Mausami Nath; Ranjit Singh; H. Ramananada Singh; Amit Das	Factors affecting seasonality in stock market: A Social Network Analysis Approach	International Journal of Accounting & Finance Review	5/4	2020	39-59
5	Kajol; Prasita Biswas; Ranjit Singh; Sana Moid; Amit Das	Factors Affecting Disposition Effect in Equity Investment: A Social Network Analysis Approach	International Journal of Accounting & Finance Review	5/3	2020	64-86



6	Ranjit Singh; Sankharaj Roy; Bhartrihari Pandiya	Antecedents of Financial Inclusion: Evidence from Tripura, India	Indian Journal of Finance and Banking	4/2	2020	79-92
7	Sabyasachi Mondal and Ranjit Singh	Is Socially Responsible Indices Weak Form of Efficient Market? Evidences from Developing Economies	Asian Social Science	16/2	2020	55-67

Seminars and invited talks presented:

1. Delivered a talk on “Personal Finance” at G H Raisoni Institute of Engineering and Technology, Nagpur on 16th December 2020
2. Delivered a talk on “Financial Market and Investor Behaviour” at JIMS Engineering Management Technical Campus, Greater Noida on 11th November 2020.
3. Delivered a talk on ‘New Education Policy 2020’ in a webinar on ‘National Education Policy, 2020: Its Impact on Management Education’ organized by the Department of Business Administration, Assam University, Silchar on 22nd August 2020.
4. Delivered a lecture in Faculty Development Programme on ‘E-Learning and Development in Digital Era’ organized by Department of Management, School of Management and Economics, ADAMAS University, Kolkata from 25th to 30th May 2020.
5. Delivered a talk on ‘Atmanirbhar Bharat: A Road Ahead’ in the National Webinar on ‘Atmanirbhar Bharat: A Road Ahead’ organized by Faculty of Commerce and IQAC, Lanka Mahavidyalaya, Assam in association with Assam College Librarian’s Association 31st July 2020.
6. Delivered a talk on ‘Entrepreneurship as a Career for Youth’ in the National Webinar on ‘Entrepreneurship as a Career for Youth’ organized by Department of Commerce and Department of Human Resource Management in association with IQAC, Golaghat Commerce College, Assam on 26th August 2020.
7. Chaired a technical session in 4th International Seminar on ‘COVID 19: Economic Challenges and Turnaround through Innovative Ideas’ organized by the ICFAI University, Tripura on 10th July 2020.
8. Delivered a talk on ‘Behavioural Finance’ in the Webinar on ‘Behavioural Finance’ organized by Department of Management, School of Business and Economics, ADAMAS University, Kolkata on 5th May 2020.



9. Delivered a talk on 'Behavioural Finance' in the Webinar on 'Behavioural Finance: Emerging Issues' organized by Digboi College, Assam on 21st July 2020.
10. Delivered a talk on 'the role of financial markets in efficient allocation of resources' in the Webinar "Managing the Challenges and Opportunities in times of the Pandemic: The Indian Perspective" organized by Department of Management Studies, Bodoland University, Assam on 23rd May 2020.
11. Delivered a lecture on 'Project Proposal Writing Guidelines' in an Online Faculty Development Programme on 'Research Methodology and Statistical Data Analysis through SPSS' organized by Faculty of Management Studies, ICFAI University, Tripura from 22nd June to 28th June 2020.

Other Activities:

- Coordinator of Workshop on Entrepreneurship Development organized at Department of Management Studies, IIITA from 07.12.2020 to 11.12.2020
- Coordinator of Workshop on Innovation Management and Entrepreneurship Development organized at Department of Management Studies, IIITA from 20.07.2020 to 24.07.2020
- Chief Coordinator of 3rd Summer School on Behavioural Finance organized at DoMS, IIITA from 15-06-2020 to 19-06-2020

**Prof. Pavan Chakraborty****Department:** Information Technology**Designation:** Professor and Head**Experience (Teaching/Research):** 30 years**Books and book-chapters published:**

Sl.No.	Author(s)	Book Title	Publisher	Year	Place	Page
1.	Momin, Abdul; Shahu, Ambika; Sanyal, Sudip; Chakraborty, Pavan.	Cognitive Informatics, Computer Modelling, and Cognitive Science. <i>Volume 2: Application to Neural Engineering, Robotics, and STEM 2020, Pages 149-177.</i>	Academic Press	2020	Cambridge, Massachusetts, USA.	Chapter 8: Electrodermal activity and its effectiveness in cognitive research field,

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Volume	Year
1.	Momin, Abdul; Bhattacharya, Saheli; Sanyal, Sudip; Chakraborty, Pavan.	Visual Attention, Mental Stress and Gender: A Study Using Physiological Signals	IEEE Access	Vol. 8, Page: 165973-165988	8/9/2020
2.	Tripathi, Rashmi; Aier, Imlimaong; Chakraborty, Pavan ; Varadwaj, Pritish Kumar	<u>Unravelling the role of long non-coding RNA-LINC01087 in breast cancer</u>	Non-coding RNA Research, Elsevier	Vol.: 5, Page: 1-10	1/3/2020
	Ansari, Md Afzal; Meraz, Md; Chakraborty, Pavan ; Javed, Mohammed.	Angle Based Feature Learning in GNN for 3D Object Detection using Point Cloud	arXiv preprint arXiv:2108.00780.		2/8/2021



	Javed, Mohammed; Meraz, MD; Chakraborty, Pavan.	A Quick Review on Recent Trends in 3D Point Cloud Data Compression Techniques and the Challenges of Direct Processing in 3D Compressed Domain.	arXiv preprint arXiv:2007.05038		8/7/2020
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Research papers published in conference proceedings (as a full paper):

Sl. No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year
1	Sen, Snigdha; Saha, Snehanthu; Chakraborty, Pavan ; Singh, Krishna Pratap	Implementation of Neural Network Regression Model for Faster Redshift Analysis on Cloud-Based Spark Platform	International Conference on Industrial, Engineering and Other Applications of Applied Intelligent Systems	Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), Volume 12799 LNAI, Year 2021, Pages 591-602	26/7/2021
2	Singh, Ajit; Chakraborty, Pavan	Optimizing Trace Tool-overhead for Lock-Intensive Multi-threaded Parallel Applications	2020 Sixth International Conference on Parallel, Distributed and Grid Computing (PDGC)	Page 225-230	6/11/ 2020

Work done in a project undertaken in the Institute:

Technology Enabled Active Learning (TEAL 2.0): Co-funded by the Erasmus + Programme of the European Union. Project of 12 institutes with IIITA budget of approximately Rs. 50.0 Lakhs. Total = 999049.00 Euro and IIITA part = 72,724 Euro
Starting Date: December 2019

Completion Date: November 2022

Any other important activity not specified above.

Became Head, Department of Information Technology on January 04, 2021.



Prof. Neetesh Purohit

Department: Electronics and Communication Engineering

Designation: Professor

Experience (Teaching/Research): 18 years

Research papers published in journals:

- 1) Neha Jaiswal, Neetesh Purohit, "On the performance of Double Rayleigh Fading Channels for Downlink NOMA-enabled Vehicular Communications", **Volume 14, Issue 20**, 15 December 2020, p. 3652 – 3660 **IET Communications**, Sept 2020. (IF 1.664)
- 2) Preeti Kharwar, Suneel Yadav, Neetesh Purohit, "Optimal power allocation for the multiple-sensor single-DF relay based IoT networks under transceiver hardware impairments", **Volume 43**, December 2020, 101183 **Physical Communication**, Elsevier. (IF 1.81)

Average Impact Factor: 1.73

Research papers published in conference proceedings (as a full paper):

K Anjali Rao, Abhishek Kumar, Neetesh Purohit, "Efficient Implementation for 3-Parallel Linear-Phase FIR Digital Odd Length Filters", 4th **IEEE** Conference on Information and Communication Technology, CICT 2020, December 3 – 5, 2020 Hosted online by IIITDM Kancheepuram

Seminars and invited talks presented:

- 1) 'Self Awareness and Empathy', Orientation Camp for 2020 UG Batch, IIITA Prayagraj, Oct 26th 2020 Saturday
- 2) 'Exploring the Cyber Security Measures', 2nd IEEE International conference on advances in computing, communication control and NETWORKING (ICAC3N-20), 18-19th December 2020, Galgotias Educational Institutes, Noida, India.
- 3) 'Promising Technologies for Upgrading Wireless Networks Performance', A plenary paper in 7th International Conference "Engineering and Telecommunication – En&T-2020", Moscow Institute of Physics and Technology (National Research University), November 25-26, 2020 Dolgoprudny, Russia
- 4) 'Innovative Incorporation of ONLINE facility in University Education System', Main Speaker in the Webinar organized by NSS and VSB Purvanchal University, Jaunpur, 11th Nov 2020.'



- 5) 'Increasing Influence of Artificial Intelligence in Wireless Networks', AICTE-AQIS Sponsored Short Term Training Program (STTP) on Artificial Intelligence and 5G Communication Technology, October 05-10, 2020 at Poornima College of Engineering Jaipur.
- 6) 'Importance of IoT in Hydrogen Economy', AICTE Training & Learning (ATAL) Academy Sponsored One Week, Online FDP on Internet of Things IOT-2020 October 05 to 09, 2020; Rajkiya Engineering College, Sonabhadra UP.
- 7) 'भारतीय भाषा (हिन्दी): दमन, संघर्ष और पुनरोत्थान', हिन्दी-दिवस २०२० समारोह, ट्रिपल आई टी, त्रिची, तमिलनाडु, १८ सितंबर २०२०;
- 8) 'NEP2020 Implementation @INIs (Brief Introduction of a Flexible Higher Study Program)' IITs-SSUN Webinar on "Role of **IITs** in the Implementation of National Education Policy 2020: Challenges and Solutions" organized by IIT-BHU Varanasi, dated 20.09.2020
- 9) 'NEP2020 Implementation @INIs (Brief Introduction of a Flexible Higher Study Program)' NITs-SSUN Webinar on "Role of **NITs** in the Implementation of National Education Policy 2020: Challenges and Solutions" Organized by NIT Kurukshetra dated 17.09.2020
- 10) Prime Mover for the discussion session in the IIITs-SSUN Webinar on "NEP2020: Opportunities and Challenges for **IIITs**", Organized by IIITA Prayagraj and IIIT Pune dated 5th September 2020.
- 11) 'Novel approaches for availing better services over wireless channels', Short Term Course on "Latest Developments in Communication and Microwave Technologies" NIT Jalandhar, September 2nd to 6th, 2020
- 12) 'Information Technology: a Bridging, Threading and Connecting Technology to many Disciplines', FDP on Interdisciplinary Research: Need and Relevance in Science and Technology, RKDF University, Bhopal, Sept 1st to 5th, 2020.
- 13) 'Artificial Intelligence (AI) based Wireless Communication Technologies', FDP on Advanced Research Applications in Artificial Intelligence Dr. A.P.J. Abdul Kalam Technical University Lucknow August 29th to Sept 2nd, 2020.
- 14) 'The role of Information Technology in Post COVID-19 Era', The Keynote speech in National Webinar on Future Opportunities in IT with reference to Covid-19, Dept. of Computer Science, Govt. Holkar [Model, Autonomous] Science College and ISROSET, Indore, India; on 15th June 2020.



Conferences attended outside IIIT Allahabad:

Invited Speaker, 7th International Conference “Engineering and Telecommunication – En&T-2020”, Moscow Institute of Physics and Technology (National Research University), November 25-26, 2020 Dolgoprudny, Russia

Work done in project undertaken in the Institute:

- 1) Chairman, Center for short term certification Programme
 - 2) Principal Investigator, of the consultancy project 'Prototypes Development for Commercial Application(s) of IoT' from Reliance Jio Infocom Pvt. Ltd. Mumbai (under Ph.D. for Working Professionals Programme)
 - 3) Co-Investigator of Design Innovation Center (DIC) spoke of IIT-BHU hub
 - 4) Principal Investigator of the IIITA Team of investigators to 'National Technical Center on Cyber Security at IITK (A 196 Crore Ambitious Project of GOI), funded by: DST.
- (i) Coinvestigator, 'Industry scale IoT based testbed' module

Other Activities:

(a) Technology Developed:

E2E Communication system model

(b) Software Developed:

CROPAPP, Improvements in AVIRAL, FINAPP, ROJAPP

(c) Industry visited and visits to other Institutes for research

Exsensor Pvt. Ltd. Bhopal

Annadatta Mahatta Infotech Pvt. Ltd. Indore

Any other important activity not specified above.

- Associate Dean (Research and Development)
- Member of Academic Ethics Cell IIT Kanpur
- Member of the Technical Committee of CCMT2020
- Coordinator CCMT-COAP Coordination Committee
- Member, Committee for International Affairs
- President of IIITA Employee Welfare Society (IEWS)



Prof. Pritish Kumar Varadwaj

Department: Applied Sciences

Designation: Professor

Experience (Teaching/Research): 17 years

Research papers published in journals:

- Aier, I., Semwal, R., Raj, U., & Varadwaj, P. (2021). Comparative modeling and structure based drug repurposing of PAX2 transcription factor for targeting acquired chemoresistance in pancreatic ductal adenocarcinoma. *Journal of Biomolecular Structure and Dynamics*, 39(6), 2071–2078.
- Mondal, M., Semwal, R., Raj, U., Aier, I., & Varadwaj, P. (2020). An entropy-based classification of breast cancerous genes using microarray data. *Neural Computing and Applications*, 32(7), 2397–2404.
- Semwal, R., Aier, I., Tyagi, P., & Varadwaj, P. (2021). DeEPn: a deep neural network based tool for enzyme functional annotation. *Journal of Biomolecular Structure and Dynamics*, 39(8), 2733–2743.
- Agarwal, V., Kumar, D., Varadwaj, P., & Tiwari, A. (2020). Water activity and biomass estimation using digital image processing in solid-state fermentation. *Bioresource technology*, 308, 123277.
- Semwal, R., Aier, I., Raj, U., & Varadwaj, P. (2020). Pr [m]: An Algorithm for Protein Motif Discovery. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*.
- Aier, I., Semwal, R., Sharma, A., & Varadwaj, P. (2020). In silico identification of therapeutic compounds against microRNA targets in drug-resistant pancreatic ductal adenocarcinoma. *Journal of Biomolecular Structure and Dynamics*, 1–9.
- Sharma, A., Kumar, R., Semwal, R., Aier, I., Tyagi, P., & Varadwaj, P. (2020). Deepolf: deep neural network based architecture for predicting odorants and their interacting olfactory receptors. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*.
- Chaudhary, A., Singh, V., Varadwaj, P., & Mani, A. (2020). Screening natural inhibitors against upregulated G-protein coupled receptors as potential therapeutics of Alzheimer's disease. *Journal of Biomolecular Structure and Dynamics*, 1–12.



- Gupta, S., Singh, V., Varadwaj, P., Chakravartty, N., Katta, A., Lekkala, S., Thomas, G., Narasimhan, S., Reddy, A., & Reddy Lachagari, V. (2020). Secondary metabolites from spice and herbs as potential multitarget inhibitors of SARS-CoV-2 proteins. *Journal of Biomolecular Structure and Dynamics*, 1–20.
- Semwal, R., & Varadwaj, P. (2020). HumDLoc: Human Protein Subcellular Localization Prediction Using Deep Neural Network. *Current genomics*, 21(7), 546–557.
- Dubey, A., Singh, V., Doharey, P., Sk, M., Samanta, S., Nema, V., Sharma, B., Varadwaj, P., & Sahoo, A. (2021). Modulating catalytic activity of human topoisomerase II α enzyme by fluorescent gold nanoclusters. *International Journal of Biological Macromolecules*, 170, 523–531.
- Sharma, A., Kumar, R., Ranjta, S., & Varadwaj, P. (2021). SMILES to Smell: Decoding the Structure–Odor Relationship of Chemical Compounds Using the Deep Neural Network Approach. *Journal of Chemical Information and Modeling*.
- Doharey, P., Singh, V., Gedda, M., Sahoo, A., Varadwaj, P., & Sharma, B. (2021). In silico study indicates antimalarials as direct inhibitors of SARS-CoV-2-RNA dependent RNA polymerase. *Journal of Biomolecular Structure and Dynamics*, 1–18.
- Varadwaj, P., Purohit, N., Lahiri, T., & Antisiperov, V. (2021). Digital signal processing-based approach to identify splicing mutations for detecting genetic diseases. *Журнал радиоэлектроники*(1), 6–6.
- Singh, A., Rana, H., Singh, V., Yadav, T., Varadwaj, P., & Pandey, A. (2021). Evaluation of antidiabetic activity of dietary phenolic compound chlorogenic acid in streptozotocin induced diabetic rats: molecular docking, molecular dynamics, in silico toxicity, in vitro and in vivo studies. *Computers in Biology and Medicine*, 104462.
- Mulpuru, V., Semwal, R., Varadwaj, P., & Mishra, N. (2021). HAMP: A Knowledge-base of Antimicrobial Peptides from Human Microbiome. *Current Bioinformatics*, 16(4), 534–540.
- Sharma, A., Kumar, R., & Varadwaj, P. (2021). OBPred: feature-fusion-based deep neural network classifier for odorant-binding protein prediction. *Neural Computing and Applications*, 1–14.
- Sharma, A., Saha, B., Kumar, R., & Varadwaj, P. (2021). OlfactionBase: a repository to explore odors, odorants, olfactory receptors and odorant–receptor interactions. *Nucleic Acids Research*.

**Research papers published in conference proceedings (as a full paper):**

- Tyagi, P., Vishwakarma, A., Tiwary, U., & Varadwaj, P. (2020). Predicting Smell Perception from Molecular Descriptors Using Machine Learning Approach. In 2020 International Conference Engineering and Telecommunication (En&T) (pp. 1–5).

Other Activities:**Tools developed:**

- a) DeepOlf: Deep neural network based architecture for predicting odorants and their interacting Olfactory Receptors.
- b) HAMP: 3D-KnowledgeBase of Human Microbiome Antimicrobial Peptide.
- c) HumDLoc: Human Protein Subcellular Localization Prediction Using Deep Neural Network.
- d) Pr[m]: An Algorithm for Protein Motif Discovery.

Tools Developed are hosted at <https://bioserver.iiita.ac.in/>

**Prof. Madhvendra Misra****Department:** Management Studies**Designation:** Professor**Experience (Teaching/Research):** 21 years**Books and book-chapters published:**

- In: S. Goundar, ed., Blockchain Technologies, Applications and Cryptocurrencies: Current Practice and Future Trends

S.No.	Author(s)	Title of the Book/Chapter	Publisher	Year	Place
1	Yadav, Jitendra & Misra, Madhvendra	Autonomous Agriculture Marketing Information System Through Blockchain	World Scientific Publishing	2020	Singapore

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Vol./No.	Year	Page
1	Yadav, Jitendra; Misra, Madhvendra; Singh, Kuldeep	Sensitizing Netizen's behavior through influencer intervention enabled by crowdsourcing—a case of reddit	Behaviour & Information Technology		2021	
2	Kumar, Mohit; Paul, Justin; Misra, Madhvendra; Romanello, Rubina	The creation and development of learning organizations: a review	Journal of Knowledge Management		2021	
3	Singh, Kuldeep; Misra, Madhvendra; Yadav, Jitendra	Corporate social responsibility and financial inclusion: Evaluating the moderating effect of income	Managerial and Decision Economics		2021	
4	Singh, Kuldeep & Misra, Madhvendra	Linking Harmonious CSR and Financial Inclusion: The moderating effects of financial literacy and income	The Singapore Economic Review		2020	1-22



5	Singh, Kuldeep & Misra, Madhvendra	Developing an agricultural entrepreneur inclination model for sustainable agriculture by integrating expert mining and ISM–MICMAC	Environment, Development and Sustainability		2020	
6	Kumar, Mohit & Misra, Madhvendra	Evaluating the effects of CRM practices on organizational learning, its antecedents and level of customer satisfaction	Journal of Business & Industrial Marketing		2020	
7	Tewari, Sumant Kumar; Madhvendra Misra	Driving performance of higher education industry: an Indian scenario	International Journal of Productivity and Performance Management		2020	
8	Yadav, Jitendra; Misra, Madhvendra; Goundar, Sam.	An overview of food supply chain virtualization and granular traceability using blockchain technology	International Journal of Blockchains and Cryptocurrencies	1/2	2020	154-178
9	Dwivedi, Utkarsh; Misra, Madhvendra	Will Disney+ get the lion's share?	Indian Management, All India Management Association	59/7	2020	61-63

Average Impact Factor:

- Behaviour & Information Technology (Listed in ABDC “A”, SSCI, ABS-2), Impact factor 1.781
- Journal of Knowledge Management (Listed in ABDC “A”, SSCI) Impact factor 4.75
- Managerial and Decision Economics (Listed in ABDC “B”, SSCI, ABS-2), Impact factor 0.5
- The Singapore Economic Review (Listed in ABDC “B”, SSCI)
- Environment, Development and Sustainability (Listed in SCIE), Impact factor 2.191
- Journal of Business & Industrial Marketing (Listed in ABDC “A”, SSCI), Impact factor 2.497
- International Journal of Productivity and Performance Management (Listed in ABDC “B”, ESCI)



Research papers published in conference proceedings (as a full paper):

S. No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year
1	Yadav, Jitendra; Misra, Madhvendra; Singh, Kuldeep	Assessment of Document Clustering and Topic Modelling of Blockchain Adoption by the e-Sports Community.	International Conference on Computational Intelligence in Analytics and Information System (CIAIS-2021)	69	2 nd April 2021
2	Singh, Kuldeep; Misra, Madhvendra; Yadav, Jitendra	Communication services for social connect: A proposed market for WIPRO.	International Conference on Computational Intelligence in Analytics and Information System (CIAIS-2021)	67	3 rd April 2021
3	Singh, Kuldeep; Misra, Madhvendra; Yadav, Jitendra	Modeling corporate social responsibility (CSR) enablers for sustainable agriculture by integrating expert mining and ISM-MICMAC	2021 IEEE Technology & Engineering Management Conference – Europe (TEMSCON)	79	17 th May 2021

Seminars and invited talks presented:

- Resource Person- Invited Keynote address and session chair in “9th IEEE International Conference on System Modelling & Advancements in Research (SMART-2020)” being organized by Faculty of Engineering & Computing Sciences (FOECS), Teerthanker Mahaveer University (TMU) Moradabad, UP, India on 4 -5 December 2020
- Resource Person- Invited Lecture on “General contours of e-learning paradigm and way to augment as the same as effective pedagogical intervention.” 19th January 2020 at Department of Economics University of Allahabad

Conferences attended outside IIIT Allahabad:

- Singh, K., & Misra, M. (2020, July). “Corporate Social Responsibility as a tool for healthtech startups: Modeling enablers of healthcare and social support system to fight Coronavirus Pandemic”. *In 2020 11th International Conference on Computing, Communication and Networking Technologies (ICCCNT) (pp. 1-6). IEEE.; 07/2020*



- Singh, K., & Misra, M. (2020, June). How to bring positive societal change through Corporate Social Responsibility (CSR)? Modeling the social responsible enablers using ISM-MICMAC. In *2020 IEEE Technology & Engineering Management Conference (TEMSCON)* (pp. 1-6). IEEE. 05/2020
- Minanshu, Madhvendra Misra: “Fitness of neuromarketing as a tool to achieve competitive advantage: a systematic literature review”. *International conference on Business Intervention for Effective Management of Technology and Innovation – IIM Shirmaur*; 03/2020

Training programmes organized:

- Co-Ordinator and Resource Person- Invited Lecture in “One Week Workshop on Entrepreneurship Development” being organized by Department of Management Studies, Indian Institute of Information Technology, Allahabad, UP, India on 7-11 December 2020
- Co-Ordinator and Resource Person- Invited Lecture in “5 Days FDP & Workshop On Creative Problem Solving & Critical Thinking” being organized by Department of Management Studies, Indian Institute of Information Technology, Allahabad, UP, India on 18-23 September 2020

**Prof. Manish Goswami****Department:** Electronics and Communication Engineering**Designation:** Professor**Experience (Teaching/Research):** 19 years**Research papers published in journals:**

S.No.	Author(s)	Article Title	Journal Name	Vol/No	Year	Page
1	D Kumar, R Anand, SV Singh, PK Misra, A Srivastava, M Goswami	A 0.4 mW, 0.27 pJ/Bit True Random Number Generator Using Jitter, Meta-stability and Current Starved Topology	IET Circuits, Devices & Systems	14/7	2020	1001-1011
2	D Kumar, LL Mankali, PK Misra, M Goswami	A 0.7 pJ/bit, 1.5 Gbps Energy-Efficient Image-Based True Random Number Generator	IETE Journal of Research		2020	1-11
3	Dipti, SV Singh, R Joshi, PK Misra, M Goswami	A reusable stage based reduced comparator count binary search ADC	Analog Integrated Circuits and Signal Processing	105/1	2020	33-45
4	P Singh, RK Jha, M Goswami, BR Singh	Integration of perovskite Pb [Zr _{0.35} Ti _{0.65}] O ₃ /HfO ₂ ferroelectric-dielectric composite film on Si substrate	Microelectronics International		2020	
5	RK Jha, P Singh, U Kashniyal, M Goswami, BR Singh	Impact of HfO ₂ buffer layer on the electrical characteristics of ferroelectric/high-k gate stack for nonvolatile memory applications	Applied Physics A		2020	
6	A Singh, M Goswami, K Kandpal	Design of a voltage-programmed V _{TH} compensating pixel circuit for AMOLED displays using diode-connected a-IGZO TFT	IET Circuits, Devices & Systems		2020	

Average Impact Factor: IET Circuits, Devices & Systems



Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	Paper No.	Year	Page
1	JK Mishra, PK Misra, M Goswami	Design of SRAM cell using Voltage Lowering and Stacking Techniques for Low Power Applications	2020 IEEE Asia Pacific Conference on Circuits and Systems (APCCAS),	50-53		
2	JS Kumar, B Kumari, P Kumar, A Verma, PK Yadav, S Ambulker, Manish Goswami, Prasanna Misra	Design of Transceiver at 865–867 MHz Band using UMC 180 nm CMOS Technology	24th International Symposium on VLSI Design and Test (VDAT), 1-5		2020	1-5
3	D Kumar, CD Jadhav, PK Misra, M Goswami	Opto-Radio Noise based True Random Number Generator	24th International Symposium on VLSI Design and Test (VDAT), 1-5		2020	
4	D Kumar, R Anand, M Goswami	A 138 Mbps jitter based power efficient true random number generator	International Conference on Electronics, Information, and Communication		2020	
5	JK Mishra, PK Misra, M Goswami	A Low Power 7T SRAM cell using Supply Feedback Technique at 28nm CMOS Technology	2020 7th International Conference on Signal Processing and Integrated		2020	

Conferences attended outside IIIT Allahabad:

Conference Name: International Conference on Electronics, Information, and Communication at Barcelona, Spain January 2020.

Organizing institution/society- IEEE Computer Society

Date- Jan 2020

Type of participations: Contributed paper presentation-

Work done in project undertaken in the Institute:

- Working towards SMDPC2SD Project of Meity, GOI.
- Working towards Random Number project of DST, GOI.

Training programmes organized:

- Summer Training program on VLSI Design- 2020

Any other important activity not specified above:

- Organized special session in IEEE- iSES-2020

**Prof. Vrijendra Singh****Department:** Information Technology**Designation:** Professor**New courses / Programmes developed:**

- B. Tech. in Engineering Science & Technology
- M.Tech. (post B. Sc. 3 years)
- Deep Learning Laboratory
- Cryptography
- Deep Learning Laboratory

Books and book-chapters published:

S. No.	Author(s)	Book Title	Publisher	Year	Place	Page
1	Salahddine Krit, Vrijendra Singh, Mohamed Elhoseny, Yashbir Singh	Artificial Intelligence Applications in a Pandemic: COVID-19 Series: Smart and Intelligent Computing in Engineering	CRC Press, Taylor & Francis	2021	United States	Book
2	Ankit Kumar, Singh Astha, Shiv Prakash and Singh Vrijendra	"A Novel Approach Towards Audio Watermarking Using FFT and CORDIC-Based QR Decomposition"	Wiley-Scrivener Publishing	March 2021	Beverly	323-338

Research papers published in journals:

S. No.	Author(s)	Article Title	Journal Name	Vol./No.	Year	Page
1	Gautam Anjali, Singh Vrijendra	Parametric Versus Nonparametric Time Series Forecasting Methods: A Review	Journal of Engineering Science & Technology Review	13/3	2020	165-171
2	Gautam Anjali, Singh Vrijendra	CLR-based deep convolutional spiking neural network with validation based stopping for time series classification	Applied Intelligence, Springer US	50/3	2020	830-848
3	Gautam Anjali, Singh Vrijendra	CNN-VSR: A Deep Learning Architecture with Validation-Based Stopping Rule for Time Series Classification	Applied Artificial Intelligence, Taylor & Francis	34/2	2020	101-124
4	Gupta Arti, Singh Vrijendra	Incorporating organisational justice, job satisfaction and organisational commitment in a model of turnover intentions for software professionals	International Journal of Indian Culture and Business Management, IEL	21/4	2020	544-562

**Research papers published in conference proceedings:**

S. No.	Author(s)	Article Title	Conference Title	Paper No	Year	Page
1	Samarjeet Yadav, Satya Prakash, Neelam Dayal, Vrijendra Singh	Forensics Analysis of WhatsApp in Android Mobile Phone	ICAEEEC-2019, IIIT Allahabad	1	15 April 2020	1-14

Seminars and invited talks presented:

S. No.	Title	Institution/Organization	Mode	Year
1	Time Series Analysis	CIS'11 - Lecture Series on Computational Intelligence, IEEE UP CIS section	Online	Dec. 17, 2020
2	Deep Learning for Time Series Analysis	ADASIVA, IIITA	Online	Dec 03, 2020
3	Time Series Forecasting	ATAL AICTE - FDP) on Machine Learning and Applications (MLA-2020), IIITM Gwalior	Online	Nov 23-27, 2020
4	Time Series Analytics on IOT	AICTE Sponsored STTP on Applied Computing, MITS Gwalior	Online	Nov 09-13, 2020
5	Paradigms for Augmenting Quality in Teaching, Learning and Assessment	FDP on "How to improve Quality in Teaching Learning Process", AIET Moodbidri, Karnataka	Online	Oct. 02, 2020
6	Exemplary practices for teaching/learning and assessments of Data Mining and Machine Learning courses	Exemplary Practices in Teaching-Learning and Evaluation of courses in Computer Science & Information Technology, VTU	Online	Aug 03-07, 2020
7	Foundation of Machine Learning and Time Series Analysis with Application	STC on Signal Processing, AI and Deep Learning, Department of Electronics and Communication Engineering of Dr B R Ambedkar National Institute of Technology, Jalandhar	Online	July 13-17, 2020
8	Advanced Machine Learning and Applications	Communication, Networks & Computing (CNC-2019)	Online	March 26-28, 2020
9	Cryptography basics for Blockchains	ONGC Training Programs titled "Big Data Analytics, Artificial Intelligence, block chain Technology and IOT", Feb.24-28, 2020, IIITA.	offline	Feb 25, 2020

Conferences attended outside IIIT Allahabad:

S. No.	Conference Name	Organizing Institution/Society	Mode	Date-Month-Year	Type of participation
1	3rd International Conference on Computer Science and Renewable Energies	Faculty of Sciences, Agadir, National School of Applied Sciences, IbnZohr	Online	Dec. 22-24, 2020	Keynote
		University, Morocco, The Mansoura University, Egypt, and University of North Texas, USA			



2	International Conference on Data Analytics, Intelligent Systems and Information Security	AICTE Sponsored, MCET Pollachi	Online	Dec. 11-12, 2020	Session Chair
3	5 th IAPR International Conference on Computer Vision and Image Processing (CVIP-2020)	IIITA	Online	Dec. 04-06, 2020	Session Chair
4	International conference on contemporary computing and applications	AKTU, Lucknow	Offline	Feb 05-07, 2020	Session Chair
5	Communication, Networks & Computing (CNC-2019)	ITM University Gwalior	Offline	March 26-28, 2020	Keynote
6	One Day Virtual workshop on Internet of Things (System Configuration Perspectives) Foundation of Machine Learning and Time Series Analysis for IOT Applications	IIITA	Offline/ Online	June 20, 2020	Invited Talk

Work done in project undertaken in the Institute:

- **PI-** [Classified] Signals Project for Ministry of Defence, Funded by Pragmalytics Technologies Pvt. Ltd., Kerala.
- **Co-PI** - Emotion Recognition for Creating a Homeostatic balance between Human and Robot in a Cobotics Framework, Technology Innovation Hub for Cobotics (i.e., Collaborative Robotics)[A Section-8 Company: I-Hub Foundation for Cobotics (IHFC)], IIT Delhi, approved by the National Mission on Interdisciplinary Cyber Physical Systems (NM-ICPS), DST, Govt. of India, 93.18 Lakhs Dec. 2020-June 2022.
- **PI-** Social Awareness For Covid-19 Through Ai Based Mobile App, DST, 19.25 Lakhs, Jan - Dec. 20-21.

Training programmes organised:

- ONGC Training Programs titled "Big Data Analytics, Artificial Intelligence, block chain Technology and IOT", Feb.24-28, 2020, IIITA.

Other activities:

- *Technology development:* Spiking Neural Network Model for Time Series Classification
- *Software development:* Time Series Analytics
- *Industry and institutions visits for research:* AKTU Lucknow, BIRAC New Delhi
- *Participation in the High Level Industry, Academia Interaction Programme, etc.:* BIRAC New Delhi, IIIT Una, NIT Jalandhar
- *Any other important activity not specified above:* Vice President, IEEE CIS UP Section



Dr. Ashutosh Mishra

Department: Applied Science

Designation: Associate Professor

Experience (Teaching/Research): 14 years



Dr. Anurika Vaish

Department: Management Studies

Designation: Associate Professor

Experience (Teaching/Research): 18 years, **Industry:** 1 year

New courses developed:

Title: Principles of Economics (B. Tech.- IT), Economics (MBA), Business Policy and Strategy (B. Tech. - EMT)

Course number: POE, MECO

Books and book-chapters published:

Sl. No.	Author(s)	Book Title	Publisher	Year	Place	Page
1	Sengupta, Sarthak, Apoorva & Vaish, Anurika	"Emotional Intelligence and Stress in Higher Educational Institutions of India during the COVID-19 Pandemic"	UGC Book series, 2021 Young Scholars' Research Paper Competition (Book chapter). - Best paper awarded by Mindshare Yuva and UGC	2021	India	In Press

Research papers published in journals:

Sl. No.	Author(s)	Article Title	Journal Name	Vol./No	Year
1	Sengupta, Sarthak & Vaish, Anurika	"Social networking mood recognition algorithm for conflict detection and management of Indian educational institutions".	Social Network Analysis and Mining, Springer Nature	10/89	2020

Average Impact Factor: (SNAM) – 2.27

Research papers published in conference proceedings (as a full paper):

S. No.	Author(s)	Article Title	Conference Title	Date-Month-Year	Remarks
1	Sengupta, Sarthak & Vaish, Anurika	"Strategic Educational Model for Development of Industry Fit Graduates in Educational Institutions"	AMLE Virtual Paper Development Workshop (in Academy of Management online Conference),	January 2021	Online mode



2	Sengupta, Sarthak, Apoorva, Munjal, Tina, Vaish, Dr. Anurika	"A Study on Goods and Services Tax (GST)"	Inter College Student Seminar 2020, ABESEC - STUGMA, GMA	May 2020	Online mode (First prize awarded for best research paper in Finance track)
3	Singh, Nimisha, Sengupta, Sarthak & Vaish, Dr. Anurika	"Human Resource Innovation in the Age of Disruption"	IIM-IIITB-INAIS Paper Writing Workshop, IIM Bangalore	March 2020	Online mode

Seminars and invited talks presented:

Title: Delivered a talk on "Creative Design Thinking for Effective Content Development"

Organization: Online Faculty Development Programme on Design Thinking organized by Kirori Mal College, University of Delhi

Date: October 2020.

Title: Delivered a talk on "Impact of COVID-19 on the Business World"

Organization: Webinar organized by Department of Management, NRI Group of Institutions

Date: June 2020

Conferences attended outside IIIT Allahabad:

1. AMLE Virtual Paper Development Workshop (in Academy of Management online Conference)
2. Inter College Student Seminar 2020, ABESEC - STUGMA, GMA
3. IIM-IIITB-INAIS Paper Writing Workshop, IIM Bangalore

Work done in project undertaken in the Institute:

Nodal Officer, Unnat Bharat Abhiyan - IIITA

Training programmes organized:

Other Activities:

- (a) **Awards and Honors:**



1. The research paper (Sarthak Sengupta, Apoorva & Anurika Vaish, "Emotional Intelligence and Stress in Higher Educational Institutions of India during the COVID-19 Pandemic", UGC Book series) was awarded as the best paper in the 2021 Young Scholars' Research Paper Competition and is accepted for publication in the UGC book series. (March 2021)
2. The research paper (Sarthak Sengupta, Apoorva, Tina Munjal, Anurika Vaish, "A Study on Goods and Services Tax (GST)", Inter College Student Seminar 2020, ABESEC - STUGMA, GMA) received first prize at Inter College Student Seminar 2020. It was awarded for the best research paper in the Finance track at ABESEC-STUGMA, GMA (May 2020)

(b) Continuing Education Activities

Name and type of the course organized - Organized "Colloquium on Information Flux and Its Impact on Societal Resilience: A Cause of Conflict or Concord". Technically co-sponsored by IEEE CIS UP section

Place, Dates, and profile of participants - Held at IIIT-Allahabad, August 22-23, 2020.

We had also received great interest from students, faculties, researchers, and industry practitioners from varied fields of the Conference tracks, ranging from Industry, Academia, Researchers, Business Delegates, Industry Experts, Information Security Experts, and Innovators to register in the event, exchange their ideas and collaborate.



Dr. Sonali Agarwal

Department: Information Technology

Designation: Associate Professor

Experience (Teaching/Research): 14 years



Dr. Sanjai Singh

Department: Electronics and Communication Engineering

Designation: Associate Professor

Experience (Teaching/Research): 16 Years

New courses developed:

Title: Quantum Computation and Quantum Information

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Vol./No.	Year	Page
1	Amit Singh, Chandravilash Rai, Sanjai Singh	Structural and electrical properties of Al/ BiFeO ₃ /ZrO ₂ / n-Si structure for non-volatile memory application	Applied Physics A	799/126	2020	1-11
2	Amit Singh, Chandravilash Rai, Sanjai Singh	Effect of insulator layer thickness on electrical properties of Al/ BiFeO ₃ /ZrO ₂ / p-Si for nonvolatile memory applications	Ferroelectrics Letters Section	47/4-6	2020	71-75
3	Amit Singh, Sanjai Singh	Lanthanum Doped BiFeO ₃ / ZrO ₂ Gate Stack for Ferroelectric Field Effect Transistors	Journal of Materials Science: Materials in Electronics	31/177	2020	16189-18198
4	Ajit Debnath, Vibhu Srivastava, Sanjai Singh, Sunn	Sol-gel derived BST (Ba _x Sr _{1-x} TiO ₃) thin film ferroelectrics for non-volatile memory application with metal- ferroelectric- semiconductor (MFS) structure	Applied Nanoscienc	10	2020	5511-5521
5	Surendra Kumar, Ankit Singh, Rashmi Singh, Sanjai Singh, Rachana Kumar, Pramod Kumar,	Facile h- MoO ₃ synthesis for NH ₃ gas sensing application at moderate operating temperature	Sensors & Actuators: B. Chemical	325/15	2020	128974



Dr. Rajat Kumar Singh

Department: Electronics and Communication Engineering

Designation: Associate Professor & HoD (ECE)

Experience (Teaching/Research): 15 years

Research papers published in Journals:

- Akhilesh Panchal and **Rajat Kumar Singh**, "EADCR: Energy Aware Distance based Cluster Head Selection and Routing Protocol for Wireless Sensor Networks," *Journal of Circuits, Systems, and Computers (World Scientific)*, Vol.30, No.4, pp.2150063, 2021.
- Akhilesh Panchal and **Rajat Kumar Singh**, "EHCR-FCM: Energy Efficient Hierarchical Clustering and Routing using Fuzzy C-Means for Wireless Sensor Networks," *Telecommunication Systems (Springer)*, 76, 251-263 (2021).
- Manoj Tolani, Sunny Sharma and **Rajat Kumar Singh**, "Energy-efficient adaptive GTS allocation algorithm for IEEE 802.15.4 MAC protocol," *Telecommun Syst (2020)*. <https://doi.org/10.1007/s11235-020-00719-0> (Springer), (Published Online in Sept'2020).
- Dipti Mishra, Satish Kumar Singh and **Rajat Kumar Singh**, "Wavelet-based Deep Auto Encoder-Decoder (WDAED) based Image Compression," *IEEE Transactions on Circuits and Systems for Video Technology*, (Accepted for publication in July 2020).
- Akhilesh Panchal and **Rajat Kumar Singh**, "FFTHR: Fitness Function based Two Hop Routing in WSN," *Internet Technology Letters (Wiley)*, DOI:10.1002/(ISSN)2476-1508 (Accepted for publication in July 2020).
- Manoj Tolani, Sunny Sharma and **Rajat Kumar Singh**, "Energy-Efficient Hybrid MAC Protocol for Railway Monitoring Sensor Network," *SN Applied Sciences (Springer)*, 2, 1404 (2020). <https://doi.org/10.1007/s42452-020-3194-1> (Published Online in July 2020).
- Soumit Samaddar Chaudhury, Seema Awasthi and **Rajat Kumar Singh**, "Dual band bandpass filter based on substrate integrated waveguide loaded with mushroom resonators," *Microw Opt Technol Lett. (Wiley)*, Vol.62, No.6, pp.2226-2235, June, 2020.
- Ankur Gupta, Harpreet Singh, Ankit Singh, **Rajat Kumar Singh** and Akhilesh Tiwari, "D-Shaped Photonic Crystal Fiber-Based Surface Plasmon Resonance Biosensors with Spatially Distributed Bimetallic Layers," *Plasmonics (Springer)*, (<https://doi.org/10.1007/s11468-020-01157-z>) Published Online, April 2020.



- Manoj Tolani, Sunny Sharma and **Rajat Kumar Singh**, "Adaptive Duty-Cycle-Enabled Energy-Efficient Bit-Map-Assisted MAC Protocol," *SN COMPUT. SCI.* 1, 144 (Springer), (<https://doi.org/10.1007/s42979-020-00162-7>) Published Online, April 2020.
- Ajay Kumar Tiwari, Seema Awasthi and **Rajat Kumar Singh**, "A Symmetrical Periodic Leaky Wave Antenna with Backward to Forward Scanning," *IEEE Antennas and Wireless Propagation Letters*, Vol.19, No.4, pp.646-650, April, 2020.

Average Impact Factor: Approx. 2.58 (8 Journals) IEEE, Springer, Wiley, World Scientific

Research papers published in Conference proceedings (as a full paper):

- Soumit Samaddar Chaudhury, Seema Awasthi and **Rajat Kumar Singh**, "Independent control over center frequency and bandwidth of bandpass filter based on SIW loaded with rectangular mushroom resonators," *IEEE AEMC 2020* pp. 302-304, India, December, 2020.

Other Activities:

- Organized Self-Financed Course-cum Workshop on Photonics Principles and Optical Networks (PPON-2020) during 29-31st May, 2020.



Dr. Vijay Kumar Chaurasiya

Department: Information Technology

Designation: Associate Professor, Associate Dean (SA), Chairman (CoW)

Experience (Teaching/Research): 17 years

New courses developed: 2

Title: 1. Wireless Networks

2. Internet of Things

Books and book-chapters published:

Sl.No.	Author(s)	Book Title	Publisher	Year	Place	Page
1	Gupta, Ayush; Verma, Ravinder; Shishodia, Mrigendra; Chaurasiya, Vijay	An Approach to End to End Anonymity	Springer, Cham	2020	US	145-155
2	Chaurasia, Vijay Kumar; Yunus, Alhasha; Singh, Madhusudan;	An overview of smart city: Observation, technologies, challenges and blockchain applications	Springer, Singapore	2020	Singapore	133-154

Research papers published in journals:

Sl.No.	Author(s)	Article Title	Journal Name	Vol/No	Year	Page
1	Lal, Nidhi; Kumar, Shishupal; Chaurasiya, Vijay Kumar;	A Road Monitoring Approach with Real-Time Capturing of Events for Efficient Vehicles Safety in Smart City	Wireless Personal Communications	114/1	2020	657-674
2	Singh, Sunakshi; Chaurasiya, Vijay Kumar;	Mutual authentication scheme of IoT devices in fog computing environment	Cluster Computing		2020	



Research papers published in conference proceedings (as a full paper):

Sl. No.	Author(s)	Article Title	Conference Title	Period
1	Prabhakaran, Ayonya; Chaurasiya, Vijay Kumar; Singh, Sunakshi; Yadav, Suneel;	An Optimized Deep Learning Framework for Network Intrusion Detection System (NIDS)	2020 International Conference Engineering and Telecommunication (En&T)	06.01.2020

Seminars and invited talks presented:

Title: Research Issues and Technologies for the Internet of Things (IoT) Deployment
 Organization: Computer Society of India, Allahabad Chapter
 Date: 26.7.2020

Conferences attended outside IIIT Allahabad:

- Participated EN&T 2020 organized by MIPT, Moscow, Russia
- Participated in IHCI 2020 organized at ROBEX, EXCO, Daegu, South Korea by The Korea Institute of Convergence Signal Processing (KICSP).

Work done in project undertaken in the Institute:

- Working as Estate Officer, Associate Dean (SA).
- Working on popularizing the benefits of Information and Communication Technology (ICT) among the farmers and rural population of Allahabad region awarded by DST, Govt.
- Working on RFID based Real Time Traffic Management System using Internet-of-Things (IoT) Protocols awarded by IIIT Allahabad.

Other Activities:

(a) Industry visited and visits to other Institutes for research

- Visited IIT BHU, MNNIT, Prayagraj, IIT Kanpur, ITI Mankapur, ITI Raibareilly for academic and industrial collaboration.

Participation in the High Level Industry, Academia Interaction Programme during Summer Programs

- Coordinator of Indian Telephone Industries, Bangalore, Raibareilly, Mankapur.
- Coordinating with Ministry of Health, Government of UP.
- Coordinating with IIT Kanpur on projects related to IoT and information security.



Dr. Manish Kumar

Department: Information Technology

Designation: Associate Professor

Experience (Teaching/Research): 19 years

New courses developed:

Title: 1. Advance Data Analytics (IADA730E)

2. Development of Data Analytics Lab

3. Development of CordIoT (Member)

Research papers published in journals:

Sl.No.	Author(s)	Article	Journal	Vol/No.	Year	Page
1	Prashant Kumar Shukla, Abhishek Singh, Shekhar Verma and Manish Kumar	"A Rotation based Regularization Method for Semi-supervised Learning"	<i>Pattern Analysis and Application</i>	Accepted	2021	1-19
2	Prashant Kumar Shukla, Abhishek Singh, Shekhar Verma and Manish Kumar	"Interpreting SVM for medical images using Quadtree."	<i>Multimedia Tool and Applications</i>	79	2020	29353-29373
3	Adarsh Prasad Behera, Abhishek Singh, Shekhar Verma and Manish Kumar	"Manifold Learning with Localized Procrustes Analysis Based WSN Localization."	<i>IEEE Sensors Letters</i>	4/10	2020	1-4

Average Impact Factor:

- Springer: *Pattern Analysis and Application* (Impact Factor 1.512)
- Springer: *Multimedia Tool and Applications* (Impact Factor 2.313)
- *IEEE Sensors Letters* (Early Access)

Research papers published in conference proceedings (as a full paper):

Sl.No.	Author(s)	Article	Conference Title	Period	Page
1	Behera, Adarsh Prasad, Sayli Godage, Shekhar Verma, and Manish Kumar	"Regularized Deep Convolutional Generative Adversarial Network."	Computer Vision and Image Processing (CVIP)	December 4-6, 2020	1-12



2	Tinku Singh, Ashwin Raut, Satakshi, Dhruv Agarwal, Rahul Jha, Anant Rai, and Manish Kumar	"Food Recommendation System using Neural Collaborative Filtering and Sentiment Analysis"	Interdisciplinary Research (ICAIR)	July 2020	
3	Singh, Vivek Kumar, Anubhav Shivhare, and Manish Kumar	"Sparse Matrix Completion for Effective Recommendation System"	Communication, and Signal Processing	2020	851-859

Seminars and invited talks presented:

- "Hierarchical clustering", Faculty Development Programme (ATAL-AICTE) on "Machine Learning and Optimization", 1 - 5 February, 2021, IIIT- Allahabad, Prayagraj. (Online Mode)
- "Database Management in Mobile Computing/Sensor Network", Faculty Development Programme on "Artificial Intelligence and Ambient Intelligence – Phase 1", 25th January to 6th February 2021, Hindustan Institute of Technology and Science , Chennai. (Online Mode)
- "Clustering for IoT Data", Faculty Development Programme (ATAL-AICTE) on "Data Science for IoT", 9- 13 October, 2020, IIIT- Allahabad, Prayagraj. (Online Mode)
- "Time Series Data Clustering", Workshop on "Time Series Data Analysis (TSDA-2020)", 28th -29th August, 2020, IIIT- Allahabad, Prayagraj. (Online Mode)

Conferences attended outside IIIT Allahabad:

- Session chair of VCAS 2020: Third International Conference on VLSI, Communication, and Signal Processing held at MNNIT Allahabad in October 2020.
- Session chair of International Conference on Advancements in Interdisciplinary Research (ICAIR2020) held at IIIT Allahabad in July, 2020.

Work done in project undertaken in the Institute:

- Design and Development of Dimensionality Reduction Techniques for Cyber Physical Systems (ICPS Programme, DST).
- IOT based water quality assessment for river Ganga at Allahabad (IIIT-Allahabad) (Completed)



Training programmes organized:

- Chairman of Committee, New course development Titled as “M.tech in Data Science and Analytics” for the Department of IT (Complete Program).
- Member of Advisory Board, New course Titled “M.tech in Data Science & Analytics” for the Department of Applied Science (Course structure & Syllabus).

Other Activities:

Continuing Education Activities

- Program Coordinator for Certificate course on “MLBDA” at IIIT (CSTCP) & Talent Edge (Industry person).
- Coordinator of workshop titled as ‘Faculty Development Programme on Data Science for IoT’ (9-13 Oct, 2020) in IIIT Allahabad.
- Coordinator of workshop titled as ‘Self-Financed Course-cum Workshop on Time Series Data Analysis’ (28-29 August, 2020) in IIIT Allahabad.

Participation in the High Level Industry, Academia Interaction Programme during Summer Programs

- Consultancy and Advisory: Advisor, Allahabad SMART CITY Project

Any other important activity not specified above.

- Professional Membership: *SENIOR Member*, IEEE
- Mentor-Startup : “Social Vaidya Medical Pvt. Ltd.” By IIIT Alumni



Dr. Satish Kumar Singh

Department: Information Technology

Designation: Associate Professor

Experience (Teaching/Research): 16 years, **Industry:** 01

New courses developed:

Title: Visual Recognition; Data Compression; Deep Learning; Biometrics

Books and book-chapters published:

1. Book Title: Computer Vision and Image Processing: 5th International Conference, CVIP 2020, Prayagraj, India Volume I, II, & III
Authors: Satish Kumar Singh, Partha Roy, Balasubramian Raman, and P Nagabhushan,
Year: 2021
Publisher: Springer Nature
2. Book Title: Biomedical Signal and Image Processing with Artificial Intelligence.
Chapter Details: An Object Aware Hybrid U-Net for Breast Tumour Annotation,
Authors: Suvidha Tripathi, and Satish Kumar Singh
Year: 2021
Publisher: EAI and Springer

Research papers published in journals:

1. Dipti Mishra, Satish Kumar Singh, and Rajat Kumar Singh "Wavelet-based Deep Auto Encoder-Decoder (WDAED) based Image Compression," IEEE Transactions on Circuits and Systems for Video Technology, Accepted (IEEE) [IF: 4.05]
2. Sumit Kumar, and Satish Kumar Singh, "Occluded Thermal Face recognition using Bag ofCNN (BoCNN)," IEEE Signal Processing Letters, vol.27, no. 17, pp. 975-979, 2020 (IEEE) [IF: 3.26]
3. Anamika Jain, Satish Kumar Singh, and Krishna Pratap Singh "Signature Verification using Geometrical Features and Artificial Neural Network Classifier," Neural Computing and Applications, Accepted (Springer) [IF:4.77]



4. Anamika Jain, Satish Kumar Singh, and Krishna Pratap Singh "Multitask learning using GNet features and SVM classifier for Signature Verification," IET Biometrics, Accepted (IET) [IF:2.2]
5. Suvidha Tripathi, and Satish Kumar Singh, "Cell Nuclei Classification In Histopathological Images using Hybrid OLConvNet," ACM Transactions on Multimedia Computing, Communications, and Applications, vol.16, no.1s, pp.1-22, art.32, 2020 (ACM) [IF: 2.5]
6. Suvidha Tripathi, and Satish Kumar Singh "An End-to-End Breast Tumour Classification Model Using Context-Based Patch Modelling- A BiLSTM Approach for Image Classification," Computerized Medical Imaging and Graphics, Submitted (Elsevier) [IF: 3.75]
7. Kapil Mishra, Satish Kumar Singh, Sannihith Kavala, and P. Nagabhushan, "Efficient Collusion Resistant Multi-Secret Image Sharing," Multimedia Tools and Applications, Accepted (Springer) [IF: 2.34]
8. Suranjan Goswami, and Satish Kumar Singh "A Simple Deep Learning Based Image Illumination Correction Method for Paintings," Pattern Recognition Letters, Accepted (Elsevier) [IF:3.73]

Average Impact Factor: 3.3275

Name of the major journal in which publication are made:

1. IEEE Transactions on Circuits and Systems for Video Technology,
2. IEEE Signal Processing Letters,
3. ACM Transactions on Multimedia Computing, Communications, and Applications,
4. Springer Neural Computing and Applications,
5. IET Biometrics,
6. Elsevier Computerized Medical Imaging and Graphics
7. Elsevier Pattern Recognition Letters

Research papers published in conference proceedings (as a full paper):

1. Nayaneesh Mishra, Satish Kumar Singh, "Face Recognition using Sf3CNN with Higher Feature Discrimination" at 5th IAPR International Conference on Computer Vision and Image Processing, (IAPR CVIP) December 2020
2. Deeksha Khash, Sumit Kumar, Dr. Satish Kumar Singh, "Facial Occlusion Detection and Reconstruction using GAN" at 5th IAPR International Conference on Computer Vision and Image Processing, (IAPR CVIP) December 2020



3. Dipti Mishra, Satish Kumar Singh, Dr. Rajat Kumar Singh, "Near Lossless Medical Image Compression using Dual Autoencoder Model" at 7th IEEE International Conference on Electrical, Electronics and Computer Engineering, (IEEE UPCON) December 2020

Seminars and invited talks presented:

1. Dec 01–06 2020 Event: 3rd One-Week Self Sponsored Short Term Course, IIIT Allahabad-211015, India Topic: Advances in Deep Architectures for Signal, Image and Vision Applications Role: Main Teacher
2. Sep 03, 2020 Event: Webinar: Jointly organized by IEEE S.B & G. L. A. University Mathura, India Topic: How to Write a Research Paper: Tips and Tricks Role: Invited Speaker
3. Jul 12, 2020 Event: Webinar: Jointly organized by IEEE S.B Jain Student Branch Nagpur & IEEEERCOEM Student Branch Nagpur, India Topic: Image Classification: A Data Driven approach Role: IEEE Virtual Speaker
4. Jul 12, 2020 Event: Webinar: Jointly organized by IEEE S.B Jain Student Branch Nagpur & IEEEERCOEM Student Branch Nagpur, India Topic: Image Classification: A Data Driven approach Role: IEEE Virtual Speaker

Conferences attended outside IIIT Allahabad:

Conference name, organizing institution/society, Date, Type of participations, e.g. Session Chaired, Invited or contributed paper presentation, Panel discussion, etc.

1. Dec 18–19, 2020 Event: 2nd International Conference on Advances in Computing, Communication Control, and Networking, GU Greater Noida, India Topic: IEEE Conference Role: General Chair
2. Dec 03–05, 2020 Event: 4th International Conference on Information and Communication Technology, IIITDM Kancheepuram Chennai-600127, India Topic: IEEE Conference Role: General Chair
3. Dec 04–06, 2020 Event: 5th International Conference on Computer Vision and Image Processing Indian Institute of Information Technology, Allahabad-211012, India Topic: IAPR Conference Role: Conference Chair

Work done in project undertaken in the Institute:

2021 – 2023

Title: Design of Efficient Descriptors for Biomedical Image Retrieval in Computer Assisted Diagnosis



Funding Agency: Department of Science and Technology (DST), India and Deutscher Akademischer Austauschdienst (DAAD), Germany

Amount: Rs. 20,00,000/- Only.

Status: Ongoing

2019 – 2021

Title: A Web Browser based Intelligent Kernel Tool for Automatic Detection and Blocking of Obscene Image and Video Contents in Real Time

Funding Agency: Ministry of Home Affairs, Government of India

Amount: Rs. 38,30,400/- Only.

Status: Ongoing

2019 – 2020

Title: Image Super-resolution

Funding Agency: Defence Institute of Psychological Research, Defence Research and Development Organisation, Government of India.

Amount: Rs. 9,22,000/- Only.

Status: Completed

Training programmes organized:

1. Dec 01–06 2020 Event: 3rd One-Week Self Sponsored Short-Term Course, IIIT Allahabad-211015, India Topic: Advances in Deep Architectures for Signal, Image and Vision Applications Role: Workshop & Summer School Coordinator

Other Activities:

- (a) **Software Developed:** Algorithmic Trading
- (b) **Awards and Honors:** Title, Awarded by
 - i. Fellow - Institute of Engineers, India
 - ii. Fellow - Institute of Electronics and Telecommunication Engineers, India
 - iii. Research Excellence Award, Amity University, Greater Noida
 - iv. Chair, IEEE Uttar Pradesh Section, India
- (c) **Continuing Education Activities**
 - i. Dec 01–06 2020
 - Event: 3rd One-Week Self Sponsored Short-Term Course



Place: IIIT Allahabad-211015, India

Topic: Advances in Deep Architectures for Signal, Image and Vision Applications

Role: Workshop & Summer School Coordinator

Approx Participants: 35

(d) Any other important activity not specified above.

Guest-Editor, Neural Computing and Applications in Computer Vision and Image Processing (Springer-NCAA)

<https://www.springer.com/journal/521/updates/17921070>

Guest-Editor, Springer Nature Computer Science SI on Recent Trends in Computer Vision(Springer-NCS)

<https://www.springer.com/journal/42979/updates/17257234>

Guest-Editor, Springer Nature Computer Science SI on Progress in Image Processing(Springer-NCS)

<https://www.springer.com/journal/42979/updates/17257234>

Associate-Editor, IET Image Processing (IET-IPR)

<https://digital-library.theiet.org/content/journals/iet-ipr>

Associate-Editor, International Journal of Pattern Recognition and Artificial Intelligence(WS-IJPRAI)

<https://www.worldscientific.com/worldscinet/ijprai>



Dr. Shailendra Kumar

Department: Management Studies

Designation: Associate Professor & HoD

Experience (Teaching/Research): 19 years

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Year
1	Agarwal, S., Kumar, S., and Adichwal, N. K.	Effect of marketing strategies on the market performance and a comparative study of online travel agencies in India	Journal of Public Affairs (ISSN: 1479-1854) (Wiley Publication) (ESCI & ABDC "B" Indexed)	Accepted for Publication (August 2020)

Average Impact Factor:

International Journal of Information Management (Elsevier Publication) (5-year Impact Factor 14.098) SSCI Indexed

Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	ISBN	Date-Month-Year	Page
1	Agarwal, S., Kumar, S., and Goel, U.	News Media Sentiments and Stock Markets: The Indian Perspective	IEEE International Conference on "Industrial Engineering and Engineering Management (IEEM2020)" organized by IEEM (Singapore)	9781538672204	14-17 December, 2020,	309-313

Seminars and invited talks presented:

Delivered an Invited Expert talk on the topic "Development of Theoretical Framework and Statistical Model for Research" during e-FDP titled "Quality Research Paper Writing and Publishing in High Impact Journals, Research Methodology" held at Ajay Kumar Garg Institute of Management (AKGIM) Ghaziabad, Uttar Pradesh on July 29, 2020.

Delivered an Invited Expert lecture on the topic "Chinese App Ban: Opportunity for India" during Webinar titled "Chinese App Banned: Pros and Cons" held at L D C Institute of Technical Studies Allahabad, Uttar Pradesh on 10th October 2020.



- Delivered an Invited Expert lecture on the topic “Corporate Finance” under Prof. S.B. Singh Memorial Lecture Series organized by Deptt. Of Business Administration, MJP Rohilkhand University Bareilly (UP) on 12th February, 2021.
- Delivered an Invited Expert lecture on the topic “Financial Management in MSME” under DST sponsored Training Program (FDP) titled "Making Self Sufficient Entrepreneurs & Innovators (February 12-23, 2021)" held at Department of Management Studies, IIITA on February 21, 2021.
- Delivered an Invited Expert lecture on the topic “Cost of Project, Sources of Finance & Profitability” under DST sponsored Training Program (FDP) titled "Making Self Sufficient Entrepreneurs & Innovators (February 12-23, 2021)" held at Department of Management Studies, IIITA on February 22, 2021.
- Srivastava, A., Kumar, S., and Goel, U. (2021). “Unlocking Investors’ Brain: A Review of Neurofinance”, International Conference on “Business Research and Innovation (ICBRI)” 26-27 February, 2021, organized by MDI (Murshidabad).
- Invited as an Expert for panel discussion on the topic “Role & Responsibilities of Supporting Agencies: DIC, SIDC, DI-MSME & Support available from Financial Institutions including Banks” under DST sponsored Training Program (FDP) titled "Making Self Sufficient Entrepreneurs & Innovators (March 1-12, 2021)" held at Department of Management Studies, IIITA on 5th March, 2021.
- Delivered an Invited Expert lecture on the topic “Cost of Project, Sources of Finance & Profitability” under DST sponsored Training Program (FDP) titled "Making Self Sufficient Entrepreneurs & Innovators (March 1-12, 2021)" held at Department of Management Studies, IIITA on March 11, 2021.

Work done in project undertaken in the Institute:

- Completed IIITA Sponsored Research Project (January, 2020) titled “Stock Market Response to Information Diffusion through Internet Sources: An empirical Study in Indian Context” sanctioned on November, 2017.
- Completed ICSSR Sponsored Research Project titled “Realisation of Pradhan Mantri Jan Dhan Yojna (PMJDY) Objectives towards Financial Inclusion: A Review of Purvanchal U.P. Region” sanctioned on March, 2019.

Training programmes organized:

- Organized and Conducted a 3-day Workshop on the topic “**Crafting Research**” on 17th -19th December, 2020 at Department of Management Studies, Indian Institute of Information Technology (IIIT-A) Allahabad.

Any other important activity not specified above:

- Supervised Ms. Jeeya Prakash from Thapar Institute of Engineering and Technology, on the topic “**Basics and Understanding of neurofinance**” under Winter Internship Program during 1st December- 31st January, 2021 at Indian Institute of Information Technology (IIIT), Allahabad.



Dr. Krishna Pratap Singh

Department: Information Technology

Designation: Associate Professor

Experience (Teaching/Research): 17 years

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Vol./No.	Year	Page
1	A Jain, SK Singh, KP Singh	Signature verification using geometrical features and artificial neural network classifier	Neural Computing and Applications	33/12	2021	6999-7010
2	A Jain, SK Singh, K Pratap Singh	Multi-task learning using GNet features and SVM classifier for signature identification	IET Biometrics	10/2	2021	117-126
3	A Jain, SK Singh, KP Singh	Handwritten signature verification using shallow convolutional neural network	Multimedia Tools and Applications	79/27	2020	19993-20018

Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year	Page
1	MD Aaditya, DM Lal, KP Singh, M Ojha	Layer Freezing for Regulating Fine-tuning in BERT for Extractive Text Summarization	PACIS 2021 Proceedings	188	12-14, July 2021	
2	DM Lal, AK Singh, KP Singh	Deep Hybrid Summarizer with Reinforced Sentence Selection	PACIS 2021 Proceedings	144	12-14, July 2021	
3	R Agrawal, UP Singh, KP Singh	Few Shots Learning: Caricature to Image Recognition Using Improved Relation Network	CVIP		4-6, Dec., 2020	162-173
4	IK Sinha, KP Singh, S Verma	DP-ANN: A new Differential Private Artificial Neural Network with Application on Health data (Workshop Paper)	IEEE BigMM	2	24-26, Sep., 2020	351-355



Conferences attended outside IIIT Allahabad:

1. Session Chaired: International Conference on Soft Computing for Problem Solving - SocProS 2020, 18-20 Dec., 2020, IIT Indore.
2. Session Chaired: ICCIS 2020 from 26-27 Dec. 2020, RTU Kota.

Work done in project undertaken in the Institute:

- Funded by Erasmus+ Programme of the European Union-(2020-2022), Projects (CO-PI-75 Lakh Rs), TEAL 2.0
- Funded By DST-ICPS (2019-2021), CO-PI (36.0 Lakh Rs), Design and Development of Dimensionality Reduction Techniques for Cyber Physical System

Seminars and invited talks presented:

1. IIT Roorkee; Essential Mathematics for Machine Learning with hands-on training TEQIP-III (November 23-27, 2020); Three Talks on
 - Probability for ML (MLE & MAP)
 - Gaussian Mixture Model
 - Bayesian Network and HMM
2. NIT Raurkela;
 - Short Term Course on "Deep Learning Applications in Image Processing under Security ambit" from 5th-9th October 2020; Talk Title: Transfer Learning
 - Short term course titled "Machine/Deep Learning for Image and Video Processing Applications" from 24th-28th February 2021; Talk Title: Representation Learning: Zero shot to Meta Learning
3. NIT Hamirpur; Short term course on "Recent Trends in Artificial Neural Networks and Optimization" during Dec 18-22, 2020. Talk Title: Representation Learning: ANN – CNN
4. NIT Jalandhar; Five Days FDP/Workshop on "Essential tools in Optimization", 25-29 June, 2020. Talk Title: Convex and Non-Convex Optimization and its uses in Machine Learning
5. IIIT Naya Raipur; Faculty Development Program (FDP) on "*Deep Learning and Applications in Computer Vision and Natural Language Processing*", 20-24Jan, 2020. Talk Title: Transfer Learning: Application in Vision and NLP
6. Gauhati University; Refresher Course on Machine Learning & Data Science (IDC) ; 15/02/2021 to 28/02/2021; Two Talks:



- Fundamentals of Machine Learning, Concept of Data Science, Applications - I
- Fundamentals of Machine Learning, Concept of Data Science, Applications -II

Workshop/ Conference/ Training programmes Organized

1. Role- Coordination & Panel Expert

Joint FDP IIITA & VTU Belgavi, 3-7 Aug, 2020, Exemplary Practices in Teaching-Learning and Evaluation of Courses in Computer Science' & Information Technology

2. Role- Convener

5th IAPR International Conference on Computer Vision & Image Processing (CVIP-2020), 4-6 Dec., 2020- IIIT Allahabad

3. Role- Coordinator & Expert

ATAL FDP- "AI- Machine Learning & Optimization", 1-5 Feb, 2021, IIIT Allahabad.

**Dr. Pramod Kumar****Department:** Applied Sciences**Designation:** Associate Professor**Experience (Teaching/Research):** 13 years**New courses developed:**

- Solar Energy and Applications
- Thin Film Physics and Technology
- Nanoscience & Nanotechnology
- Condensed Matter Physics
- Materials Informatics
- Spintronic and Magnetic Materials
- Engineering Workshop
- Solid State Physics

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Vol./No.	Year	Page
1	Surendra Kumar, Ankit Singh, Rashmi Singh, Sanjai Singh, Pramod Kumar and Rachana Kumar	Facile h-MoO ₃ synthesis for NH ₃ gas sensing application at moderate operating temperature	Sensors and Actuators B: Chemical	325/15	2020	128974
2	Rachana Kumar, Sunil Singh Kushvaha, Mahesh Kumar, Muthusamy Senthil Kumar, Govind Gupta, Kavindra Kandpal & Pramod Kumar	Flexible perylenediimide/Ga N organic-inorganic hybrid system with exciting optical and interfacial properties	Scientific Reports	10	2020	10480
3	Ahmad, Faizan and Singh, Sukhvir and Pundir, Sandeep Kumar and Kumar, Rachana and Kandpal, Kavindra and Kumar, Pramod	Effect of Doping and Annealing on Thermoelectric Properties of Bismuth Telluride Thin Films	Journal of Electronic Materials	49	2020	4195–4202



4	Faizan Ahmad, Kavindra Kandpal, Naresh Kumar, Rachana Kumar and Pramod Kumar	Effect of different metallic contacts on the device performance of a p-n heterostructure of a topological insulator and silicon (p-Bi ₂ Te ₃ /n-Si)	IEEE Transactions on Electron Devices	67/12	2020	5388 - 5395
5	Ankit Singh, Ankur Gupta, Akhilesh Tiwari, Pramod Kumar	Heterogeneous integration of TiO ₂ epitaxial growth for one-dimensional photonic crystal: An experimental and theoretical analysis	Materials Today Communications	25	2020	101367
6	Sanjay Sharma, Faizan Ahamad, Ankit Singh, Akhilesh Kumar Patel, Pramod Kumar	Anomalous Magnetic Properties in LaFe _{11.5} Al _{1.5}	Phys. Chem. Chem. Phys.,	22	2020	3425-3433
7	Rashmi Singh, Faizan Ahmad, Kashif Nazeer, Rachana Kumar, Naresh Kumar, Animesh K. Ojha, Sunil Singh Kushvaha & Pramod Kumar	Material Study of Co ₂ CrAl Heusler Alloy Magnetic Thin Film and Co ₂ CrAl/n-Si Schottky Junction Device	Journal of Electronic Materials	49	2020	3652–3658
8	Komal Bhardwaj , Rachana Kumar, Naveen J. Kindo, Nikita Vashistha, Akhilesh Kumar Patel, Mahesh Kumar and Pramod Kumar	Synthesis of graphene oxide with lower band gap and study of charge transfer interaction with perylenediimide	New J. Chem	44	2020	12704-12714
9	Ankit Singh, Surendra Kumar, Pradyumna Bawankule, Ankur Gupta, Rachana Kumar, Pramod Kumar, Akhilesh Tiwari	Selective wavelength optical filters from mixed polymorph and binary integration of MoO ₃ multilayer structures	Optical Materials	111	2021	110709



10	Faizan Ahmad, Kavindra Kandpal, and Pramod Kumar	Electrical properties of a metal-germanium-topological insulator (metal/n-Ge/p-Bi ₂ Te ₃) heterostructure devices	Journal of Materials Science: Materials in Electronics	31	2021	8106-8121
11	Sanjay Sharma, A.K.Patel, Pramod Kumar	Critical analysis of chemical and hydrostatic pressure-induced Gd ₅ Si ₂ Ge ₂ alloy	Materials Today Communications	26	2021	102091

Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	Date-Month-Year	Page
1	Sanjay Sharma, Rashmi Singh, Gyanendra Kumar Maurya, AnkitSingh, FaizanAhmad, AkhileshTiwari, PramodKumar	A comparative study on magnetocaloric effect in NdRu ₂ Si ₂ and NdRu ₂ Ge ₂	International Conference on Advanced Materials and Nanotechnology	February 20-22, 2020	149-152
2	Ankit Singh, Alok Raj, Ankur Gupta, Akhilesh Tiwari and Pramod Kumar	Split ring resonator biosensor-an innovative design and analysis	IEEE 8th International Conference on Photonics ICP 2020	May 11-30 2020	117-118
3	Rashmi Singh, Amit Srivastava, Naresh Kumar, and Pramod Kumar	Effect of Substrates & Deposition Temperatures on Structural and Magnetic Properties of Co ₂ MnSi Deposited by PLD	International Conference on Mechanical, Materials and Renewable Energy (ICMMRE 2019)	February 6-7, 2020	030001

Seminars and invited talks presented:

S.No.	Title	Institution/Organization	Mode	Year
1	Behavior study of P-N Eterojunction of topological insulator	International Conference on "Smart Materials for Sustainable Technology (SMST-2020) ", 22-25 February 2020	Offline/Online	2020
2	Topological materials	Materials Synthesis and	Offline/Online	2020



	(Bi ₂ Te ₃ /Bi ₂ Se ₃) and its applications	Characterization Techniques, 7-11 September, 2020 at NIT Uttarakhand		
3	XRD data Analysis	Materials Synthesis and Characterization Techniques, 7-11 September, 2020 at NIT Uttarakhand	Offline/Online	2020
4	XRD data analysis: material/biomaterial prospective	Intelligent Biomedical-Micro-Electro-Mechanical System, From 22-09-2020 to 28-09-2020 at the Indian Institute of Information Technology-Allahabad (IIIT-A)	Offline/Online	2020

Conferences attended outside IIIT Allahabad:

S.No.	Conference Name	Organizing Institution/ Society	Mode	Date-Month-Year	Type of participation
1	International Conference on "Smart Materials for Sustainable Technology (SMST-2020)", 22-25 February 2020	IIT BHU, IIT Delhi, IIT Goa	Offline/ Online	22-25 February 2020	Invited Talk
2	International Conference on Advanced Materials and Nanotechnology	JIT, Noida	Offline/ Online	February 20-22, 2020	Oral
3	Materials Synthesis and Characterization Techniques	NIT, Uttarakhand	Offline/ Online	7-11 Sep' 2020	Invited talk
4	Intelligent Biomedical-Micro-Electro-Mechanical System	IIIT	Offline/ Online	22-09-2020 to 28-09-2020	Invited talk

Training programmes organized:

- 3rd Workshop on advanced materials and instruments based engineering (AMIBE-2021)
- Physics Workshop

**Dr. Akhilesh Tiwari****Department:** Applied Sciences**Designation:** Associate Professor & Head (First Year B Tech)
Chairman, Senate Post Graduate Committee (SPGC)**Experience (Teaching/Research):** 22 years, **Industry:** 01 year**Books and book-chapters Published:**

Sl.No.	Author(s)	Book Title	Publisher	Year	Place
1	Tiwari, Akhilesh; Pramod Kumar	Recent Advances & Innovations in Physics Teaching & Research	LAP Lambert Academic Publishing ISBN: 9786200787651	2020	Germany

Research papers published in journals:

Sl.No.	Author(s)	Article Title	Journal Name	Vol./No.	Year	Page
1	Singh, Ankit; Surendra Kumar; Bawankule, Pradyumna; Gupta, Ankur; Rachana Kumar; Pramod Kumar; Tiwari, Akhilesh	Selective wavelength optical filters from mixed polymorph and binary integration of MoO ₃ multilayer structures	Optical Materials	111	2021	110709
2	Manoj Johri, Akhilesh Tiwari , Saumya Saxena, Sanjeev Johri, Dinesh Kumar, and Dharmendra Pratap Singh	Study of the dielectric response and thermodynamical properties of PentylCyano Biphenyl (PCB) Liquid Crystal using microwave cavity spectrometer as a probe	Measurement	166	2020	108156 (IF3.364)
3	Ankit Singh, Ankur Gupta, Akhilesh Tiwari and Pramod Kumar	Heterogeneous integration of TiO ₂ epitaxial growth for one-dimensional photonic crystal: an experimental and theoretical analysis	Materials Today Communications	25	2020	101367 (IF-2.335)
4	Ankur Gupta, Harpreet Singh, Ankit Singh, Rajat	D-Shaped Photonic Crystal Fiber-Based Surface Plasmon	Plasmonics	15	2020	1323 (IF-2.678)



	Kumar Singh, Akhilesh Tiwari	Resonance Biosensors with Spatially Distributed Bimetallic Layers				
5	Vidhu Agarwal, Dinesh Kumar, Pritish Varadwaj, Akhilesh Tiwari	Water activity and biomass estimation using digital image processing in Solid-State fermentation	Bioresource Technology	380	2020	123277 (IF-7.539)
6	S Sharma, Rashmi Singh, Gyanendra Kumar Maurya, Ankit Singh, Faizan Ahmed, Akhilesh Tiwari and Pramod Kumar	A comparative study on magnetocaloric effect in NdRu_2Si_2 and NdRu_2Ge_2	Materials Today: Proceedings	28/1	2020	149 (IF-1.3)

Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year	Page
1	A. Singh, A. Raj, A. Gupta, A. Tiwari and P. Kumar	Split ring resonator biosensor-an innovative design and analysis	2020 IEEE 8th International Conference on Photonics (ICP), 2020	S17	16-18 March 2020	117-118

<https://doi.org/10.1109/ICP46580.2020.9206451>

Seminars and invited talks presented:

1. Title: Split ring resonator biosensor-an innovative design and analysis

Organization: IEEE 8th International Conference on Photonics 2020 (ICP2020) held from 16-18 March 2020, Kelantan Malaysia.

Date: 16-18 March 2020 (Held later in May 2020 due to COVID19 Pandemic lockdown)

2. Invited talk delivered on the topic "Overview of Simulation Software in Electrical Engineering: Specific to COMSOL Multi physics" on 11-02-2021 at RTU (ATU) TEQIP-III Sponsored Workshop on "Simulation Software for Electrical Engineers" Organized by Rajasthan Technical University, Kota & Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur held from 08-02-2021-12-02-2021.

Conferences attended outside IIIT Allahabad:

- IEEE 8th International Conference on Photonics 2020 (ICP2020) held from 16-18 March 2020, Kelantan Malaysia.

**Dr. S. Venkatesan****Department:** Information Technology**Designation:** Associate Professor**Experience (Teaching/Research):** 14 years**Books and book-chapters published:**

S.No.	Author(s)	Book Title	Publisher	Year	Page
1	Subramanian Venkatesan, Shubham Sahai, Sandeep Kumar Shukla and Jaya Singh	Secure and Decentralized Management of Health Records, Applications of Blockchain in Healthcare	Springer	2020	115-139

Research papers published in journals:

S. No.	Author(s)	Article Title	Journal Name	Vol/No.	Year	Page
1	Pravin Mundhe, Vijay Kumar Yadav, Abhishek, Shekhar Verma and S Venkatesan	Ring Signature-Based Conditional Privacy-Preserving Authentication in VANETs	Wireless Personal Communications	114	2020	853–881
2	Vijay Kumar Yadav, Shekhar Verma, S. Venkatesan	Efficient and Secure Location-Based Services Scheme in VANET.	IEEE Transactions on Vehicular Technology	69/11	2020	13567-13578
3	Raghav, Nitish Andola, S.Venkatesan and ShekharVerma	PoEWAL: A lightweight consensus mechanism for blockchain in IoT	Pervasive and Mobile Computing	69	2020	-
4	Rakesh Kumar Yadav, Abhishek, Shekhar Verma and S Venkatesan	Cross-covariance based affinity for graphs	Applied Intelligence	51	2021	3844–386
5	Jaya Singh and S.Venkatesan	Blockchain mechanism with Byzantine fault tolerance consensus for Internet of Drones services	Transactions on Emerging Tele communications Technologies	32/4	2021	-

Average Impact Factor: Major Journal: IEEE Transactions on Vehicular Technology; 2.8156



Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	Date-Month-Year	Page
1	Venkatesan Subramanian, Yuvaraj Rajendra, Shubham Sahai and Sandeep Kumar Shukla	Decentralized Device Authentication Model Using the Trust Score and Blockchain Technology for Dynamic Networks	3rd IEEE Blockchain Conference	2-6 Nov. 2020	116-125
2	Jaya Singh, Yuvaraj Rajendra, S. Venkatesan, and Om Prakash Vyas	Lightweight Authentication and Key Establishment Scheme for Smart Metering Infrastructure	International Conference on Cybersecurity in Emerging Digital Era (ICCEDE)	9 – 10 Oct. 2020	-

Seminars and invited talks presented:

- Title: Blockchain and its Applications
Organization: Computer Society of India, Allahabad Chapter
Date: 13th September 2020
- Title: Secure eHealth Record Management System using the Blockchain Technology
Organization: DST-UKIERI Virtual workshop on Adversarial Cyber Security, Jointly organized by Indian Institute of Technology (IIT) Mandi, in collaboration with London Metropolitan University and Centre for Multidisciplinary Innovation and Collaboration (C-MRiC)
Date: 24th September 2020
- More than 20 invited talks on Blockchain and Cyber Security delivered in the ATAL Faculty Development programmes.

Conferences attended outside IIIT Allahabad:

- 3rd IEEE Blockchain Conference organized by St. Francis Xavier University, Canada and University of West Attica, Greece in Virtual Mode to present the contributed paper.

Work done in project undertaken in the Institute:

1. Department of Science & Technology - Indo-Norway Collaborative Project
Title: Cyber-Physical Security in Energy Infrastructure of Smart Cities (CPSEC)



Recommended Cost: Approximate Rs.36 lakhs

Role: Co-PI

Duration: 3 years [From October 2018]

2. Department of Science & Technology - ICPS

Development of Secure IoT Communication using the Blockchain Technology

Recommended Cost: Approximate Rs.36 lakhs

Role: Principal Investigator

Duration: 3 years from [From October 2019]

Training programmes organized:

- 5 days Blockchain workshop organized at Pondicherry University. 21st -25th Oct. 2020.

Other Activities:

(a) **Software Developed:** MCQ Conduction and Evaluation web portal to facilitate the online evaluation during Covid'19

(b) **Continuing Education Activities:** 5 days Blockchain workshop organized in Pondicherry University during 21st -25th Oct. 2020 for Master's students.



Dr. Abhishek Vaish

Department: Information Technology

Designation: Assistant Professor

Experience (Teaching/Research): 12.5 years, **Industry:** 2.5 years

Books and book-chapters published:

S.No.	Author(s)	Book Title	Publisher	Year	Place	Series
1	Bobek, Samo; Vaish, Abhishek	Information Security in digital society: scientific monograph [Electronic Version] ISBN: 789619503515	Bio energija, d.o.o., Maribor, Slovenia, European Union / Izdala in založila: Bio energija, d.o.o.	2020	Maribor, Slovenia	Scientific monograph series Challenges of contemporary business

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Vol./No.	Year	Page
1	Rathore, Mudit; Vaish, Abhishek	A system design for multi-phase, hybrid DDoS detection	Journal of Computer Fraud & Security, ISSN 1361-3723	2020/11	2020	10-19
2	Preetish Ranjan; Vaish, Abhishek	Socio-Technical Attack Approximation Based on Structural Virality of Information in Social Networks doi:10.4018/IJISP.2021010108	International Journal of Information Security and Privacy (IJISP)	15/1	2021	53-172

Seminars and invited talks presented:

- Title: International Symposium on Recent Advancements in Information and Communication Technology- RAICT 20
Organization: Integral University, Lucknow
Date: 6th Nov, 2020
- Title: Challenges of Cyber Security during Pandemic
Organization: Sahyadri College of Engineering & Management
Date: 23rd & 24th Feb, 2021

Training programs organized:

International Symposium on Information Flux & Its Impact on Societal Resilience: A cause of conflict or concord, 22 & 23rd August, 2020.



Dr. Pragya Singh

Department: Management Studies

Designation: Assistant Professor

Experience: 15 years

Research papers published in journals:

- Manuscript titled “The age of short-lived’ content is here. Are you ready?” Published in Vimarsh: An Endeavour to Share Knowledge” (UGC Indexed - ISSN 0976-5174), a bi-annual, peer-reviewed refereed journal, Volume 12/ Issue 1 January - June 2021.
- Article on “Relational wellbeing & side effects of information revolution, Published in National Magazine; News Times Post on 01st -15 March, 2021 Issue.

Average Impact Factor: h-index - 3, i10-index - 1

- Springer
- Taylor & Francis
- Bharti Publications
- Dominant Publishers
- & international journals/ conference proceedings etc.
- Excel India Publishers
- ERT Publishers
- ABC Press
- Various national

Seminars and Invited talks presented:

- Title: Introduction to emotional quotient. Delivered talk on emotional quotient in AICTE (ATAL) sponsored five days FDP (Online Mode) on Emotional Intelligence, at Indian Institute of Information Technology, Allahabad, on 13 Sep, 2020.
- Delivered talk on emotional quotient in AICTE (ATAL) sponsored five days FDP (Online Mode) on Emotional Intelligence, at Indian Institute of Information Technology, Allahabad, on 17 Sep, 2020.
- Resource Person for the Alva’s TECHNOTHON-2020 on “EQ and IQ” at Alva’s Institute of Engineering & Technology, Moodbidri, Karnataka, on 11 Nov, 2020.
- Delivered Talk on “Emotional Intelligence” as Resource Person for Department of Business Administration at Alva’s Institute of Engineering & Technology, Moodbidri, Karnataka, on 31st Dec, 2020. Delivered Talk on “Emotional Intelligence” at Department of Electrical & Electronics Engineering, G.L. Bajaj Institute of Technology & Management, Greater Noida in AICTE Sponsored Short Term Training Program (STTP) on Moral, Values, Attitude and behaviour Sciences on 09th Feb, 2021.
- Delivered Talk on “EMOTIONS & ENNEAGRAM” at Department of Electrical & Electronics Engineering, G.L. Bajaj Institute of Technology & Management, Greater Noida in AICTE Sponsored Short Term Training Program (STTP) on Moral, Values, Attitude and behaviour Sciences on 09 Feb, 2021.
- Delivered 06 Talks on “Innovation & Entrepreneurship”, in DST sponsored training programme FDP on making self-sufficient entrepreneurs and innovators for two weeks in online mode at IIIT Allahabad from 12-23 Feb 2021 & 01-12 March, 2021.



Conferences attended outside IIIT Allahabad:

International Conferences

- Participated in Conference on “Social Distancing and New Marketing Agenda” at Clarion University OF Pennsylvania, USA on 02nd July, 2020.
- Participated in Conference on “Study Abroad in COVID” organized by Multinational Business Academy in association with Marshall M. Sloane School of Business & Communication, USA on 30th July, 2020.

National Seminar/Workshops

- Participated and successfully completed National Online Quiz on Stress Management organized By School of Management Sciences on May 30 - June 3rd, 2020.
- Participated and successfully completed Faculty Awareness Program on “NBA Accreditation Process” at SNJB College of Engineering on May 19th, 2020.

Work done in project undertaken in the Institute:

- Title: DST project on training program on entrepreneurship, Role: PI, funded by: Department of Science and Technology, Government of India, from: 09 Oct, 2020 to 31 Mar, 2021.
- Title: Advent of digital marketing strategies in tourism industry, Role: PI, funded by: one time seed money project sponsored by IIIT Allahabad, from: 06 Oct, 2017 to 30 Nov, 2018.
- External Consultancy Project undertaken Title: making sense of the traditional rites and rituals, Role: Co-PI, funded by: Constituency management office of Shri Ananth Kumar, Ministry for Chemicals and Fertilizers, Government of India, from: 18 Mar, 2016 to 15 May, 2016.

Training programmes organized:

- Conducted AICTE ATAL sponsored FDP on emotional intelligence in online mode at IIIT Allahabad, from 13 Sep, 2020 to 17 Sep, 2020.
- DST sponsored training programme FDP on making self-sufficient entrepreneurs and innovators for two weeks in online mode at IIIT Allahabad from 12-23 Feb 2021.
- DST sponsored training programme FDP on making self-sufficient entrepreneurs and innovators for two weeks in online mode at IIIT Allahabad from 01-12 Mar 2021.

Other Activities:

(a) Awards and Honors

- Received Certificate of Appreciation for International day of women and girls in science at IIITA on 11 Feb, 2021.

(b) Continuing Education Activities

- IEEE Continuing Education Completed 01 Professional Development Hour in “Making Labs effective with Remote Learning” on 28th July 2020.
- IEEE Continuing Education Completed 01 Professional Development Hour in “Ditching the Traditional College Lecture in Remote Instruction” on 29th July 2020.



- IEEE Continuing Education Completed 01 Professional Development Hour in “Managing Remote Students Teams” on 30th July 2020.
- IEEE Continuing Education Completed 01 Professional Development Hour in “Students Assessment for Remote Delivery” on 31st July 2020.

(c) Participation in the High Level Industry, Academia Interaction Programme

- Participated in Training Program on Community Resource Management for Women Scientists (online) Sponsored by Department of Science & Technology, Govt. of India held from 23rd- 27th November 2020.

Any other important activity not specified above.

- Nominated guest faculty for delivering lectures at Regional Training institute, Allahabad. Nominated Resource Person For Delivering Lectures At Regional Training Institute, Allahabad (Indian Audit & Accounts Department) Government of India on 07 December, 2017, from 07 Dec, 2017 till date.
- Reviewer for JFSM, Springer (ISSN 0972-2696). Reviewer for Global Journal of Flexible Systems Management (JFSM), Springer (ISSN 0972-2696) since January 2019, from 01 Jan, 2019 till date.
- Reviewer for Advances in Science, Technology and Engineering Systems Journals (ASTES) ISSN: 2415-6698. Active Reviewer for Manuscripts for Advances in Science, Technology and Engineering Systems Journals (ASTES) ISSN: 2415- 6698, from 15 Nov, 2020 till date.



Dr. Bibhas Ghoshal

Designation: Information Technology

Department: Assistant Professor

Experience (Teaching/Research): 11 years

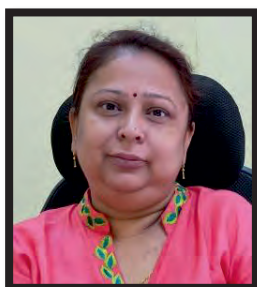


Dr. Ashutosh Singh

Designation: Electronics and Communication Engineering

Department: Assistant Professor

Experience (Teaching/Research): 7 years



Dr. Nidhi Mishra

Department: Applied Sciences

Designation: Assistant Professor

Experience (Teaching/Research): 10 years

New courses developed:

Title: Cheminformatics

Course number: SCIM821C

Books and book-chapters published:

S.No.	Author(s)	Book Chapter Title	Publisher	Year	Place
1	Akhilesh Kumar Maurya, Nidhi Mishra	Polymeric Biomaterials in Tissue Engineering	CRC Press Taylor & Francis.	2020	IIITA
2	Akhilesh Kumar Maurya, Nidhi Mishra	Smart Polymeric Biomaterials in Tissue Engineering	Apple academic press	2020	IIITA
3	Akhilesh Kumar Maurya, Anamika Mishra, Nidhi Mishra	Nanoengineered polymeric biomaterials for drug delivery system	Elsevier	2020	IIITA

Research papers published in journals:

- Mulpuru, Viswajit & Semwal, Rahul & Varadwaj, Pritish & **Mishra, Nidhi**. (2020). HAMP: A Knowledgebase of Antimicrobial Peptides from Human Microbiome. *Current Bioinformatics*. 15. 10.2174/1574893615999200802041228.
- Kumar, Maurya Akhilesh, Upadhyaya Sonal, Gupta Akshi, Jeya kumar Ebenezer, Rubina Lawrence, and **Mishra Nidhi**. "Microwave Assisted Green Synthesis of Silver Nanoparticles with Leaf of Ficus racemosa and its in vitro Antibacterial Analysis and Dye Catalytic Activity." *Research Journal of Chemistry and Environment*, Vol 25 (2021): 4.
- Anamika Mishra, Ravi Raushan, Nidhi Mishra. (2020). Target Gene Identification of Breast Cancer using Protein-Protein Interaction Network Analysis. *International Journal of Advanced Science and Technology*, 29(04), 8477
- ShristiModanwal, Suraj Kumar Tiwari, and **Nidhi Mishra**. "Drug Design against Obesity Using Computer Aided Approach." (2020).
- Mishra, Anamika, and **Nidhi Mishra**. "Antiquorum Sensing Activity of Copper Nanoparticle in Pseudomonas aeruginosa: An In Silico Approach." *Proceedings of the National Academy of Sciences, India Section B: Biological Sciences* 91, no. 1 (2021): 29-36.



- Mulpuru, Viswajit, and **Nidhi Mishra**. "Immunoinformatic based identification of cytotoxic T lymphocyte epitopes from the Indian isolate of SARS-CoV-2." *Scientific reports* 11, no. 1 (2021): 1-9.
- Mulpuru, Viswajit, and **Nidhi Mishra**. "In Silico Prediction of Fraction Unbound in Human Plasma from Chemical Fingerprint Using Automated Machine Learning." *ACS omega* 6, no. 10 (2021): 6791-6797.
- Maurya, Akhilesh Kumar, Viswajit Mulpuru, and **Nidhi Mishra**. "Discovery of Novel Coumarin Analogs against the α -Glucosidase Protein Target of Diabetes Mellitus: Pharmacophore-Based QSAR, Docking, and Molecular Dynamics Simulation Studies." *ACS omega* (2020).
- Maurya, Akhilesh Kumar, and **Nidhi Mishra**. "In silico validation of coumarin derivatives as potential inhibitors against Main Protease, NSP10/NSP16-Methyltransferase, Phosphatase and Endoribonuclease of SARS CoV-2." *Journal of Biomolecular Structure and Dynamics* (2020): 1-16.
- Maurya, Santosh K., Akhilesh Kumar Maurya, **Nidhi Mishra**, and Hifzur R. Siddique. "Virtual screening, ADME/T, and binding free energy analysis of anti-viral, anti-protease, and anti-infectious compounds against NSP10/NSP16 methyltransferase and main protease of SARS CoV-2." *Journal of Receptors and Signal Transduction* 40, no. 6 (2020): 605-612.

Average Impact Factor: 2.0

Research papers published in conference proceedings:

- Presentation of the work entitled "In silico Drug Targeting of GPR120 Involved in Obesity and Diabetes Mellitus" at International Conference on Recent Advances in Engineering and Science held at Aligarh Muslim University on 11-12 th January 2020.
- Presentation of the work entitled "In silico docking analysis of Podophyllotoxin and its derivatives against cancer targets" at International Conference on Natural Products and Human Health -2020 (ICNPHH-2020) held at University of Delhi on 27-29 th February 2020.
- Presentation of the work entitled "Synthesis and Characterization of Hydroxyapatite Based PNIPAM Nanocomposite for Drug Release Application" at International Conference on Recent Advances in Applied Sciences, Technology & Health (RASTH) 2021 on 3 March 2021.

Workshop programs organized:

- Self-financed A Workshop on Nanotechnology in Medicine on October 3, 2020.
- Self-financed Advanced Online Workshop on Protein structure Prediction and Molecular Docking on Aug 28-29, 2020.



Dr. Sitangshu Bhattacharya

Department: Electronics and Communication Engineering

Designation: Assistant Professor

Experience (Teaching): 07 years, **Research:** 12 years (after PhD)

New courses developed:

Title: Applied Mathematics, Physics of Nanoscale Devices, Solid State Device Physics and Physical Limitations of Semiconductor Devices

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Year	Pagination
1	Miroslav Kolos, Luigi Cigarini, Rekha Verma, Frantisek Karlicky and Sitangshu Bhattacharya	Giant linear and nonlinear excitonic responses in an atomically thin indirect semiconductor nitrogen phosphide NP	ACS, Journal of Physical Chemistry C	2021	In press DOI: https://doi.org/10.1021/acs.jpcc.1c02091

**Dr. Amit Prabhakar****Department:** Applied Sciences**Designation:** Assistant Professor**Experience (Teaching/Research):** 9 years, **Industry:** 1 year**New courses developed:** No new courses developed between 01/04/2020 to 31/03/2021

- **Jan–Dec 2020:** Human Anatomy & Physiology for Engineers
- **Jan–Mar 2021:** Clinical Biochemistry

Books and book-chapters published:

S.No.	Author(s)	Book Title	Publisher	Year	Place	Page
1	Nimisha Roy, Ankur Jaiswar, Amit Prabhakar, Deepti Verma	The revolutionary potential of noble metal nanoparticles as anti-cancer agents: state-of-the-art applications and future perspectives	Bentham Science Publishers Pte. Ltd.	2021	Singapore	ITS/04/EB-01, Rev. 03, Issue. 01
2	Nimisha Roy, Ankur Jaiswar, Amit Prabhakar, Deepti Verma	Nanobiosensors for point-of-care medical diagnostics	Springer Nature	2021	India	Nanobiosensor based microfluidic point-of-care platforms: Fabrication, characterization and applications.

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Volume	Year	Page
1.	Prabhakar Amit, Agrawal Mehul, Mishra Neha, Roy Nimisha, Verma Deepti, Jaiswar Ankur, Dhawaj Amar,	Cost-effective Smart Microfluidic Device With Immobilized Silver Nanoparticles and Embedded UV-Light Sources for Synergistic Water Disinfection Effect.	<i>RSC Advances,</i>	10	2020	17479 - 17485
2.	Roy Nimisha, Jyoti Kashyap, Verma Deepti, Tyagi	Prototype of a Smart Microfluidic Platform for the Evaluation of SARS-Cov-2 Pathogenesis,	<i>Transactions of the Indian National Academy of</i>	5	2020	Pages 241–250 (2020)



	Rakesh K., Prabhakar Amit,	along with Estimation of the Effectiveness of Potential Drug candidates and Antigen-Antibody Interactions in Convalescent Plasma Therapy,	<u>Engineering</u> , (DOI: <u>10.1007/s41403-020-00148-0</u>).			
3.	Amit Prabhakar, Deepti Verma, Amar Dhawaj, and Soumyo Mukherji	Microchannel Integrated Tapered and Tapered-Bend Waveguides, for Proficient, Evanescent-Field Absorbance Based, On-Chip, Chemical and Biological Sensing Operations	Sensors & Actuators: B. Chemical	332	2021	129455.
4.	Amit Prabhakar, Ishita Bansal, Ankur Jaiswar, Nimisha Roy, Deepti Verma,	A Simple Cost-Effective Microfluidic Platform for Rapid Synthesis of Diverse Metal Nanoparticles: A Novel Approach Towards Fighting SARS-CoV-2	Materials Today: Proceedings	Accepted for Publication		
5.	Amit Prabhakar, Deepti Verma, Nimisha Roy, Prashant Nayak and Soumyo Mukherji	Design and Fabrication of a Cost-Effective, Electrochemical Detection Based, Polymeric Capillary-Electrophoresis Microfluidic Devices for Diverse Bioanalytical Functions	MNDCS-2021 (International Conference on Micro/ Nanoelectronics Devices, Circuits and Systems) Proceedings	Accepted for Publication		

Average Impact Factor: 4.0

Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year
1.	Amit Prabhakar, Deepti Verma, Nimisha Roy, Prashant Nayak and Soumyo Mukherji	Design and Fabrication of a Cost-Effective, Electrochemical Detection Based, Polymeric Capillary-Electrophoresis Microfluidic Devices for Diverse Bioanalytical Functions	MNDCS-2021 (International Conference on Micro/ Nanoelectronics Devices, Circuits and Systems)	58	March-2021



2.	Amit Prabhakar, Ishita Bansal, Ankur Jaiswar, Nimisha Roy, Deepti Verma,	A Simple Cost-Effective Microfluidic Platform for Rapid Synthesis of Diverse Metal Nanoparticles: A Novel Approach Towards Fighting SARS-CoV-2	IEEE 5NANO 2021, Mangalam College of Engineering, Department of Electrical & Electronics Engineering Vettimukal, Ettumanoor, Kottayam, Kerala, India, Pin-686 631	042	29 th & 30 th April 2021.
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Seminars and invited talks presented:

S. No.	Title	Institution/Organization	Mode	Date-Month-Year
1-7	STP & FDP cum Workshop on "Intelligent Biomedical-Micro-Electro-Mechanical System	It was a week-long program via <u>On-Line Mode</u> , at the BioMEMS & Nanotechnology Lab, Indian Institute of Information Technology-Allahabad (IIIT-A) in Prayagraj.	Online	22/09/2020 23/09/2020 24/09/2020 25/09/2020 26/09/2020 27/09/2020 28/09/2020
	STP & FDP cum Workshop on "Artificial Intelligence in Artificial Organs and Bionic Implants".	It will be a 3-days long program via <u>On-Line Mode</u> , at the BioMEMS & Nanotechnology Lab, Indian Institute of Information Technology-Allahabad (IIIT-A) in Prayagraj.	Online	February 2020

Conferences attended outside IIIT Allahabad:

S.No.	Conference name	Organizing institution/society	Date-Month-Year	Type of participations	Article Title	Author(s)
1.	MNDCS-2021 (International Conference on Micro/Nanoelectronics Devices, Circuits and Systems)	NIT-Silchar	March-2021	Invited/contributed paper presentation	Paper Id: 58; Design and Fabrication of a Cost-Effective, Electrochemical Detection Based, Polymeric Capillary-Electrophoresis Microfluidic	Amit Prabhakar, Deepti Verma, Nimisha Roy, Prashant Nayak and Soumyo Mukherji



					Devices for Diverse Bioanalytical Functions	
2.	IEEE 5NANO 2021,	Mangalam College of Engineering, Department of Electrical & Electronics Engineering Vettimukal, Ettumanoor, Kottayam Kerala, India, Pin – 686 631	29-30 April 2021	Invited/ contributed paper presentation	Paper Id: 042; A Simple Cost-Effective Microfluidic Platform for Rapid Synthesis of Diverse Metal Nanoparticles: A Novel Approach Towards Fighting SARS-CoV-2	Amit Prabhakar, Ishita Bansal, Ankur Jaiswar, Nimisha Roy, Deepti Verma,

Work done in project undertaken in the Institute:

S. No	Title	Cost in Lakh	Month of submission	Role as PI/Co-PI	Agency	Status
1	Gold Nanoparticle Coated/ Embedded, Colour-Barcoded Magnetic Microparticles for Lab on chip Localized Surface Plasmon Based Label Free Multiplexed Bioassays	48.4	Jan 2015	PI	SERB , Department of Science and Technology, New Delhi, India	Project Completed in 2020
2	A Novel Water Purification System with Silver Nanoparticle Coated Micro-Channel Arrangement for Filter Less Purification of Water and Embedded Waveguide for Purity Indicator	25.00	June 2015	PI	Water Technology Initiative-2015 , Department of Science and Technology, New Delhi, India	Project Completed in 2020
3	A Portable Corona-Discharge System with Custom Made Electrodes for PDMS Hydrophilic Treatment & Bonding for Microfluidic Chip Fabrication.	2.5 Lakhs	March 2019 to March 2021	Mentor	<i>*NewGen IEDC (New Generation Innovation and Entrepreneurship Development Centre) Start-up projects</i>	Project To be completed in 2021



4	Cost-Effective Micro Impedance Pump For Potential Application in the Micro-fluidics & Bio-Medical Domain.	2.5 Lakhs	March 2019 to March 2021	Mentor	*NewGen IEDC (New Generation Innovation and Entrepreneurship Development Centre) <i>Start-up projects</i>	Project To be completed in 2021
5	Blue EV-low cost custom Electric Bike.	2.5 Lakhs	March 2019 to March 2021	Mentor	*NewGen IEDC (New Generation Innovation and Entrepreneurship Development Centre) <i>Start-up projects</i>	Completed in 2020
6	Advanced Prosthetics using 3D printing and SEMG.	2.5 Lakhs	March 2019 to March 2021	Mentor	*NewGen IEDC (New Generation Innovation and Entrepreneurship Development Centre) <i>Start-up projects</i>	Project To be completed in 2021

Training programmes organized:

- Organized a STP & FDP cum Workshop on "Intelligent Biomedical-Micro-Electro-Mechanical System". It was a week-long program via On-Line Mode, held from 22-09-2020 to 28-09-2020 at the BioMEMS & Nanotechnology Lab, Indian Institute of Information Technology-Allahabad (IIIT-A) in Prayagraj.
- Organizing a STP & FDP cum Workshop on "Artificial Intelligence in Artificial Organs and Bionic Implants. It will be a 3-Days long program via On-Line Mode, to be held on February 2020 at the BioMEMS & Nanotechnology Lab, Indian Institute of Information Technology-Allahabad (IIIT-A) in Prayagraj.

Other Activities:

(a) Technology Developed:

Sl. No.	Title of Filed / Published/ Granted PATENTS.	Patent Application / Publication/ Patent – Number & Corresponding Dates	Awarding Country	Inventors / Authors	Current Status
1.	Cost-Effective Micro Impedance Pump For Lab On CHIP	Indian Patent Application Number:	Indian	Dr. Amit Prabhakar, Amar	Filed via:- Technology Information,



	Applications.	<u>201911039486.</u> <u>Filed on</u> <u>September 30,</u> <u>2019</u>		Dhwaj	Forecasting and Assessment Council (TIFAC)
2.	A System FOR Creating Precise Microstructures based on various Polymers using Multiple Apparatus	Indian Patent Application Number: 202011042433 30/09/2020	Indian	Dr. Amit Prabhakar, Amar Dhwaj, Neha Mishra,	Filed
3.	A Micro-System with Microheater Integrated Optical Waveguide for investigating Diverse Physical	Indian Patent Application Number: 202011042443 30/09/2020	Indian	Dr. Amit Prabhakar, Nimisha Roy, Neha Mishra,	Filed
4.	CNC Mountable Z-Axis, for a versatile 3D Printer Machine	Indian Patent Application Number: 328285-001 16/03/2020	Indian	Dr. Amit Prabhakar, Prashant Nayak, Amar Dhwaj, Ankur Jaiswar	Filed

• **Patents:**

Sl. No.	Title of Filed / Published/ Granted PATENTS.	Patent Application / Publication/ Patent – Number & Corresponding Dates	Awarding Country	Inventors / Authors	Current Status
1.	Cost-effective Micro Impedance pump for Lab on Chip Applications.	Indian Patent Application Number: <u>201911039486.</u> <u>Filed on</u> <u>September 30,</u> <u>2019</u>	Indian	Dr. Amit Prabhakar, Amar Dhwaj	Filed via:- Technology Information, Forecasting and Assessment Council (TIFAC)
2.	A System For Creating Precise Microstructures	Indian Patent Application Number: 202011042433	Indian	Dr. Amit Prabhakar, Amar	Filed



	Based on various Polymers using Multiple Apparatus	30/09/2020		Dhwaj, Neha Mishra,	
3.	A Micro-System with Microheater Integrated Optical Waveguide for Investigating Diverse Physical	Indian Patent Application Number: 202011042443 30/09/2020	Indian	Dr. Amit Prabhakar, Nimisha Roy, Neha Mishra,	Filed
4.	CNC Mountable Z-Axis, for a versatile 3D Printer Machine	Indian Patent Application Number: 328285-001 16/03/2020	Indian	Dr. Amit Prabhakar, Prashant Nayak, Amar Dhwaj, Ankur Jaiswar	Filed

Continuing Education Activities

- Organized a STP & FDP cum Workshop on "Intelligent Biomedical-Micro-Electro-Mechanical System". It was a week-long program via On-Line Mode, held from 22-09-2020 to 28-09-2020 at the BioMEMS & Nanotechnology Lab, Indian Institute of Information Technology-Allahabad (IIIT-A) in Prayagraj.

- Participation in the High Level Industry, Academia Interaction Programme during Summer Programs**

Attended online training sessions 'Orientation and Adoption of NISP at HEI level' & 'Policy Implementation Strategy and Progress Monitoring at HEI level' held during 7 August to 21 August 2020.



Dr. Amar Nath Yadav

Department: Electronics and Communication Engineering

Designation: Assistant Professor

Experience (Teaching/Research): 7 years



Dr. Sangeeta Singh

Department: Applied Sciences

Designation: Assistant Professor

Experience (Teaching/Research): 11 years

Books and book-chapters published:

S.No.	Author(s)	Book Title	Publisher	Year	Place	Page
1	Princy Choudhary, Ayushi Gupta and Sangeeta Singh.	Biotechnology in the Modern Medicinal System: Advances in Gene Therapy, Immunotherapy, and Targeted Drug Delivery	Taylor & Francis Group	2021	USA	55-71

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Volume	Year	DOI
1	Richa Shukla, Sangeeta Singh , Anirudh Singh, Krishna Misra.	Two Pronged Approach for Prevention and Therapy of Covid-19 (Sars-CoV-2) by a Multi-targeted herbal Drug, a component of Ayurvedic decoction.	European Journal of Integrative Medicine.	-	2021	10.1016/j.eujim.2020.101268.
2	Princy Choudhary, Ayushi Gupta and Sangeeta Singh .	Therapeutic advancement in neuronal transdifferentiation of mesenchymal stromal cells for neurological disorders".	Journal of Molecular Neuroscience.	71	2020	10.1007/s12031-020-01714-5 pp 889-901

Average Impact Factor: 2.6

Work done in project undertaken in the Institute:

- Transdifferentiation of mesenchymal stem cells into functional neurons on biodegradable nanomaterial scaffolds. Funded by SERB (Ongoing)

**Dr. Ratan Kumar Saha****Department:** Applied Sciences**Designation:** Assistant Professor**Experience (Teaching/Research):** 14 years**Research papers published in journals:**

S. No.	Author(s) [Surname, Forename]	Article Title	Journal Name	Volume	No.	Year	Page
1.	Kaushik, Anuj; Yalavarthy, Phaneendra K and Saha, Ratan K	<i>Convergent Born series improves accuracy of numerical solution of time independent photoacoustic wave equation</i>	Journal of Modern Optics	67	9	2020	849-855
2.	Kaushik, Anuj; Paul, Avijit and Saha, Ratan K	<i>Systematic analysis of frequency dependent differential photoacoustic cross-section data for source size estimation</i>	Journal of the Optical Society of America A	37	12	2020	1895-1904
3.	Saha, Ratan K	<i>Numerical solution to the time-independent inhomogeneous photoacoustic wave equation using the Born series methods</i>	Journal of the Optical Society of America A	37	12	2020	1907-1915
4.	Praksh, Ravi; Badal, Divakar; Paul, Avijit; Sonker, Deepak and Saha, Ratan K	<i>Photoacoustic signal simulation using discrete particle approach and its application in tomography</i>	IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control	68	(3)	2021	707-717
5.	Kaushik, Anuj and Saha, Ratan K	<i>Characterization of normal and deformed red blood cells using simulated differential photoacoustic cross-section spectral data</i>	Journal of Physics Communication	5		2021	035007

Average Impact Factor: 2.02



Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year	Pagination
1.	Kaushik, Anuj and Saha, Ratan K	<i>A numerical solution of phototacoustic wave equation for red blood cell by the Born series methods</i>	OSA Frontiers in Optics and Laser Science	JTu1B.19	14-9-2021	JTu1B.19

Seminars and invited talks presented:

Title: Photoacoustic flow cytometer: A future microfluidic device for single cell characterization

Organization: Intelligent Biomedical-Micro-Electro-Mechanical System, IITA

Date: September 25, 2020

Title: Introduction to Biomedical Photoacoustics

Organization: Acoustical Society of India and CSIR-National Physical Lab

Date: March 23, 2021

Work done in project undertaken in the Institute:

An externally funded (ICMR) project has been obtained. We have been working in this project on blood characterization using the photoacoustic technique.

**Dr. Sintu Kumar Samanta****Department:** Applied Sciences**Designation:** Assistant professor**Experience (Teaching/Research):** 5/8.5 years**New courses developed:**

Title: Engineering Biology

Course number: SENB630E

Books and book-chapters published:

S.No.	Author(s)	Book Title	Publisher	Year	Place	Page
1	Pavan Kumar Gautam, Saurabh Shivalkar and Sintu Kumar Samanta	Environmentally Benign Synthesis of Nanocatalysts: Recent Advancements and Applications	Springer Nature (Book chapter)	2020	Switzerland	1-19
2	Saurabh Shivalkar, Vishal Singh, A K Sahoo, Sintu Kumar Samanta, P K Gautam	Bioremediation: a potential ecological tool for waste management	Elsevier (Book chapter)	2021	-	1-21
3	Saurabh Shivalkar, Pingali MS, Arushi Verma, Anirudh Singh, Vishal Singh, B Paital, Das D, P K Varadwaj, S K Samanta	Outbreak of COVID-19: A detailed overview and its consequences (Book chapter)	Heat Shock Proteins (HESP)	2021	-	
4	Pavan Kumar Gautam, Sushmita Banerjee, Sintu Kumar Samanta	Sustainable approaches for synthesis of biogenic magnetic nanoparticles and their applications in removal of heavy metals from contaminated water: An overview	Elsevier (Book chapter)	2021	-	

Research papers published in journals:

S. No.	Author(s)	Article Title	Journal Name	Vol/ No.	Year	Page/doi
1	Anirudh Singh, Arushi Verma, Ruhar Singh, A K Sahoo, S K	Combination therapy of biogenic C-dots and lysozyme for enhanced	Nanotechnology	32/8	2020	085104 (10.1088/1361-6528/abc2ed)



	Samanta	antibacterial and antibiofilm activity				
2	Arushi Verma, Saurabh Shivalkar, Palashuddin Sk Md, Sintu Kumar Samanta, Amaresh Kumar Sahoo	Nanocomposite of Ag NPs and Catalytic Fluorescent C-dots for Synergistic Bactericidal Activity through Enhanced ROS Generation	Nanotechnology	31/40	2020	405704 (10.1088/1361-6528/ab996f)
3	Anirudh Singh, P K Gautam, Arushi Verma, Vishal Singh, Shivapriya Pingali M, Saurabh Shivalkar, A K Sahoo, S K Samanta	Green synthesis of metallic nanoparticles as effective alternatives to treat antibiotics resistant bacterial infections: A review	Biotechnology Reports	25	2020	e00427 (10.1016/j.btre.2020.e00427)
4	S Shivalkar, Pavan Kumar Gautam, S Chaudhary, S K Samanta, A K Sahoo	Recent Development of Autonomously Driven Micro/Nanobots for Efficient Treatment of Polluted Water	Journal of Environmental Management	281	2021	111750 (org/10.1016/j.envman.2020.111750)
5	Martine Thomson Pazhoor, Pavan Kumar Gautam, S K Samanta, Pargin Bangotra, Sushmita Banerjee	Performance assessment of Zn–Sn bimetal oxides for the removal of inorganic arsenic in groundwater	Groundwater for Sustainable Development	14	2021	100600 (org/10.1016/j.gsd.2021.100600)
6	K Das, S Pingali M, B Paital, F Panda, SG Pati, Anirudh Singh, P K Varadwaj, S K Samanta	A detailed review of the outbreak of COVID-19	Frontiers in Bioscience-Landmark	-	2021	Accepted

Average Impact Factor: 2.837, Major journal: Nanotechnology and Journal of Environmental Management.

Seminars and invited talks presented:

S. No.	Title	Institution/Organization	Date-Month-Year
1	Development of an advanced nanomaterial to combat bacterial biofilm infections.	Odisha University of Agriculture and Technology, College of Basic Science and Humanities, Bhubaneswar-751003, Odisha, India	25/11/ 2020



2	Role of a universal stress protein in the regulation of biofilm formation in <i>M. smegmatis</i> .	Indian Institute of Information Technology Allahabad, Uttar Pradesh, India at webinar on "Recent Developments from Molecular Pathogenesis to Theranostics (RDMT-2020)	08/11/2020
3	Strategies to combat bacterial biofilm infections: A focus on the development of an advanced nanomaterial.	School of Basic Sciences and Research, Sharda University, Greater Noida, Uttar Pradesh, India	17/10/ 2020

Work done in project undertaken in the Institute:

Title: Development of kit for simultaneous isolation of viral RNA by magnetic nanoprobe and rapid detection of novel coronavirus by highly luminescent gold nanoclusters, Funding Agency: DBT, Govt. of India, Duration: 2020-2021, Sanctioned Amount: INR 14, 00,000/-, Role: Co- PI. Status: Work is going on.

Training programmes organized:

- ✓ Title: "Recent Developments from Molecular Pathogenesis to Theranostics (RDMT-2020)", Type: Webinar, Organizer: Dept. of Applied Sciences, IIIT Allahabad, Duration: 7-8th November, 2020, Role: Convener.
- ✓ Title: "Materials-Studio", Type: Online Workshop, Organizer: Dept. of Applied Sciences, IIIT Allahabad, Duration: 6th July, 2020, Role: Convener.

Other Activities:

(a) Industry and institutions visits for research

Visited Department of Life Science and Biotechnology, Jadavpur University, Kolkata to discuss with Dr. Paltu Kumar Dhal about collaborative research.

(b) Patents

Title: Potato Peel based C-Dots for the development of Nanobots to degrade industrial effluents containing toxic dyes. Status: Filed. Indian Patent with application No: 202011049379.



Dr. Himanshu Maurya

Department: Electronics and Communication Engineering

Designation: Assistant Professor

Experience (Teaching/Research): 1 years



Dr. Ramesh Kumar Bhukya

Department: Electronics and Communication Engineering

Designation: Assistant Professor

Experience (Teaching/Research): 4 years



Dr. Triloki Pant

Department: Information Technology

Designation: Assistant Professor

Experience (Teaching/Research): 12 years

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Vol/No.	Year	Page
1	Vikash K. Mishra, Triloki Pant	Open surface water index: a novel approach for surface water mapping and extraction using multispectral and multisensory data	Remote Sensing Letters	11/11	2020	973-982
2	Vikash K. Mishra, Triloki Pant	Water level monitoring using classification techniques on Landsat-8 data at Sangam region, Prayagraj, India	IET Image Processing	14/15	2020	3733-3741
3	Triloki Pant	The Role of Significant Digits of Fractal Dimension for the Measurement of Texture in SAR Images	International Journal of Computer Vision and Image Processing (IJCVIP)	11/1	2021	80-96

Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year	Page
1	Harsh Srivastava, Triloki Pant	A Time Series based Study of MODIS NDVI for Vegetation Cover	2020 IEEE India Geoscience and Remote Sensing Symposium (InGARSS)	1122	2020/12/1	21-24
2**	Vikash K. Mishra, Triloki Pant	A Novel Water Index for Extraction of Water Features using Landsat-8 Images in Prayagraj District, India	2020 XXXIIIrd General Assembly and Scientific Symposium of the International Union of Radio Science	-	29 August - 5 September 2020	1-4

** Received Young Scientist award by the student for this paper.



Seminars and invited talks presented:

- Title: Remote Sensing Basics for Contemporary Applications: A Review of Water Index based Approaches of Water Extraction (Invited Talk)

Organization: Integral University, Lucknow (One Week Online FDP on Advanced Research Trends of Satellite Image processing in Land Surface Monitoring (August 17-21, 2020))

Date: 20.08.2020

Training programmes organized:

Sanctioned 21 days summer/winter school (level-I) on "Geospatial Science and Technologies" under National Geospatial Program (NGP) of DST, Govt. of India

Other Activities:

Working as a team member in the project of Erasmus+ Capacity Building in Higher Education scheme: EU Grant (€999,091.00) Topic: Improving Access to Science and Technology Higher Education in Resource Poor Institutions through an Open Platform for Technology Enabled Active Learning Environment (Teal2.o)



Dr. Saurabh Mishra

Department: Management Studies

Designation: Assistant Professor

Experience (Teaching/Research): 11 years **Industry:** 4 years

Books and book-chapters published:

S.No.	Author(s)	Book Title	Publisher	Year	Place	Page
1.	Shashikant Rai, Saurabh Mishra, Ram Mohan Mishra	<u>Supply Chain Sustainability</u>	Published by <u>De Gruyter</u>	2021	Germany	158-179

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Vol./No.	Year	Page
1.	Richa Sharma, Saurabh Mishra, Shashikant Rai	Empowering Women Self Help Groups Through Microfinance During Covid-19: A Case Study of Women SHG	Indian Journal of Finance and Banking	5/1	2021	56-72
2.	Saurabh Mishra and Hemant Chauhan, Neha Jain, Sohan Singh Rawat,	Modeling the Determinants of Consumers Intentions to Use Online Sharing Economy Platforms	International Journal of Business Information Systems	36/1	2020	-

Continuing Education Activities

- Conducted self-finance short term course: Short Term Training Program (STTP) on "Research Tools in Management and Social Sciences". School of Management Studies, MNNIT, Allahabad from 08 August to 12th August 2020.

**Dr. Shashi Kant Rai****Department:** Management Studies**Designation:** Assistant Professor**Experience (Teaching/Research):** 11 years

S. No.	Author(s)	Article Title	Journal Name	Vol/No	Year	Page
1.	Sharma, R., Mishra, S., & Rai, S	Empowering women self-help groups through microfinance during COVID-19: a case study of women SHG (Journal), Journal/Conference/ Book Publisher:, 5(1), 56-72	Indian Journal of Finance and Banking	5/1	2021	56-72
2.	Choudhury, M., Singh, R., Kajol, K., & Rai, S. K.	Empathy of the bancassurance channel: an empirical study (journal), journal/ conference/ book publisher: Indian journal of finance and banking, (SCI/ABDC), Year: 2020	Indian Journal of Finance and Banking	4/4		30-47

Research papers published in journals:**Research papers published in conference proceedings (as a full paper):**

S.No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year
1	Netranand Pathak, Shashikant Rai	Innovative Solution for Reusing of Packaging Waste Materials from E-Commerce /Online Shopping in India	IIM Bodh Gaya	279	12 March 2021

Seminars and invited talks presented:

Title: Innovation in supply chain

Organization: Workshop on Innovation Management and Entrepreneurship Development Department of Management Studies Indian Institute of Information Technology Allahabad, Prayagraj

Date: 24 Jul, 2020

Title: Information security in financial transactions

Program: One Week Summer School on Behavioral Finance

Place: Department of Management Studies, IIIT Allahabad.,, from 15 Jun, 2018 to 21 Jun, 2018

Work done in project undertaken in the Institute:

Title: social awareness for COVID-19 through AI based mobile app., Role: Co-PI, funded by: DST GOVT.OF INDIA, from: 15 Feb, 2021 to 31 Mar, 2022

Title: Assessment and Measurement of Academic Stress among the Student of IIIT Allahabad: An empirical study, Role: PI, funded by: IIIT-ALLAHABAD, from: 18 Feb, 2021 to 19 Feb, 2024

Training programmes organized:

Conducted self financed short term course titled: Summer School on Behavioral Finance



Dr. B. S. Sanjeev

Department: Applied Sciences

Designation: Assistant Professor

Experience (Teaching/Research): 15 years

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Year
1.	Dheeraj Chitara, Richa Anand, BS Sanjeev.	Molecular crowding and conserved interface interactions of human argonaute protein-miRNA-target mRNA complex.	Journal of Biomolecular Structure and Dynamics	2020
2.	Zahoor Bhat, Dheeraj Chitara, Iqbal J, BS Sanjeev, Madhumalar Arumugam	Targeting allosteric pockets of SARS-CoV-2 main protease Mpro.	Journal of Biomolecular Structure and Dynamics	2021

Average Impact Factor: 3.55



Dr. Sumit Kumar Upadhyay

Designation: Assistant Professor

Department: Applied Sciences

Experience (Teaching/Research): 06 years 10 months

New courses developed:

Advanced Linear Algebra (Ph.D. Course work)

Research papers published in journals:

Sl.No.	Author(s)	Title of the Article	Journal	Vol/ No	Year	Page
1	Mani Shankar Pandey, Sumit Kumar Upadhyay, Vipul Kakkar	A construction of Bent Functions on a finite group	National Academy Science Letters	43/3	2020 (June)	247-251

Average Impact Factor: 0.416 and National Academy Science Letters

**Dr. Rahul Kala****Department:** Information Technology**Designation:** Assistant Professor**Experience (Teaching/Research):** 7 years**Research papers published in journals:**

S. No.	Author(s)	Article Title	Journal Name	Vol/No.	Year	Page
1.	Malviya, V., Reddy, A., & Kala, R	Autonomous Social Robot Navigation using a Behavioral Finite State Social Machine	Robotica	38/12	2020	2266-2289
2.	Reddy, A.K., Malviya, V. & Kala, R.	Social Cues in the Autonomous Navigation of Indoor Mobile Robots	International Journal of Social Robotics	--	2020	DOI: 10.1007/s12369-020-00721-1

Research papers published in conference proceedings (as a full paper):

S. No.	Author(s)	Article Title	Conference Title	Date-Month-Year	Page
1.	L. Kenye, R. Palugulla, M. Arora, B. Bhat, R. Kala and A. Nayak	Re-localization for Self-Driving Cars using Semantic Maps	2020 Fourth IEEE International Conference on Robotic Computing (IRC)	2020	75-78

Seminars and invited talks presented:

- 1) Title: COVID-19, Machine Learning and We (Panel Discussion)
Organization: NIT Delhi, Date: 26th June, 2020
- 2) Title: Innovation and entrepreneurship and IPR issues among students: Experiences of incubation centre at IIITA
Organization: IIIT Allahabad, Date: 23th July, 2020, 28th September, and 10th December, 2020
- 3) Title: Mobile Robot Path Planning Algorithms
Organization: Mepco Schlenk Engineering College Sivakasi, Date: 27th August, 2020
- 4) Title: Robot Motion Planning
Organization: Gurukula Kangri Vishwavidyalaya, Haridwar, Date: 19th October, 2020
- 5) Title: Robot Motion Planning



Organization: RGPV Bhopal, Date: 3rd November, 2020

- 6) Title: Autonomous Mobile Robots

Organization: MNNIT Allahabad, Date: 6th November, 2020

- 7) Title: Autonomous Mobile Robots

Organization: Karnataka State Akkamahadevi Women's University, Vijayapura, Date: 15.10.2020

- 8) Title: Challenges faced in Testing Cars of the Future (Connected, Intelligent, EV, etc) and possible solutions (Panel Discussion)

Organization: Electronics For You, Date: 16th December, 2020

- 9) Title: Technology Sourcing: Support available from RD Institutions:

Organization: IIIT Allahabad, Date: 19th February, 2021

- 10) Title: Autonomous Vehicles: Tech Making it Possible

Organization: Electronics For You, Date: 25 February, 2021

- 11) Title: Autonomous Vehicles in India: Design Challenges and Opportunities

Organization: Electronics For You

Date: 31st March, 2021

Conferences attended outside IIIT Allahabad:

2020 Fourth IEEE International Conference on Robotic Computing, IEEE, 9-11 November, 2020, Invited or contributed paper presentation.

Work done in project undertaken in the Institute:

Self-Learning Maps

The project aims to enable self-driving cars localize primarily using a budgetary stereo camera. The approach was primarily solved by using semantic SLAM. Significant efforts were made to hand-create a semantic database in CC1 building of the institute. SPTAM library was modified to carry semantic optimizations as well. Several limitations noted in the implementation restricted the results. As a result, place recognition technique was incorporated for a better correspondence matching alongside a geometrically consistent corner correspondence matching. There were significant errors due to the low resolution stereo camera that resulted in large errors in the depth estimation. These were handled by several methods, still the approach lacked accuracy. A new optimization method is now designed to solve the problem that does not need depth calculation. Further the optimization does not filter out semantic points as was being done by the RANSAC method. The results on this are awaited.



SLAM in Extreme Weather Conditions

The project is aimed at enabling the vehicle localize in GPS denied and low feature environments. Place recognition approaches using deep learning methodologies were developed as a part of the project. The outputs of the libraries lacked temporal cohesion that is useful to improve the accuracy of the approach. Filtering approaches and regression based geometric consistency approaches were developed to improve the results.

Medical Cyber Physical System for lifestyle diseases using Big Data Analytics

The project detects anomaly in the ECG signals of the patients. Since this was an international collaborative project supposed to be catalyzed by recurrent visits from the overseas scientists to India and vice versa, the project was heavily impacted due to the disruption of international travel and no collaborative visits at either end could be done. The project was progressed by writing papers, adding comparisons to the existing proposed methods and proposing a new novel architecture for anomaly detection.

NewGen Innovation & Entrepreneurship Development Centre

The project encourages the students to develop projects that may have a commercial angle at a later stage. The centre continues to recruit students at a high frequency to catch them early. Two major festivals Innovation Festival and e-summit were organized. The mentorship support from PUM Netherlands was provided. The centre started the minor on innovation, entrepreneurship and IPR. The centre also opened channels to allow external students and recently graduated students from different institutes to apply. The centre also started the mentorship program allowing the students to mentor project ideas. Several projects reached at an advance stage and specifically the projects AmuseBag, Nazm-e-Hayat, and PS1925 significantly progressed. Steps were taken to commercially launch many GeekHaven projects. The lab development was significantly progress towards this period with the procurement of the furnishing and the compute.

Other Activities:

- (a) **Industry visited and visits to other Institutes for research:** Mercedes Benz Research and Development India/NavAjna Technologies Pvt. Ltd. (virtual), Furthering the work on self-learning maps project, 1 day.
- (b) **Continuing Education Activities:** (i) Talk by Samir Menon, Dexterity on 6th September, 2020, (ii) Talk by Bhaskar Gupta, Amazon, USA on 12th February, 2020.
- (c) **Any other important activity not specified above.:** (i) Co-organized Innovation Festival 9-10 January, 2021 and (ii) e-Summit 25-27 March, 2021



Dr. Vineet Tiwari

Department: Management Studies

Designation: Assistant Professor

Experience (Teaching/Research): 9.5 years, **Industry:** 1 year

New courses developed:

Title: 1. Supply Chain and Logistics Management
2. Total Quality Management

Research papers published in journals:

- Chandra Kant Upadhyay, G.A. Vasantha, Vijayshri Tiwari, **Vineet Tiwari**, B. Pandiya, "Strategic upturn of reverse logistics with Crowdshipping: Transportation explication for India" Transportation Research Procedia. Elsevier (**SCOPUS**), Pages 247-259, Volume 48, ISSN 2352-1465, 2020

Research papers published in conference proceedings (as a full paper):

- "Speech and lyric-based Doc2Vec Music Recommendation System", by Niharika Gali, Dr Vineet Tiwari, publication in the conference proceedings with ISBN: 978-93-5473-030-6 with the title: "Proceedings of international conference on advanced computing techniques-2021" and also published in IJERT conference proceedings online journal with ISSN: 2278-0181.
- "Analysis of the factors affecting the knowledge learning and academic performance of the students During Covid-19 pandemic" by Lekhika Dugtal, Vineet Tiwari, accepted for presentation at the 11th Conference on Excellence in Research and Education (CERE-2021) to be conducted from 18th-20th June 2021.

Seminars and invited talks presented:

Title: Modelling and Analysis of Coal Sector in India - Problems and Possibilities
Organization: NITTTR, Bhopal (Online Mode)
Date: 16-12-2020

Training programmes organized:

- Organized a Self-Financed Course-cum Workshop on "**Supply Chain and Logistics - Modeling and Analysis**" during **January 22-23, 2021** in Online Mode

Other Activities:

(a) Continuing Education Activities

- Organized a Self-Financed Course-cum Workshop on "Supply Chain and Logistics - Modeling and Analysis" during January 22-23, 2021 in Online Mode at IIITA
Participants were from Industry, Academia and Research Scholars
- Attended an Online FDP by IIM Visakhapatnam on 'Partial Least Squares and Structural Equation Modeling' during 19 April – 22 April, 2021

**Dr. Prasanna Kumar Misra****Department:** Electronics and Communication Engineering**Designation:** Assistant Professor**Experience (Teaching/Research):** 7 years, **Industry:** 8 months**New courses developed:**

Title: Low Power System Design Course number (if any): ELPD630E

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Vol/No.	Year	Page
1	Ankita Verma, Pritesh Kumar Yadav, Sunanda Ambulker, Manish Goswami, Prasanna Kumar Misra	A 36.7 mW, 28 GHz receiver frontend using 40 nm RFCMOS technology with improved Figure of Merit	Analog Integrated Circuits and Signal Processing	107	2021	135-144
2	Jitendra Kumar Mishra, Bharat Bhushan Upadhyay, Prasanna Kumar Misra, Manish Goswami	Design and Analysis of SRAM cell using Body Bias Controller for Low Power Applications	Circuits, Systems, and Signal Processing	40/5	2021	2135-2158
3	Sajai Vir Singh, Rohit Joshi, Prasanna Kumar Misra, Manish Goswami	A reusable stage based reduced comparator count binary search ADC	Analog Integrated Circuits and Signal Processing	105/1	2020	33-43

Average Impact Factor: 1.0**Research papers published in conference proceedings (as a full paper):**

S.No.	Author(s)	Article Title	Conference Title	Date-Month-Year	Page
1	Pritesh Kumar Yadav, Prashant Kumar, Ankita Verma, Sunanda Ambulker, Prasanna Kumar Misra	A 60 GHz, 50 mW, 3dB Noise Figure Receiver Frontend Using UMC 40 nm CMOS technology	IEEE International Symposium on Smart Electronic Systems	2020	227-231
2	Jitendra Kumar Mishra, Prasanna Kumar Misra, Manish Goswami	Design of SRAM cell using Voltage Lowering and Stacking Techniques for Low Power Applications	IEEE Asia Pacific Conference on Circuits and Systems	2020	50-53

Training programmes organized: Summer Training Program on VLSI Design 2020**Other Activities:**

- (a) *Technology Developed*
- Transceiver Chip (Soft IP)



Dr. Srijit Bhattacharjee

Department: Applied Sciences

Designation: Assistant Professor

Experience (Teaching/Research): 8 years

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Volume	Year	Page
1.	Bhattacharjee Srijit, Kumar S.	Memory effect and BMS symmetries for extreme black hole	Phys.Rev.D	102	2020	14
2.	<i>Bhattacharjee Srijit</i> , Kumar S, Sarkar S.	Mass Inflation and Strong Cosmic Censorship in a non-extreme BTZ black hole	Phys.Rev.D	102	2020	11
3.	<i>Bhattacharjee Srijit</i> , Sarkar S, Bhattacharyya A.	Scalar perturbations of black holes in Jackiw-Teitelboim gravity	Phys.Rev.D	103	2020	08
4.	Banerjee R, Bhattacharjee Srijit, Varadwaj Pritish K.	*A study of the Covid-19 epidemic in India using the SEIRD model	Quantitative Biology, accepted in March, 2021	-	2020	
5.	Bhattacharjee Srijit, Kumar S, Bhattacharyya A.	Displacement memory effect near the horizon of black holes	Journal of High Energy Physics,	03	2021	134

Average Impact Factor: 5.2; Physical Review D

Conferences/Workshops/Seminars/Specialist Meeting attended

S. No	Conference Name	Organizing Institution/Society	Mode	Date-Month-Year	Type of participation
1	Testing General Relativity using Gravitational Waves	IIT Gandhinagar	Online	13-14, August, 2020	Attendee
2.	RECONNECT	Durham University, UK	Online	25-29 May, 2020	Attendee
3.	19th International Conference on Bioinformatics (InCoB 2020)	International Society for Computational Biology (ISCB)	Online	25-29, November, 2020	Oral Presentation (Refereed)



4.	The Dual Mysteries of Gauge Theories and Gravity	IIT Madras	Online	19-24, October, 2020	Attendee
5.	31st meeting of the Indian Association for General Relativity and Gravitation (IAGRG-2020)	IIT Gandhinagar	Online	19-20, December, 2020	Attendee
6.	Faculty Development Programme on e-content Development	NITTTR, Chennai	online	15-19 June	Attendee
7.	<i>Invited seminar on Inner Horizon instability of black holes</i>	Centre for Quantum Spacetime, Sogang University, Korea	online	19 Feb-2021	Speaker

Work done in project undertaken in the Institute: Published 4 papers in SCI journals with IFs over 5.

Training programmes organized: Received a grant from SERB-DST GoI, under the Accelerated Vijnyan scheme (Vrittika) for the event titled- Computational and Theoretical Aspects of Gravitational Physics at IIIT, Allahabad (CompGravIIITA); Cost: INR 50,000 (It is now ongoing)

Other Activities:

Awards and Honors: Awarded Visiting Associateship at IUCAA, Pune for three years starting from August 2020.



Dr. Shanti Chandra

Department: Electronics and Communication Engineering

Designation: Assistant Professor

Experience (Teaching/Research): 5 years



Dr. Pooja Mishra

Designation: Assistant Professor

Department: Electronics and Communication Engineering

Experience (Teaching/Research): 7 years

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Vol.	Year
1	Nidhi Verma, Pooja Mishra , Neetesh Purohit, Dharmendra Singh	Development of classification criteria for dominant scattering from the lunar surface: An application of MiniSAR data	Planetary and Space Science (Elsevier)	199	2021

Research papers published in conference proceedings (as a full paper):

S.No.	Author (s) Name	Title of the Article	Conference Title	Paper No	Date-Month-Year	Page
1	N. Verma, P. Mishra , N. Purohit	Synergic Use of SAR and Optical Data for Estimation of Soil Moisture in Vegetative Region	<i>IEEE International Geoscience and Remote Sensing Symposium</i>	DOI:10.1109/IGARSS39084.2020.9323753	2020	720-23

Average Impact Factor: 3.6

Journals:

- International Journal of Remote Sensing (Taylor and Francis) (IF: 2.976)
- IEEE Transactions on Geoscience and Remote Sensing (IF: 5.855)
- IEEE Geoscience and Remote Sensing Letters (IF: 3.83)
- IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing (IF: 3.827)
- Geomatics, Natural Hazards and Risks (IF -3.33)
- Planetary and Space Science (1.782)

Seminars and invited talks presented:

- Invited Lecture on "SAR Polarimetry: Concepts and Applications in Land Cover Monitoring" on 27/08/2020 in the One Week Online Faculty Development Programme on Recent Advancement in Satellite Image Processing in Land Surface Monitoring (ARTSIP-2020) organized by Advanced Computing Research Lab., Department of Computer Application Center, Integral University, Lucknow.

Conferences attended outside IIIT Allahabad:

- Attended IEEE International Geoscience and Remote Sensing Symposium from 26 September – 2 October, 2020 (Virtual Event). (Type of Participation – Author of Paper)
- Attended “Chandrayaan - 2 virtual meeting of DFSAR” User Meet (Virtual) scheduled on 21/08/2020. (Type of Participation- Expert)

**Dr. Suneel Yadav****Department:** Electronics and Communication Engineering**Designation:** Assistant Professor**Experience (Teaching/Research):** 5 years 3 months, **Industry:** 4 months**Books and book-chapters published:**

S.No.	Author(s)	Book Title	Publisher	Year	Place	Page
1.	Anshul Pandey and Suneel Yadav	5G and Beyond Wireless Systems: PHY Layer Perspective	Springer, Singapore	2020	Singapore	365-390

Research papers published in journals:

S. No.	Author(s)	Article Title	Journal Name	Vol/No.	Year	Page
1.	Anshul Pandey, Suneel Yadav , Dinh-Thuan Do, and Rupak Kharel,	Secrecy Performance of Cooperative Cognitive AF Relaying Networks with Direct Links Over Mixed Rayleigh and Double-Rayleigh Fading Channels	IEEE Transactions on Vehicular Technology	69/12	Oct. 2020	15095-15112
2.	Preeti Kharwar, Suneel Yadav , and Neetesh Purohit	Optimal Power Allocation for the Multiple-Sensor Single-DF Relay based IoT Networks under Transceiver Hardware Impairments	Physical Communication	43	Dec 2020	101183
3.	Suneel Yadav	Secrecy Performance of Cognitive Radio Sensor Networks Over α - μ Fading Channels	IEEE Sensors Letters	4/9	Sept 2020	6002004
4.	Anshul Pandey and Suneel Yadav	Secrecy Analysis Cooperative Vehicular Relaying Networks over Double-Rayleigh Fading Channels	Wireless Personal Communications	114	Oct. 2020	2733-2753



Average Impact Factor:

- Wireless Personal Communications: 1.061
- Physical Communications: 1.594
- *IEEE Transactions on Vehicular Technology*: 5.379

Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year	Page
1	Anshul Pandey and Suneel Yadav	Secure Cooperative Fixed Gain Untrusted Relay Networks with Destination Assisted Jamming under Nakagami-m Fading Channels	IEEE International Black Sea Conference on Communications and Networking (IEEE BlackSeaCom)	6	26th-29th May 2020	1-6
2	Suneel Yadav and Anshul Pandey	Secrecy Performance of Cognitive Vehicular Radio Networks: Joint Impact of Nodes Mobility and Imperfect Channel Estimates	IEEE International Black Sea Conference on Communications and Networking (IEEE BlackSeaCom)	6	26th-29th May 2020	1-6
3	Anshul Pandey and Suneel Yadav	Secrecy Capacity Analysis of Cooperative Vehicular Amplify-and-Forward Relay Networks	International Conference on Soft Computing and Signal Processing, 2020	8	21 st -22 nd Aug. 2020	1-8
4	Addanki Prathima, Devendra S. Gurjar, and Suneel Yadav	Two-Way Cooperative Cognitive Radio Networks with Nonlinear RF-Energy Harvester	IEEE Latin-American Conference on Communications	6	18th-20th November 2020.	1-6
5	Suneel Yadav and Devendra S. Gurjar	Physical Layer Security in Underlay Cognitive Radio Networks Over α - μ Fading Channels	IEEE Latin-American Conference on Communications	6	18th-20th November 2020.	1-6



6	Vijay Kumar Chaurasiya, Suneel Yadav , Sunakshi Singh, and Ayonya Prabhakaran	An optimized deep learning framework for network intrusion detection system (NIDS)	7th International conference on Engineering and Telecommunications (En&T 2020), MIPT, Moscow,	7	Nov 25th-26th, 2020.	1-7
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Conferences attended outside IIIT Allahabad:

- **IEEE International Black Sea Conference on Communications and Networking**, 26th-29th May 2020, contributor paper presentation.
- **IEEE Latin-American Conference on Communications**, 18th-20th November 2020, , contributor paper presentation.

Work done in project undertaken in the Institute:

- Design Innovation Center, Spoke, IIITA
Role: PI/Coordinator

Training programmes organized:

- Organized a LOGO design contest for SPIRIT society IIITA under DIC project in September 2020 at IIIT Allahabad.
- Organized a Workshop on Supply Chain and Logistics - Modelling and Analysis from 22-23 January 2021 under DIC Project, IIIT Allahabad.
- Organized an all-girls hackathon "SheHacks'21" from 12 March 2021-14 March 2021, under DIC project.
- Organized an electronics hackathon "BUILD_N_HACK" from 16 Feb 2021-20 Feb 2021, under DIC project.
- Organized a technical training camp "Aparoksha Month" from 11 Jan 2021-1 March 2021, under DIC project.

Other Activities:

- (a) *Technology Developed*
1. Safety Watch
 2. Spraying Drone for Smart Agriculture



Dr. Sunny

Department: Electronics and Communication Engineering

Designation: Assistant Professor

Experience (Teaching/Research): 6 years

Research papers published in journals:

12 SCI/SCIE Journal Papers b/w 01/04/2020 to 31/03/2021

- Manoj Tolani, Sunny & Rajat Kumar Singh, "Adaptive Duty-Cycle-Enabled Energy-Efficient Bit-Map-Assisted MAC Protocol," *SN Computer Science*, volume 1, no. 144, 2020.
- Vibhu Srivastava, Prateek Mishra, Sunny, "Investigations on transient regime of Ge₂Sb₂Te₅-based vertical photodetector integrated with silicon-on-insulator waveguide," *Photonics and Nanostructures - Fundamentals and Applications*, Volume 40, 100796, 2020.
- Prateek Mishra, Vibhu Srivastava, Mirgender Kumar & Sunny, "All-Dielectric Metasurface-Enabled Near-Infrared Switching Based on Ge₂Sb₂Te₅ Phase-Change Material," *Journal of Electronic Materials*, volume 49, 5084, 2020.
- V Srivastava, P Mishra & Sunny, "Fabrication of highly responsive phase-change Ge₂Sb₂Te₅ photodetector for visible region," *Indian Journal of Physics*, volume 95, pages 947–955, 2021.
- Ajit Debnath, Vibhu Srivastava, Sanjai Singh & Sunny, "Sol–gel derived BST (Ba_xSr_{1-x}TiO₃) thin film ferroelectrics for non-volatile memory application with metal–ferroelectric–semiconductor (MFS) structure," *Applied Nanoscience*, volume 10, pages 5511–5521, 2020.
- Vibhu Srivastava, Prateek Mishra & Sunny, "CMOS compatible novel integration solution for broad range tunable photodetection using phase-change material based heterostructures," *Scientific Reports*, volume 10, Article number: 11131, 2020.
- Manoj Tolani, Sunny & Rajat Kumar Singh, "Energy-efficient hybrid MAC protocol for railway monitoring sensor network," *SN Applied Sciences*, volume 2, Article number: 1404, 2020.
- Ajay Beniwal and Sunny, "SnO₂-ZnO-Fe₂O₃ tri-composite based room temperature operated dual behavior ammonia and ethanol sensor for ppb level detection," *Nanoscale*, vol. 12, pp. 19732-19745, 2020.
- Suraj Kumar Lalwani, Ajay Beniwal & Sunny, "Enhancing room temperature ethanol sensing using electrospun Ag-doped SnO₂-ZnO nanofibers," *Journal of Materials Science: Materials in Electronics*, volume 31, pages 17212–17224, 2020.



- V. P. Singh, Mirgender Kumar, B. Purusottam Reddy, Sunny, R. K. Gangwar and Chandana Rath, "Multifunctional Hierarchically Architected ZnO for Luminescence, Photocatalytic, Electrocatalytic, and Energy Storage Applications," *Crystals*, 10(11), 1025, 2020.
- Manoj Tolani, Sunny, Rajat Kumar Singh, "A Markov model for IEEE 802.15.4 MAC protocol with energy-efficient GTS utilization under saturated and unsaturated traffic conditions," *Ad Hoc Networks*, Volume 115, 102452, 2021.
- Manoj Tolani, A Sunny & Rajat Kumar Singh, "Energy-efficient adaptive GTS allocation algorithm for IEEE 802.15.4 MAC protocol," *Telecommunication Systems*, volume 76, pages 329–344, 2021.

Average Impact Factor: 3.4228

Name of the major journals:

- Nanoscale (Royal Society of Chemistry) (*Impact Factor – 7.790*)
- Ad Hoc Networks (*Impact Factor – 4.111*)
- Scientific Reports (Nature) (*Impact Factor – 4.379*)
- Applied Nanoscience (*Impact Factor – 3.674*)

Research papers published in conference proceedings (as a full paper):

- Vibhu Srivastava, Tulika Bajpai, Sunny, "Evaluation of Electrical Discharge by Ge₂Sb₂Te₅ on Different Substrates for Optoelectronic Applications," *2020 IEEE REGION 10 CONFERENCE (TENCON)*, 16-19 Nov. 2020, Osaka, Japan.

Seminars and invited talks presented:

- Title: Solution Processing Techniques for Electronic Device Applications
Organization: IIIT – Noida
Date: 29th December, 2020

Conferences attended outside IIIT Allahabad:

- Attended as Session Chair: in 3rd International Conference on VLSI, Communication and Signal Processing (VCAS 2020) organized by the Department of Electronics & Communication Engineering, Motilal Nehru National Institute of Technology Allahabad, Prayagraj, from October 09 - 11, 2020.

Work done in project undertaken in the Institute:

- Title: Investigations on Chalcogenide Photodetectors (ECR/2016/001950)
Budget: 52.48 lacs
Duration: 3 years
Funded by: SERB, Department of Science and Technology (DST), Ministry of Science and Technology, India



Start Date: 09 October 2017

Status: Completed

About Project: This research proposal aims to study the various properties of the photodetector devices made up of chalcogenide materials for crucial application of photo-detection. The investigations incorporate the design, simulation, fabrication and testing of chalcogenide photodetectors for some crucial parameters like good responsivity, efficiency and good photoluminescence from visible to NIR range. The successful outputs of the proposed investigation may have huge scope in optoelectronic applications, all-photonic system interfaces, integrated optical circuits and for low cost tunable photodetectors.

- Title: Investigations on Conducting Polymer based Gas Sensors for Industrial Applications

Duration: 3 years

Budget: 10 lacs

Start Date: May 2017

Status: Completed

Sponsored by: IIIT-Allahabad, India (for One-Time Seed Money Grant)

About Project: The conducting polymer and metal oxides based gas sensors are being investigated for detection and concentration estimation of hazardous gases like NH_3 , H_2S , CH_4 , CO , NO_2 and VOCs with high selectivity and sensitivity at lower temperature (or RT) with ultra-low concentration detection ability. After successful fabrication of single sensor element, sensor array may be developed for Electronic-Nose (E-Nose) applications, which may be further investigated for industrial use. The successful output of the proposed work may have much industrial, agriculture, environmental, medical and domestic applications.

Other Activities:

Patents

- Title: Fabrication of long-time stable acetone sensor using $\text{Ge}_2\text{Sb}_2\text{Tb}_5$ (GST) as sensing material.
Patent number: 202111005038 (TEMP/E-1/5401/2021-DEL)
Granting agency: Intellectual Property India
Status: Applied

Any other important activity not specified above.

- Title: Event Conducted "Explore Light & Its Applications"
School Name & Date of Visit - KVS Jhalwa on 21 January 2021.
Association /Sponsored - Optical Society of America-OSA-IIITA Student Chapter
Instructors: Myself along with my research group.

**Dr. Utkarsh Goel****Department:** Management Studies**Designation:** Assistant Professor**Experience (Teaching/Research):** 8 years, **Industry:** 1 year**Research papers published in conference proceedings (as a full paper):**

S.No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year
1.	Shweta Agarwal, Shailendra Kumar, and Utkarsh Goel.	“News Media Sentiments and Stock Markets: The Indian Perspective”,	IEEM Virtual - the 2020 IEEE International Conference on Industrial Engineering and Engineering Management, Singapore,	IEEM20-P-0256	December 14-17, 2020

Conferences attended outside IIIT Allahabad:

International Conference On Business Research And Innovation (ICBRI) 2021, MDI Gurgaon, February 26-27, 2021, Contributed Paper Presentations, Paper Title- “Unlocking Investor's Brain- A Review Of Neurofinance”

Work done in project undertaken in the Institute:

Seed Money Project granted by IIITA, “Stock Market Response to Information Diffusion through Internet Sources: An empirical Study in Indian Context”, Jointly with Dr. Shailendra Kumar, Status: Completed, Amount Rs. 16,00,000.

Other Activities:

Outstanding Paper Award in Literati Awards 2020 by Journal of Asia Business Studies, Emerald Publishing.



Dr. Amaresh Kumar Sahoo

Department: Applied Sciences

Designation: Assistant Professor

Experience (Teaching/Research): 4.5 years

Books and book-chapters published:

S. No.	Author(s)	Book Title	Publisher	Year	Place	Page
1.	Saurabh Shrivalkar, Vishal Singh, Amaresh Kumar Sahoo, Suntu Kumar Samanta, Pavan Kumar Gautam	Book Title: Bioremediation for Environmental Sustainability Book Chapter Entitled: Bioremediation: a potential ecological tool for waste management	Elsevier	2021	Netherlands	1-21

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Vol/No	Year	Page
1.	Arushi Verma, Saurabh Shrivalkar, Md Palashuddin Sk, Suntu K Samanta, Amaresh K Sahoo	Nanocomposite of Ag nanoparticles and catalytic fluorescent carbon dots for synergistic bactericidal activity through enhanced reactive oxygen species generation	Nanotechnology	31/40	2020	405704
2.	Anirudh Singh, Arushi Verma, Ruhar Singh, Amaresh Kumar Sahoo, Suntu Kumar Samanta	Combination therapy of biogenic C-dots and lysozyme for enhanced antibacterial and antibiofilm activity	Nanotechnology	32/8	2020	085104
3.	Pawan Kumar Doharey, Vishal Singh, Mallikarjuna Rao Gedda, Amaresh Kumar Sahoo, Pritish Kumar Varadwaj, Bechan Sharma	In silico study indicates antimalarials as direct inhibitors of SARS-CoV-2-RNA dependent RNA polymerase	Journal of Biomolecular Structure and Dynamics		2021	1-18



4	Shiv Bharadwaj, Sherif Aly El-Kafraway, Thamir A Alandijany, Leena Hussein Bajrai, Altaf Ahmad Shah, Amit Dubey, Amaresh Kumar Sahoo, Umesh Yadava, Mohammad Amjad Kamal, Esam Ibraheem Azhar, Sang Gu Kang, Vivek Dhar Dwivedi	Structure-Based Identification of Natural Products as SARS-CoV-2 Mpro Antagonist from Echinacea angustifolia Using Computational Approaches	Viruses	13/2	2021	305
5	Amit Dubey, Vishal Singh, Pawan Kumar Doharey, Md Palashuddin Sk, Sintu Kumar Samanta, Vijay Nema, Bechan Sharma, Pritish Kumar Varadwaj, Amaresh Kumar Sahoo	Modulating catalytic activity of human topoisomerase II α enzyme by fluorescent gold nanoclusters	International Journal of Biological Macromolecules	170	2021	523-531
6	Saurabh Shivalkar, Pavan Kumar Gautam, Shrutika Chaudhary, Sintu Kumar Samanta, Amaresh Kumar Sahoo	Recent development of autonomously driven micro/nanobots for efficient treatment of polluted water	Journal of Environmental Management	281	2021	111750
7	Shiv Bharadwaj, Amit Dubey, Nitin Kumar Kamboj, Amaresh Kumar Sahoo, Sang Gu Kang, Umesh Yadava	Drug repurposing for ligand-induced rearrangement of Sirt2 active site-based inhibitors via molecular modeling and quantum mechanics calculations	Scientific Reports	11/1	2021	1-25

Average Impact Factor: 4.1

Seminars and invited talks presented:

- Title: Development of Nanoclusters Based Theranostic Materials for Healthcare



Organization: CSVTU-TEQIP-3 sponsored Short Term Training Program (STTP) cum Workshop on "Intelligent Biomedical Micro-Electro-Mechanical Systems" Organized by Indian Institute of Information Technology Allahabad, Date: 22nd-28th September, 2020

- Title: Nanotechnology in Therapeutics

Organization: Workshop on "Nanotechnology in Medicine", Organized by Indian Institute of Information Technology Allahabad, Date: 3rd October 2020

- Title: Development of Nanoclusters Based Theranostic Materials for Healthcare.

Organization: A webinar on "Recent Developments from Molecular Pathogenesis to Theranostics (RDMT-2020)" Organized by Indian Institute of Information Technology Allahabad

Date: 07-08th November, 2020

Training programmes organized:

- **Convener** in a national seminar cum workshop on "**Recent Developments in Applied Biotechnology (RDAB-2020)**", 06-08th March, 2020
- **Convener** in an "**Online Workshop on Materials-Studio (BIOVIA)**" on 06th July 2020
- **Convener** in "**A workshop on Nanotechnology in Medicine**" on 3rd October 2020
- **Convener** in a webinar on "**Recent Developments from Molecular Pathogenesis to Theranostics (RDMT-2020)**" from 07-08th November, 2020

Other Activities:

Patents:

- Potato Peel based C-dots for development of catalytic and magnetic nanobots that are autonomously driven to degrade industrial effluents containing toxic dyes. Amaresh Kumar Sahoo, Sintu Kumar Samanta, Saurabh Shivalkar, Pavan Kumar Gautam and Arushi Verma. Indian Patent, Application number 202011049379 dated 12/11/2020

Sponsored Projects

- Title: Development of kit for simultaneous isolation of viral RNA by magnetic nanoprobe and rapid detection of novel coronavirus by highly luminescent gold nanoclusters. Funding agency: **DBT, Govt. of India**, 14.22 lakh, from 2020-2021.



Dr. Anand Kumar Tiwari

Department: Applied Sciences

Designation: Assistant Professor

Experience (Teaching/Research): 07/11 years

Conferences attended outside IIIT Allahabad:

- A national seminar on Human Diseases: A mathematical approach, Conducted by SRMU Lucknow, June 14-15, 2020.
- Participated in the online training programme on “E-content development for 21st century learners”, Conducted by NITTTR Chennai, June 15-19, 2020.

Work done in project undertaken in the Institute:

Project Title: A classification of doubly semi-equivelar maps for lower genus surfaces.

- (i) Enumeration of some doubly semi-equivelar maps):** The 2-uniform tilings of the plane provide doubly semi-equivelar maps on torus, as the 1- uniform tilings provide semi-equivelar maps. There are twenty distinct 2-uniform tilings of the plane. Under the heading, we have given a technique to classify doubly semi-equivelar maps corresponding to all those 2-uniform tilings which have at most 4-gonal tiles. A detailed work can be seen here: <https://arxiv.org/abs/2005.00332>
- (ii) Hamiltonicity of doubly semi-equivelar maps on torus):** The well known 2-uniform tilings of the plane induce infinitely many doubly semi-equivelar maps on the torus. Under this headin, we have shown that every doubly semi-equivelar map on torus contains a Hamiltonian cycle. This established, the Nash-Williams conjecture, which states that every 4-connected graph on the torus is Hamiltonian, for the graphs associated with these doubly semi-equivelar maps. A detailed work can be seen here: <https://arxiv.org/abs/2101.02541>



Dr. Soumyadev Maity

Department: Information Technology

Designation: Assistant Professor

Experience (Teaching/Research): 7 Years 11 Months

Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year	Page
1	P. Kushwaha, H. Sonkar, F. Altaf, S. Maity	A Brief Survey of Challenge-Response Authentication Mechanisms	International Conference on ICT for Sustainable Development (ICT4SD), Panaji, Goa, India.	DOI: 10.1007/978-981-15-8354-4_57	23-24th July, 2020	573-581
2	M. M. Nawaz, V. Gupta, J. Rawat, K. Prateek, S. Maity	Partial Consensus and Incremental Learning Based Intrusion Detection System	International Conference on Cybernetics, Cognition and Machine Learning Applications (ICCCMLA), Goa, India.	DOI: 10.1007/978-3-030-68291-0_14	29-30th Aug, 2020.	193-201
3	A. Islam, S. Ranjan, A. P. Rawat, S. Maity.	A Comprehensive Survey On Attacks and Security Protocols for VANETs	8th International Conference on Innovations in Computer Science & Engineering (ICICSE), Hyderabad, India.	DOI: 10.1007/978-981-33-4543-0_62	28-29 August, 2020.	583-595

Seminars and invited talks presented:

Sl.No.	Title	Organization	Date
1	"Verifiable Data Auditing: Enhancing Reliability and Availability of Safety-Critical Data for Fog-Assisted Cyber Physical Systems.	AICTE Training and Learning (ATAL) FDP on "Cyber Crime & Computer Security", Organised by Department of Electronics Engineering, Kamla Nehru Institute of Technology (KNIT), Sultanpur, U.P., India.	6th October, 2020.
2	"Verifiable Data Auditing for Fog-Assisted Cyber Physical Systems",	One day Webinar on "Cyber Security" Sponsored By: TEQIP III, CSVTU, Bhilai (C.G.) and Organised By: University Teaching Department (UTD) Chhattisgarh Swami Vivekanand Technical University (CSVТУ), Bhilai (C.G.), India.	28th November, 2020.



Work done in project undertaken in the Institute:

Sl.No.	Title of the Project	Funding Agency	Role	Status
1	"Reliable and Privacy Preserving Data Auditing for FOG assisted Cyber Physical Systems (FOG-CPS)"	C3iHub@IIT-Kanpur.	Principal Investigator	Project Sanctioned. Waiting for fund transfer.
2	"Development of Security Audit Framework for Secure IoT Network"	C3iHub@IIT-Kanpur.	Co-investigator	Project Started. Recruitment of Manpower is in progress.
3	"Secure and Privacy Preserving Student Feedback Management System for IIIT-Allahabad"	IIIT Allahabad.	Principal Investigator	Project Started. Equipment purchase is in progress.



Dr. Jagpreet Singh

Department: Information Technology

Designation: Assistant Professor

Experience (Teaching/Research): 13 years

Research papers published in journals:

S. No.	Author(s)	Article Title	Journal Name	Volume	Year	Page
1	Kumar Manoj, Kaur Lakhwinder, Singh Jagpreet	Dynamic and Static Energy Efficient Scheduling of Task Graphs on Multiprocessors: A Heuristic	IEEE Access	8	2020	176351-176362

Average Impact Factor: 3.367, IEEE Access

Seminars and invited talks presented:

- Title: IoT Network protocols
Organization: FDP on IoT at IIIT Allahabad
Date: 9th December 2020
- Title: Research Directions in IoT
Organization: FDP on IoT at IIIT Allahabad
Date: 11th December 2020
- Title: Routing Protocols and models for SIoT
Organization: FDP on SIoT at University of Mysore Department of Studies in Computer Science Manasagangothri, Mysuru – 570006
Date: February 23, 2021



Dr. Rekha Verma

Department: Electronics and Communication Engineering

Designation: Assistant Professor

Experience (Teaching/Research): 6 years 5 months

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Volume	Year	Pag
1	Neelesh Gupta and Rekha Verma	First-principles study of thermoelectric transport properties in low-buckled monolayer silicene	Physica B: Condensed Matter	606	2020	412715

Average Impact Factor: 1.902

Seminars and invited talks presented:

Title: Strain Engineering in Tuning the Electronic and Vibrational Properties in Silicone and other 2D Materials

Organization: Indo-Polish International Conference on Advances in Energy Harvesting Technology (online mode)

Date: 18-20 March 2021

Conferences attended outside IIIT Allahabad:

Organized and Chaired the session "Thermoelectric Energy Harvesting" during Indo-Polish International Conference on Advances in Energy Harvesting Technology (online mode), March 18-20, 2021.

Work done in project undertaken in the Institute:

"Ab-initio linear and non-linear ultrafast spectroscopy in two-dimensional nitrogen based binary buckled group V semiconductors", Co-PI, funded by Indo-Czech International Cooperation Division, (Duration: December 2020-2023), Status: Ongoing

**Dr. Sudipta Das****Department:** Management Studies**Designation:** Assistant Professor**Experience (Teaching/Research):** 5 years, **Industry:** 11 years**New courses developed:**

Title: Introduction to Finance

Course number: ID20BIOF3C

Research papers published in journals:

S.No.	Author(s)	Title of the Article	Journal	Volume (No)	Year
1	Sudipta Das	The Time–Frequency Relationship between Oil Price, Stock Returns and Exchange Rate.	Journal of Business Cycle Research	https://doi.org/10.1007/s41549-021-00057-3	2021

Self-Financed Workshop organized:

Supply Chain and Logistics-Modeling and Analysis, from 22-23 January, 2021 at IIIT Allahabad.

**Dr. Seema Kushwaha****Department:** Applied Sciences**Designation:** Assistant Professor**Experience (Teaching/Research):** 4 years**New courses developed:**

Title: Algebraic Number Theory

Conferences attended outside IIIT Allahabad:

S.No.	Conference Name	Organizing Institution/Society	Mode	Date-Month-Year	Type of participation
1.	Number Theory & Its Related Topics	Sambalpur University	Online	6-15 July 2020	Contributed
2.	International Webinar on Recent Trends in Number Theory	KIIT, Bhubaneswar	Online	17-20 August, 2020	Attended



Dr. Mohammed Javed

Designation: Assistant Professor Grade I

Department: Information Technology

Experience (Teaching/Research): 05 years

Research papers published in journals/Conferences:

S.No.	Author(s) Name	Title of the Article	Journal	Volume (No)	Year	Page
1	Mohammed Javed, Bulla Rajesh, P. Nagabhushan	Automatic Tracing and Extraction of Text-Line and Word Segments Directly in JPEG Compressed Document Images	IET Image Processing	14(9)	2020	1909 – 1919

Average Impact Factor: 1.995

Research papers published in conference proceedings (as a full paper):

S.No.	Author(s) Name	Title of the Article	Conference Title	Paper No	Date-Month-Year	Pages
1.	Bulla Rajesh, Mohammed Javed , David Doermann	HH-CompWordNet: Holistic Handwritten Word Recognition in the Compressed Domain	IEEE Data Compression Conference (DCC2021)	181	March 2021	362
2.	Naga Nikhil, MD Merz, Mohammed Javed	Automatic On-Road Object Detection in LiDAR-Point Cloud using Modified VoxelNet Architecture	CVIP2020		December 2020	201-213
3.	Arul Prakash, MD Merz, Mohammed Javed	One Shot Learning Based Human Tracking in Multiple Surveillance Cameras	CVIP2020		December 2020	214-223

Seminars and invited talks presented:

Workshop Cum Internship Program on “Data Analytics and Machine Learning”, Alva’s Institute of Engineering & Technology (AIET), Mijar Campus, Moodbidri, Karnataka, in association with IIIT Allahabad, through MoU.



Work done in project undertaken in the Institute:

1. CIAR, Development of Software for IIIT Allahabad (fully automated employing Machine Learning) (8.5 Lakhs)
2. As a Corresponding Co-Investigator for National Research Project Grant on CCPWC, Ministry of Home Affairs, Government of India, (38 Lakhs)

11. Training Programmes organized:

1. National Workshop and summer school, **ADASIVA-2021**, IIIT Allahabad (Sponsored by DRDO, ISRO, CSIR, MathWorks and IEEE UP Section)

Dates: Decmeber 2020

Role: Co-Coordinator

2. CVIP2020 Conference at IIIT Allahabad

Dates: December 4-6, 2020

Role: **Conference Convener**



Dr. Anshu S. Anand

Department: Information Technology

Designation: Assistant Professor

Experience (Teaching/Research): 3 years

New courses developed: 1

Title: Parallel and Distributed Computing

Research papers published in conference proceedings (as a full paper): 1

S.No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year	Page
1	Anshu S Anand, Karthik Sayani, R K Shyamasundar	Fortress Abstractions in X10 Framework	13th International Symposium on High-level Parallel Programming and Applications (HLPP), Porto, Portugal	9	9-10 July, 2020	154-173

Seminars and invited talks presented: 1

Title: Parallel Computing

Organization: Alva's Institute of Engineering & Technology, Mangalore, Karnataka

Date: 9th November, 2020

Conferences attended outside IIIT Allahabad:

- 1) IEEE International Parallel and Distributed Processing Symposium (IPDPS) - New Orleans (USA), IEEE, 18-22 May, 2020, Attendee [Online Mode]
- 2) 13th International Symposium on High-level Parallel Programming and Applications (HLPP)- Porto (Portugal), University of Porto, 9-10 July, 2020, Contributed paper presentation [Online Mode]
- 3) 28th International Conference on High Performance Computing, Data, and Analytics (HiPC) - Bangalore, IEEE, 16-20 July, 2020, Attendee [Online Mode]

**Dr. Savitri Joshi****Department:** Applied sciences**Designation:** Assistant Professor**Experience (Teaching/Research):** 3 years, **Industry:** 1 year
(Administrative experience as Statistical Officer, Planning Department, Government of Rajasthan)**Research papers published in journals:**

S.No.	Author(s)	Article Title	Journal Name	Vol/No.	Year	Page
1	Joshi, Savitri and Rattihalli, R.N.	Estimation of parameters in a general hazard regression change point model	Journal of the Indian Statistical Association	57/1	2019	19-40
2	Bhati, Deepesh and Joshi, Savitri	Weighted Geometric Distribution	Communication in Statistics: Theory and Methods	47/6	2018	1510-1527
3	Joshi, Savitri and Jose, K. K.	Wrapped Lindley Distribution	Communication in Statistics: Theory and Methods	47/5	2018	1013-1021
4	Joshi, Savitri, Jose, K. K. and Bhati, Deepesh	Estimation of a change-point in the hazard rate of Lindley model under right censoring	Communication in Statistics: Simulation and Computation	46/5	2017	3563-3574
5	Sharma, A., Verma, H.K., Joshi, Savitri, Panwar, M. S., Mandal, C. C.	A link between cold environment and cancer	Tumor Biology	36/8	2015	5953-5964

Average Impact Factor: 1.29875**Research papers published in conference proceedings (as a full paper):**

S. No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year
1	Joshi, Savitri and Rattihalli, R. N.	Estimation of parameters in the Exponential Lindley hazard change point model	International Conference on Trends in Computational and Cognitive Engineering	Chapter 29	2020 (Springer Nature) Under press

Conferences attended outside IIIT Allahabad:

Presented a paper entitled “Estimation of parameters in the Exponential Lindley hazard change point model” in International Conference on Trends in Computational and Cognitive Engineering organized by Central University of Haryana during 28-30 November, 2019.

Other Activities:

Reviewed an article for the international journal “Statistica” in 2019.



Dr. Kavindra Kandpal

Department: Electronics and Communication Engineering

Designation: Assistant Professor

Experience (Teaching/Research): 8 years

Research papers published in journals:

S.No.	Authors	Title	Journal Name	Vol.	Year	Page
1.	Manocha, Pratyush; Kandpal, Kavindra; Goswami, Rupam;	Selection of Low Dimensional Material Alternatives to Silicon for Next Generation Tunnel Field Effect Transistors	Silicon, Springer	13/3	2021	707-717
2.	Ahmad, Faizan; Singh, Sukhvir; Pundir, Sandeep Kumar; Kumar, Rachana; Kandpal, Kavindra; Kumar, Pramod;	Effect of doping and annealing on thermoelectric properties of bismuth telluride thin films	Journal of Electronic Materials, Springer	49/7	2020	4195-4202
3.	Sodhani, Aditya; Kandpal, Kavindra;	Design of threshold voltage insensitive pixel driver circuitry using a-IGZO TFT for AMOLED displays	Microelectronics Journal	101	2020	104819
4.	Singh, Aryamick; Goswami, Manish; Kandpal, Kavindra;	Design of a voltage-programmed V _{TH} compensating pixel circuit for AMOLED displays using diode-connected a-IGZO TFT	IET Circuits, Devices & Systems	14/6	2020	876-880
5.	Kumar, Rachana; Kushvaha, Sunil Singh; Kumar, Mahesh; Kumar, Muthusamy Senthil; Gupta, Govind; Kandpal, Kavindra; Kumar, Pramod;	Flexible perylenediimide/GaN organic-inorganic hybrid system with exciting optical and interfacial properties	Scientific Reports, Nature	10/1	2020	1-11



6.	Ahmad, Faizan; Kandpal, Kavindra; Kumar, Naresh; Kumar, Rachana; Kumar, Pramod;	Effect of Different Metallic Contacts on the Device Performance of a pn Heterostructure of a Topological Insulator and Silicon (p-Bi ₂ Te ₃ /n-Si)	IEEE Transactions on Electron Devices	67/12	2020	5388-5395
7.	Sodhani, Aditya; Goswami, Rupam; Kandpal, Kavindra;	Design of Pixel Circuit Using a-IGZO TFTs to Enhance Uniformity of AMOLED Displays by Threshold Voltage Compensation	Arabian Journal for Science and Engineering		2021	10-Jan
8.	Ahmad, Faizan; Kandpal, Kavindra; Kumar, Pramod;	Electrical properties of a metal-germanium-topological insulator (metal/n-Ge/p-Bi ₂ Te ₃) heterostructure devices	Journal of Materials Science: Materials in Electronics	32/6	2021	8106-8121

Research papers published in conference proceedings (as a full paper):

S.No.	Authors	Article name	Conference title	Year
1	Singh, Aryamick; Kandpal, Kavindra;	Design of a Threshold Voltage Insensitive 3T1C Pixel Circuit Using a-IGZO TFT for AMOLED Displays	2020 24th International Symposium on VLSI Design and Test (VDAT), IEEE	2020
2	Gupta, Nishant; Kandpal, Kavindra;	Device-To-Circuit Integrated Design of DMFET Biosensor and Its Readout Using CMOS Pre-charge Amplifier	2020 IEEE 17th India Council International Conference (INDICON), IEEE	2020

Conferences attended outside IIIT Allahabad:

- Session Chair, 6th IEEE International Symposium of Smart Electronic Systems, 14-16 Dec. 2020.
- Organised summer training on VLSI Design (STPVD-2020) at IIITA.



Dr. Anjali Gautam

Department: Information Technology

Designation: Assistant Professor

Experience (Teaching/Research): 1 year 10 months

Research papers published in journals:

S.No.	Author(s)	Article Title	Journal Name	Year	Page
1.	Anjali Gautam, Balasubramanian Raman	Towards accurate classification of skin cancer from dermatology images	IET Image Processing	2021	1-16

Research papers published in conference proceedings (as a full paper):

S. No.	Author(s)	Article Title	Conference Title	Paper No	Date-Month-Year
1	Anjali Gautam, Balasubramanian Raman	Skin Cancer Classification from Dermoscopic Images using Feature Extraction Methods	2020 IEEE REGION 10 CONFERENCE (TENCON)	958-963	16-19 November, 2020

Seminars and invited talks presented:

Title: Applications of Deep Learning

Organization: Atria Institute of Technology, Bengaluru

Date: 12/02/2021

**Dr. J. Kokila****Department:** Information Technology**Designation:** Assistant Professor**Experience (Teaching/Research):** 6 years**Books and book-chapters published:**

S.No.	Author(s)	Book Title	Publisher	Year
1	N. Ramasubramanian and J. Kokila	Security of Internet of Things Nodes Challenges, Attacks, and Countermeasures and Chapter Title "Study of Hardware attacks"	CRC PressTaylor & Francis Group	2021

Research papers published in conference proceedings (as a full paper):

S.No.	Author(s)	Article Title	Conference Title	Date-Month-Year	Page
1	S. Chithra, J. Kokila, N Ramasubramanian	Detection of Hardware Trojans using Machine Learning in SoC FPGAs	IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT)	16 th September 2020	1-10
2	Kokila, J and Chithra, S and Ramasubramanian, N	Side-channel Analysis using Deep Learning on Hardware Trojans	International Conference on Artificial Intelligence and Machine Learning (ICAIML 2020) 4 TH -5 TH September 2020, Jaipur, India	28 th January 2021	12 - 18

Work done in project undertaken in the Institute:**Title:** Obfuscation based Defense technique for Hardware Trojan on Multicore cryptosystems**Funding Agency:** C3i Hub, IIT Kanpur.**Status:** Submitted on Feb 2021



Research and Projects



Research and Projects

Sl. No.	Name of Project	Coordinator	Funding Agency	Project Cost	Amount Released	Period of Project
1	Development of New method and algorithms to identify exon-intron boundary and finding signatory signal pattern for genetic engineering like autism	Dr. Prithish Vardwaj	DST	20,70,860	12,27,930	2011-13
2	Disaster management system for large scale deployment of sensor network using a fault tollerant mechanism	Dr. Shirshu Verma	DST	1,58,47,800	73,08,000	2011-15
3	Distributing Industrial Optimization tasks to Rural Worker- INDO UK BURD Project	Prof. Anupam	DST	60,88,130	42,55,024	2012-17
4	Technology incubation and Development of Entrepreneurs(Tide) Scheme	Dean (R&D)/ Dr. Rahul Kala	DEITY	1,65,00,000	68,36,000	2008-17
5	Inspire Faculty Award	Dr. Sitangshu Bhattacharya	DST	35,00,000	26,29,798	2014-20
New Project 2015-16						
6	IIIT-A Design Innovation Center	Dr. Suneel Yadav	MHRD	1,19,60,000	69,37,004	2015-22
7	Special Manpower Development Programme	Dr. Manish Goswami	DietY	53,88,000	53,88,000	2015-20
8	Graphene transistors on different high-k dielectrics as performance boosters and role of self-heating: a physics based theoretical approach	Dr. Sitangshu Bhattacharya	DST	27,26,000	23,34,000	2015-20
New Project 2016-17						
9	A Novel water Purification System with Silver Nanoparticle Coated Micro-Channel Arrangement for Filter Less Purification of	Dr. Amit Prabhakar	DST	25,18,947	24,78,919	2016-18



	Water and Embedded Waveguide for Purity Indicator					
10	Colour Barcoded, gold Nanoparticle Coated, Embedded, Magnetic Microparticle for Lab on Chip Localized Surface Plasmon Based Label Free Multiplexed Biossays	Dr. Amit Prabhakar	DST	32,22,600	27,57,720	2016-18
11	Global initiative on academic network	Dr. Satish Kumar Singh	MHRD	59,84,000	59,84,000	2015-18
12	Silicon nanowires: professional compact model of scaled thermoelectric figure of merit for energy harvesting”	Dr. Rekha Verma	DST	21,09,800	13,68,600	2016-20
13	Mission Planning using Sampling based techniques	Dr. Rahul kala	SERB	3928766	3187713	2016-19
New Project 2017-18						
14	Hindi to English Machine Translation System for Judicial domain	Dr. Pritish Varadwaj	MeitY	2738000	2738000	2017-21
15	Physical Layer Security in Cooperative Cognitive Relay Networks	Dr. Suneel Yadav	SERB	4548500	4282694	2017-21
16	Design and Development of Software Packages (s) for Image Illumination Normalization and coloring of the IR Images	Dr. Satish Kumar Singh	DRDO	2452643	2424999	2017-20
17	IMPRINT India initiative	Dr. Bibhas Ghoshal	MHRD (IIT Kanpur)	4046400	2023200	2017-22
18	Investigations on Chalcogenide Photodetectors	Dr. Sunny Sharma	SERB	5247660	5008497	2017-20
19	Medical Cyber Physical System for lifestyle diseases using Big Data Analytics	Dr. Sonali Agarwal/ Dr. Rahul Kala	SERB	3596250	2244464	2017-22
20	National Post-Doctoral Fellowship Scheme	Dr. Sintu Kumar Samanta	SERB	1963148	1963148	2017-19



New Project 2018-19

21	Towards disbursement of Micro grant for implementation of projects under the Foldscope scheme	Dr. Amaresh Kumar Sahoo	DBT	800000	600000	2018-19
22	Near Horizon Structure of Black Holes	Dr. Srijit Bhattacharjee	SERB	1977248	1341949	2018-21
23	Cyber Physical Security in Energy Infrastructure of Smart Cities (CPSEC) Indo-Norway Collaboration Project under ICT - CPSEC	Prof. O.P.Vyas	DST	3575500	1431768	2018-21
24	Newgen Innovation & Entrepreneurship Development Centre	Dr. Ranjana Vyas	DST	28750000	10750000	2018-23
25	Real Time Complex Processing and Analytics for Smart Buildings	Dr. Sonali Agarwal	DST	23,37,720	16,64,200	2018-21
26	Design and Development of Dimensionality Reduction Techniques for Cyber Physical Systems	Prof. Shekhar Verma	DST	3128400	2559200	2018-21
27	Transdifferentiation of mesenchymal stem cells into functional neurons on biodegradable nanomaterial scaffolds	Dr. Sangeeta Singh	SERB	3816000	2450000	2018-21
28	Scheduling of Precedence tasks with DVFS and Duplication on heterogeneous multiprocessors	Dr. Jagpreet Singh	SERB	1798090	1254940	2018-22

New Project 2019-20

29	IMPRES Research Project : Realisation of Pradhan Mantri Jan Dhan Yojna (PMJDY) Objectives towards Financial Inclusion: A review of Puranchal U.P. Region under domain Governance, Innovation and Public Policy	Dr. Utkarsh Goel	Indian Council of Social Science Research (MHRD)	4,20,000	360000	2019-20
30	Development of Secure IoT Communication using the	Dr.	DST	3630000	1730000	2019-22



	Blockchain Technology (DST/ICPS/Cluster/CS Research/2018 (General)	Venkatesan				
31	Low Power-High Speed True Random Number Generator for Cryptographic and Security Applications Under Cyber Security (CS) Research of Interdisciplinary Cyber Physical Systems (ICPS) Programme	Dr. Manish Goswami	DST	67,76,000	4600000	2019-22
32	Design and Optimize novel molecules as lipase inhibitors using CADD methodologies	Dr. Nidhi Mishra	Council of Science & Technolog, UP	780000	390000	2019-22
33	Modeling And Simulation Of Environmental And Occupational Epidemiology Data In Indian Context An Ontology Based Data Mining Approach	Dr. Sonali Agarwal	CSIR	2636000	1045000	2019-23
34	Popularizing the benefits of Information and Communication Technology (ICT) among the farmers and rural population in Prayagraj, UP	Dr. Vijay Kr. Chaurasiya	DST	1190750	950000	2019-21
35	GenomeIndia: Cataloguing the Genetic Variation in Indians	Dr. Prithish Varadwaj	DBT	14000000	9300000	2019-22
New Project 2020-21						
36	CARS project titled "Image Super-resolution" No.: S&T/ DIPR-735/19-20/CARS-01	Dr. Satish Kumar Singh	DRDO	922000	500000	2020-21
37	A web browser based Intelligent kernel tool for automatic detection and blocking of obscene image and video contents in real time by IIIT Allahabad	Prof. P.Nagabhushan/ Dr. Satish Kr. Singh/ Dr. Mohammed Javed	BPR&D	38,30,400	1149080	2020-22
38	Development of Application Oriented AI Systems	Prof. U.S. Tiwary/ Dr. Bibhash Ghosal/Dr. Jagpreet Singh	MeitY	3982000	1994000	2020-23



39	Improving Access to Science and Technology Higher Education in Resource-Poor Institutions through an Open Platform for Technology Enabled Active Learning Environment	Dr. Sonali Agarwal	Sri Lanka	EURO 72,724	3078362	2020-23
40	Development of kit for simultaneous isolation of viral RNA by magnetic nanoprobe and rapid detection of novel coronavirus by highly luminescent gold nanoclusters	Dr. Amaresh Kumar Sahoo	DBT	1401520	700760	2020-21
41	Development of fuzzy logic based automated micro-irrigation system powered by phyllotaxy pattern solar tree for agricultural and horticultural crops	Dr. Ashutosh Kumar Singh	U.P. Council of Agricultural Research, Gomti Nagar, Lucknow	2073500	4,77,750	2020-21
42	Ab-initio linear and non-linear ultrafast spectroscopy in twodimensional nitrogen based binary bucked group V semiconductors	Dr. Sitangshu Bhattacharya	DST	3525903	836226	2020-23
43	Detection and quantification of multiple blood parameters with photoacoustics: Fundamental research and portable device development for onsite sample Analysis	Dr. Ratan Kumar Saha	ICMR	2105898	701966	2020-23
44	Entrepreneurship Training Program through online platform	Dr. Pragya Singh	DST	200000	160000	2020-21
45	Social Awareness for COVID-19 through AI based Mobile App (TPN/52915)	Dr. Vrijendra Singh	DST	1576800	1260000	2020-22



SCHOLARSHIP



Scholarship/Fellowship/Assistantships

There are various scholarships/financial assistantships provided by the Central & State Government to the students of the Institute. A brief overview of some of the various Scholarships is as follows:

Sl. No.	Name of the Scholarship	Eligibility Criteria	Amount Re-imbursable (in Rs.)
1	Post Matric Scholarships (State Wise)	As decided by the concerned State Governments. Some of them are :- (a) Uttar Pradesh Post Matric Scholarship (b) Madhya Pradesh Post Matric Scholarship (c) Bihar Post Matric Scholarship (d) Uttarakhand Post Matric Scholarship (e) Maharashtra Post Matric Scholarship (f) Andhra Pradesh Post Matric Scholarship (g) Telangana Post Matric Scholarship (h) Rajasthan Post Matric Scholarship *Others as given on National Scholarship Portal	As decided by the State Government.
2	Post Matric Scholarships Scheme for Minorities	Scholarship will be awarded to the students who have secured not less than 50% marks or equivalent grade in the previous final examination and the annual income of whose parents/guardian from all sources does not exceed Rs.2.00 Lakh. 30% of scholarship will be earmarked for girl students.	Admission and tuition fees subject to a maximum ceiling of Rs.3,000/- p.a. Maintenance allowance for 10 months @ Rs.380/- p.m. for Hosteller and @ Rs.230/- p.m. for Day Scholar.
3	Merit Cum Means Scholarship For Professional and Technical Courses CS	Scholarship will be awarded to the students who have secured not less than 50% marks or equivalent grade in the previous final examination. The annual income of the beneficiary/parent or guardian of beneficiary should not exceed Rs.2.50 lakh from all sources.	Full Course Fees Reimbursement for IIIT Allahabad.
4	Post-matric Scholarship	The students having more than 40% disability (Certified by competent medical authority of the state Governments/UTs.) are only eligible.	Fees Reimbursement upto 1.50 lakh p.a. Maintenance



	for Persons with Disabilities	Scholarship will be paid to the students whose parents / guardians' income from all sources does not exceed Rs.2,50,000/-per annum.	allowance p.m. Rs. 1,600/- for Hosteller and Rs. 750/- for Day Scholar. Disability allowance depending on type of disability. Book Allowance Rs. 1,500/-
5	Scholarships for Top Class Education for Students with Disabilities.	Student with disability having not less than 40% disability. Total income from all sources of the candidate and/or his/her parents/guardians, shall not exceed Rs.6,00,000/- (Rupees Six lakh) per annum.	Reimbursement of tuition fees and non-refundable charges up to Rs. 2.00 lakh p.a. Maintenance Allowance Rs. 3,000/- p.m. for hostellers and Rs. 1,500/- p.m. for Day Scholars. Books & Stationery Rs. 5,000/- p.m. Reimbursement of expenses for purchase of a computer with accessories Rs. 30,000/- per awardee as a one-time grant for entire course. Reimbursement of expenses for purchase of Aids and Assistive Device Rs. 30,000/- per awardee as a one-time grant for entire course.
6	Top Class Education Scheme for SC Students	1. The annual family income ceiling from all sources for eligibility under the Scheme is Rs.6.00 lakh. 2. The SC students, who secure admission in the notified institutions, according to the norms prescribed by the respective institutions, are eligible for the scholarship under the scheme to the extent of the number of scholarships allocated to the institutions concerned. 3. The scholarship is merit based and the top ones in each institutions (subject to their	1. Full tuition fee and other non-refundable charges (there is a ceiling of Rs.2 lakh per annum per student towards fee in the private institutions and Rs.3.72 lakh per annum per student in private commercial



		eligibility) to get. In case the number of students admitted exceeds the number of awards, then the scholarship will be restricted to the top ones in the inter-se merit list institute-wise.	pilot training institutions). 2. Living expenses @ of Rs.2220 per month per student. 3. Books & stationery @ Rs.3000 per annum per student. 4. A latest computer with full accessories limited to Rs. 45000 per student as one time assistance (Living expenses, cost of books and stationery and computer are subject to actual).
7	National Fellowship & Scholarship for Higher Education of Scheduled Tribe Students	1. The total family income of the student from all source should not exceed Rs. 6.00 lakh per annum. 2. Only those Scheduled Tribe students who have secured admission in notified Institutions will be eligible for the scholarship.	1. Full amount of tuition fee and other non-refundable dues in respect of Government/Government-funded institutions are paid. 2. In case of students studying in private sector institutions a ceiling of Rs. 2.00 lakh per annum per student will apply normally. 3. In case of students in private sector flying clubs for Commercial Pilot Training the ceiling is Rs. 3.72 lakh per annum per student. 4. Living expenses are paid as per actual, subject to maximum ceiling of Rs. 2200/- per



			month per student. 5. Expenditure on Books and stationery is paid @ Rs. 3000/- per annum per student. Cost of a latest computer along with accessories limited to Rs. 45,000/- as one time assistance during the entire course is paid to the student.
8	Central Sector Scheme of Scholarships for College and University Students	Students who are above 80th percentile of successful candidates in the relevant stream for a particular Board of Examination, in class XII of 10+2 pattern or equivalent and not belonging to the creamy layer. Scholarship will be paid only to those students whose parent's/guardian's income from all sources does not exceed Rs.8.00 Lakh p.a.	The rate of scholarship would be Rs.1000/- p.m. at Graduation level for first three years of College and University courses and Rs.2000/- per month at Post-Graduation level. Students pursuing professional courses would get Rs.2000/- per month in the 4th and 5th year. The scholarship would be paid for 10 months in an academic year.
9	Institute Scholarships		
(a)	Merit-cum-Means Scholarship	1. The cumulative average of SGPI of two semesters only, per year, respectively should be equal to or above 8.50. 2. Parental Income should be less than Rs. 5.00 lakh p.a. 3. Total number of beneficiaries is limited to 3% of the total strength in each individual program/stream/department.	Rs. 36,000/- p.a.
(b)	Merit Incentive Scholarship	1. The cumulative average of SGPI of two semesters only, per year, respectively should be equal to or above 9.00.	Rs. 36,000/- p.a.



		2. 2% (Top Rank Holders) of the Total Strength, provided the Total Strength is above 40, in each individual program/stream/department will be awarded with Merit Incentive Award.	
10	Department Scholarships	The scholarships provided by the employer of the parents of the students.	As per their norms.
11	PG Fellowship/ Scholarship	- As per government norms as decided by MoE - Department of Higher Education – Technical Section-1 from time to time. - Annual Satisfactory Assessment Report of Student's Performance must be completed to get the SRF Scholarship for 13th Month. Additional Institute Norms – - Student must perform the TAship duties 8 hours per week against his assigned work by the concerned faculty/ supervisor. - Student must attend at least 75% of his class/lab.	For M.Tech– Rs.12,400/- p.m. Assistantship awarded on a semester to semester basis for a period up to 24 months (or till the end of 4th semester whichever is earlier). OR For Ph.D. Students– Up to 4 Years +1 year if extension is granted. (a) As JRF - Rs.31000/ p.m. (b) As SRF - Rs.35,000/- p.m. after successful completion of 2 years in Ph.D. programme as JRF and if the students clears the comprehensive exam in maximum 2 attempts.

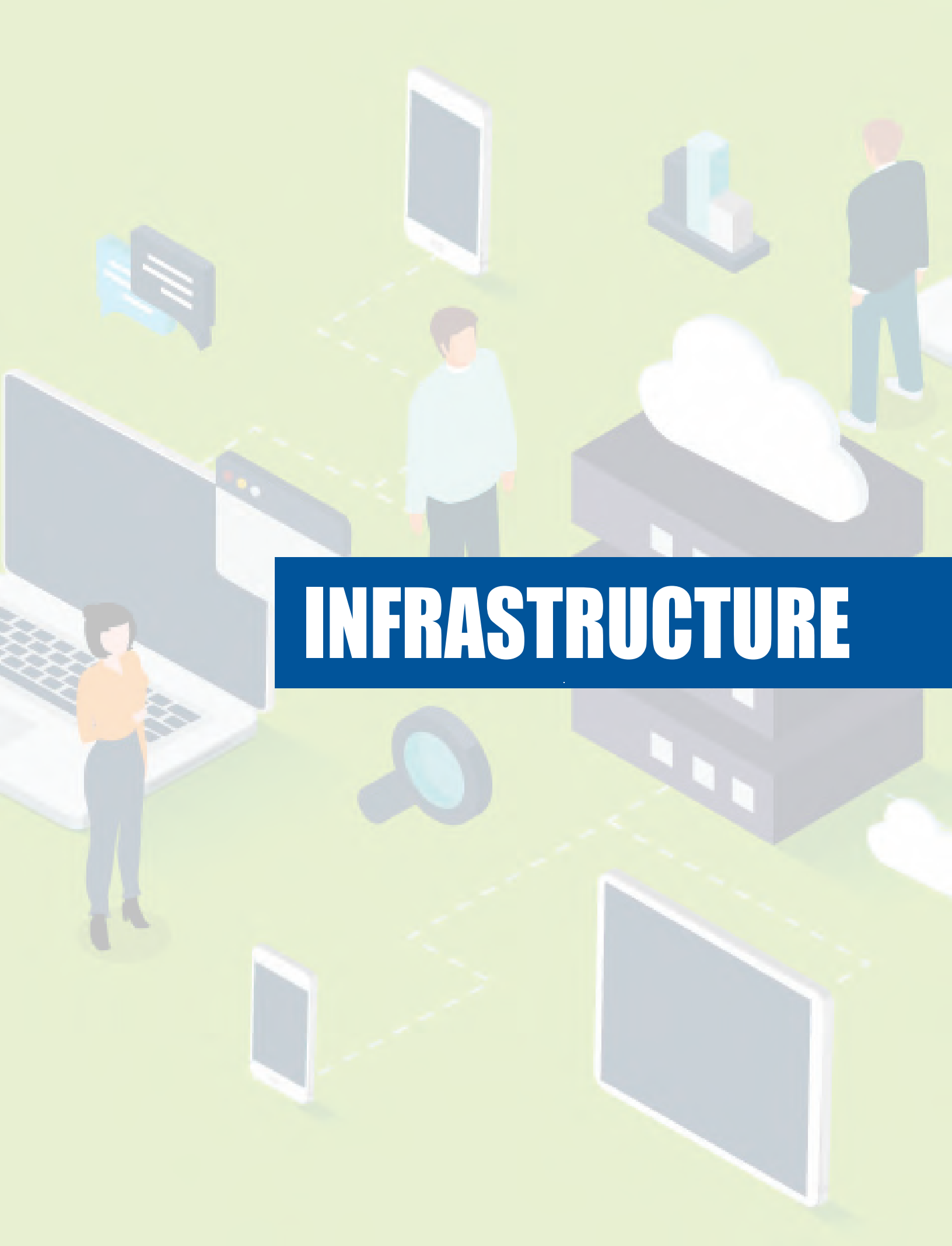


Memorandum of Understanding (MoU)

1	MoU signed between IIITA and Garuda UAV Soft Solutions Pvt. Ltd., dated on 21.06.2019
2	MoU signed between IIITA and ISRO, Bengaluru, India, dated on 23.07.2019
3	MoU signed between IIITA and Keysight Technologies India Pvt. Ltd., dated on 29.07.2019
4	MoU signed between IIITA and Stifing University, Hildesheim, Gemany, dated on 01.03.2020

Ranking (Category: Engineering)

Year	NIRF	India Today
2018	90	12
2019	82	10
2020	103	11

An isometric illustration on a light green background depicting various digital and technological elements. In the center, a man in a light blue sweater stands near a large smartphone. To the left, a woman in an orange shirt stands next to a large laptop. To the right, another man in a dark suit stands near a server rack with a white cloud on top. A magnifying glass is positioned in the lower center. Dashed white lines connect the smartphone, the laptop, and the server rack, suggesting a network or data flow. Other elements include a bar chart, speech bubbles, and a tablet.

INFRASTRUCTURE



Infrastructure

Facilities

The Jhalwa campus includes three Computer Centers with several labs each, lecture halls, a newly built auditorium, library, and a residential campus. Various other facilities are under development. This new campus has been developed on 100 acres of land at Devghat, Jhalwa, on the outskirts of Prayagraj (Allahabad).

The architecture aims to transcend established design conventions and make a statement about the similarities between atoms and bits. Instead of the traditional geometric lines, the campus and other buildings have been styled on patterns developed by internationally acclaimed scholar and mathematician, Roger Penrose.

Penrose Geometry

This grid was chosen because the process of constructing a “Penrose Universe” has a remarkable congruence with the fundamentals of information theory. The basic units of information are aggregated in simple or complex sequences to provide a variety of “information structures” that span the entire range of human activity.

Sprawling on 100 acres lush green lawns and expanse of rich flora and devise floriculture, the Campus includes Visitors Guest House, Faculty Guest House, VIP Guest House, 05 Boys’ Hostels with the occupancy of 1975 inmates, 03 Girls’ Hostelsw, Residential Quarters of Type I, II, III & IV, Married Scholar Apartments, Students Activity Centre, Bank, Post Office, Health and Shopping Complexes, Squash Courts, Tennis Courts, Badminton Courts, Pavilion & Playgrounds,etc.

Elements of the new campus

Within the Penrose layout for the campus, a central zone has been marked out for the academic core consisting of an administrative building, lecture theater complex, library, computer laboratories and research facilities. The sun pattern has been chosen for laying out the library and the lecture hall complex. The computer laboratories and the administrative buildings are derived from selected tessellated blocks in the star pattern. The lecture theater complex has pentagonal lecture halls seating 100+ students. Multimedia labs, tutorial rooms, faculty rooms, language labs and meeting rooms are also included. The basement of the building contains the air-conditioning plant and other service machinery. The building has three levels, with an area of approximately 3820 sq.m. The total covered area in the academic campus is approximately 15,600 sqm. Dholpur stone and rough cast plasters are the two main finishes chosen for the building exteriors.



This infrastructure is proposed to accommodate the needs of the institute for more than a decade. The students have access to a regular bus service from the Jhalwa campus to central Prayagraj city (Vigyan Prarishad). There are separate hostels for men and women, with single rooms (for the senior most batches) and twin sharing rooms. The spacious accommodations are provided with computers, along with 24-hour backup power supply. The hostel mess caters to the students' meals. Facilities for recreation and sports like cricket, football, badminton and table tennis are available with more on the way.

Salient Features in brief

- 24 X 7 Internet Connectivity
- WiFi connectivity throughout the campus
- Normally each student allotted P4 and above computers
- 24 X 7 uninterrupted power supply
- State of the art facilities for all labs
- All academic and administrative areas are fully air conditioned
- Different sport facilities like volleyball court, basketball court, football court, snooker, cricket ground, swimming pool, GYM facilities, etc are available for all the students
- Banking & ATM facilities are available in the Institute premises
- 24 X 7 Medical facilities are available in the campus.
- Hostel messes are fully air conditioned
- Institute is having canteen providing hygienic foods / snacks
- One of the salient features of the training imparted to the students is the hands on computer assembly training. The students themselves have assembled almost all of the Institute's computers, under the guidance of specially trained technical staff. This has not only enabled the Institute in bringing down the cost of new computers, but also made almost 100% instant troubleshooting of any faults, resulting in no requirement of any computer related AMCs.
- Broadband over Power Line (BPL)

Sports

IIITAllahabad has an excellent physical activity infrastructure for its residents to ensure that academic development is duly supplemented by sufficient physical development as well. A good football ground – complete with spectator stands serves as the principal venue for most of the sports events organized by “Spirit” – the sports club of IIITAllahabad. A duly marked athletic track circumscribing the ground serves to provide for a safe track for not only the



athletic events – but the early morning joggers as well. Aquatic sports are catered to by a 25*12m swimming pool that is maintained to strict hygiene standards. The institute also provides flood lit basketball, tennis and squash courts to ensure that students have sufficient venues to engage in games of their choice. To further complement these venues, the air-conditioned Student Activity Center (SAC) also houses a table tennis facility along with a billiards room for those interested in indoor activities.



Health Facility

The health center of the institute is a 24 x 7 functional body that provides OPD care and first aid facilities for the residents where prompt treatment for ailments and small wounds can be availed. A multi-bed hospital meant for admitting students with greater illness is also maintained. Facilities like ECG and Pathology for basic routine tests on weekdays are also available and can be availed as per need.

The Medical Claim and Accidental Insurance Policy (MCAIP) ensure timely hospitalization and the best of treatments available for the students. An ambulance meant for transporting patients from institute to Nazareth Hospital and SRN Hospital in case of major illness or emergency is available round the clock. Homeopathic treatment is available on selected days. The students are required to reveal their medical history of any type and nature such as asthma, epilepsy, HTN, diabetes or any other chronic illness, during the time of admissions so that proper treatment and care can be provided to them during emergencies or otherwise. A team of well qualified doctors headed by CMO Dr. R.Dayal, ensure the best of health care for the residential students.



Networking, Maintenance & High Computing Facilities:

IIITA has established a reliable network of 10000+ nodes functional round the clock to cater the needs of more than 3000 users and approximately 7000+ networked devices including Desktop /Laptop /Mobile/MacBook etc. out of which approximately 4000+ nodes are operational round the clock. The internal design is powered by providing dedicated wired as well as shared wireless network to every node in the campus. The network spans through every building on the campus using optical cables where high quality equipment (including Load Balancing, Firewall, WSA and Layer 3 managed switches) have been installed ensuring a high speed (Gigabit) intranet access 24X7. The internet is facilitated by a dedicated link from National Knowledge Network of 1Gbps bandwidth including a redundant link of 1 GBPS bandwidth from JIO to ensure connectivity in case of technical breakdown however both the Internet links are working simultaneously on Link Load Balancing Device to shape the High speed Traffic. Centralized Server Room monitors all the network related activities and facilitates a secure network services within the campus. Network infrastructure of IIITA is sophisticated which uses cutting edge technologies like Nexus Backbone switch, Unified Threat Management systems, Adaptive Security Appliances etc. It is prominently upgraded with time to meet the needs of users. The Networking and Maintenance Cell provides hardware (such as Desktop computers, Laptops, Printers, Scanners), software and other technical services to the users. Under the supervision of NMHC Section various labs set up for UG and PG students. A major service offered to students includes- WWW, Mail, Proxy, Firewall, DNS, LDAP, Profile, Storage, WINS, Forums, and Database etc.

Software: The PC's use mainly Windows and Linux. The labs have a very rich repository of software ranging from integrated development environments for C/C++, Java, Visual Basic, to RDBMS like Oracle 9i, MySQL, MATLAB, Webex Microsoft Office. Several specialized software for core labs or projects like Statistical, Rational Rose, SPSS 10.0, Argo UML, Systat 12 and other licensed version software for testing purposes have also been acquired. ERP prototype packages are being acquired for facilitating the students with the latest enterprise applications.

Hardware: Computer laboratories and the administrative buildings are derived from selected tessellated blocks in the star pattern. All the labs are equipped with latest PCs having Quad Core, i5 ,i7 and 1 TB storage and 8/16 GB (RAM) with 24X7 internet connectivity through 2 GBPS Leased line. Scanners, CD/DVD writers, Laser printers are also provided in the Labs.

ISP And Network Devices Details : 1 GB Link from NKN (BSNL Media Provider) and another 1 GB link from Reliance, over Juniper MX-80 (NKN) and Juniper ACX 1100 Series (Reliance) Routers, Security Appliance: CISCO Wi-Fi Controller 5516, FPR 2100 Series, Fortinet 1000B (LLB), Core Switches: CISCO Nexus 7000 Series, CISCO Catalyst 4507 R+E, Cisco 3560, CISCO 2960, and Cisco 4000 catalyst, provide support in maintaining state of class network services for users.

Central Computing Facility (CCF): NMHC maintains Central Computing Facility which consist the HPC Facility (SURYA) has 16 CPU (640 cores) compute node clusters and 4 GPU (160 cores with 2x4 Nvidia Tesla-V100 having 40,960 CUDA core) node clusters along with 8.5TB of RAM. The BigData Facility (DHYAN) has 20 CPU (800 cores) data node clusters with 8TB of RAM and ~250 TB of HDFS Storage. HPC and BigData Facility uses General Parallel File System (GPFS) for storage (~450TB) connected via Mellanox 56Gb/s passive copper cables (15 GBPS throughput) based on DDN GRIDScaler Storage. Cloud Facility has 6 cloud nodes (240 cores), 2.3TB of RAM with 150TB of storage. The CCF facility has 100 Gbps inter-connectivity, 10 Gbps external-connectivity and 2x100KVA UPS backup.



Hostels

The Institute has state-of-the-art Hostel facilities for both Boys and Girl students with good ventilated rooms equipped with computers, fully air-conditioned modular Mess with electronic equipments and playing facilities.

Hostel	Rooms			Occupancy
	Single	Double	Total	
Girls Hostel – I	10	21	31	52
Girls Hostel – II	10	39	49	88
Girls Hostel – III	128	48	176	248 (including 24 single suits)
Boys Hostel – I	108	78	186	264
Boys Hostel – II	108	78	186	264
Boys Hostel – III	108	78	186	264
Boys Hostel – IV	168	92	260	352
Boys Hostel – V	347	210	557	831 (including 64 single suits)
Married Scholar Apartments			50	50
			Total	2413



Classrooms

- Computer Centre (CC-I) 05
- Computer Centre (CC-II) 05
- C.V. Raman Bhawan (CC-III) 12
- Lecture Theatre (LT) 10



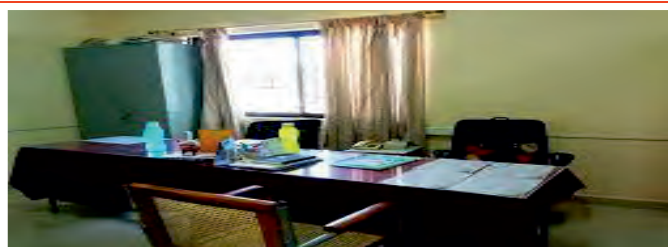
Laboratories

- Computer Centre (CC-I) 16
- Computer Centre (CC-II) 16
- C.V. Raman Bhawan (CC-III) 30
- Lecture Theatre (LT) 05



Faculty Cabins

- Computer Centre (CC-I) 22
- Computer Centre (CC-II) 22
- C.V. Raman Bhawan (CC-III) 54
- Lecture Theatre (LT) 10



Residential Facilities

Sl.No.	Type	Built Area	No. of Rooms
1	A	55 m ²	08
	B	85 m ²	16
	I	85 m ²	32
	C	100 m ²	02
	G	100 m ²	20
	D	120 m ²	28
	H	120 m ²	18
	J	148 m ²	20
	E	155 m ²	14
	F	200 m ²	05



2	Visitors' Hostel I	
	AC Room suites (Refrigerators, TV, computer facilities in six suits), all double beds)	10
	AC Rooms (TV, All Double beds)	20
	Non-Ac Rooms (Dining Hall, cyber cafe-3 computers, gym facilities)	10
	Visitors' Hostel II (For VIP/International Visitors mainly with all essential facilities)	
	Visitors' Hostel III (All double beds, refrigeration in 17 suites, TV & computer in all 30)	
	AC Suites	28
	AC Single	02

Other Amenities

➤ Auditorium ➤ Sports • Pavillion • Volleyball Court • Lawn Tennis Court • Athletic Track • Squash Court • Swimming Pool	➤ Cafeteria ➤ Amul Parlour ➤ Nesley Parlour ➤ Health Centre ➤ Bank & Post Office ➤ Telephone Exchange ➤ Shops ➤ Dormitory ➤ Student Activity Centre ➤ Sewage Treatment Plant	➤ Director Residence & Camp Office ➤ HVAC & Associated work ➤ Internal Furnishing for academic buildings, hostels and auditorium ➤ Office Equipments ➤ Upgrading of Internet & WiFi Facilities
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Labs and Research Facilities

Computer laboratories and the administrative buildings are derived from selected tessellated blocks in the star pattern. A lot of emphasis is laid on research and learning via project work. This is exemplified by the numerous laboratories setup for research and projects pertaining to various emerging and contemporary fields like image Processing, Wireless Communication, Neural Networks, VLSI, Robotics and Bio-Informatics to name a few. They house softwares from widely used to be state-of-the-art technology. Laboratories that have been set up can be classified into two categories – general and specialized laboratories. Students have been provided independent systems in at least one general laboratory. Students can use laboratory facilities all round the clock. Laboratories open at their request, so students can conveniently work even when it is a public holiday. They can use these systems to install and run programs of their choice, carry out assignments and project works under course curriculum.

The computer labs comprise of latest PCs having Core 2 Duo, Quad Core, I5 with a 24 hours Internet access through 1 GBPS Leased line; Scanners, CD-writers, Laser printers are also available in the Labs. Multimedia projectors, Webcams, Video Cameras are extensively used for communication skills labs and various Presentations. Efforts are on to provide students with the latest Laptops. All computer points are backed by 100% Uninterrupted Power Supply.

Software: The PC's use mainly Windows XP and Linux. The labs have a very rich repository of software ranging from integrated development environments for C/C++, Java, Visual Basic, to RDBMS like Oracle 9i, MySQL. Several specialized software for core labs or projects like Statistica, Rational Rose, SPSS 10.0, Argo UML, Systat 12 and various software for Testing and Decision Purposes for Managers have been acquired with adequate user licenses. ERP prototype packages are being acquired for facilitating the students with the latest in enterprise applications.

The Institute maintains licensed copies of all software (systems, applications and academics) that students require and ensures that the licenses are kept up to date. It discourages the use of illegally procured software. Students have the prerogative to request the Institute to procure any software or hardware that they require in their assignments, projects or research activities.

Research Laboratories

Sl.No.	Name of the Lab	Faculty Incharge
1	Robotics Lab	Prof. G. C. Nandi, Dr. Rahul Kala
2	SILP/Cognitive Computing Center(New)	Prof. U.S.Tiwary
3	Machine Learning and Optimization Lab	Prof. Shekher Verma/Dr. K.P.Singh



4	Interactive Technologies & Multimedia (ITM) Lab	Prof. Anupam Agarwal / Prof. Vrijendra Singh / Prof. Shirshu Varma
5	Data Analytics Lab	Dr. Manish Kumar
6	Network Security & Cryptography Lab	Prof. Shekhar Verma/Dr. S.Venkatesan Dr. Vijay Chaurasia/Dr.Soumyadev Maity
7	Wireless Sensor Network Lab	Dr. Shirshu Varma
8	Robotic Fabrication & Control	Dr. Pavan Chakrabarty
9	Computer Vision Biometric Lab/Research Lab	Prof. P. Nagabhushan/Dr. S.K.Singh/ Dr. M. Javed
10	System Lab	Dr. Bibhas Ghosal/Dr. Jagpreet Singh/Dr. Anshu Anand
11	Deep Learning lab	Prof. Vrijendra Singh
12	Intelligent Signal Processing Lab	Dr. Shirdhu Verma/ Prof. Vrijendra Singh
13	Advanced Image & Data Science Lab	Dr. T. Pant/ Prof. Vrijendra Singh
14	Software Engineering research Lab	Dr. Sonali Agarwal/Prof. Vrijendra Singh
15	Big Data analytic Lab	Dr. Sonali Agarwal
16	Digital forensics and cyber security lab	Dr. Abhishek Vaish/Dr. Shekher Verma Dr. S. Venkateshan
17	Wireless network and IoT research Lab	Dr. Vijay Chaurasia
18	Business Intelligence & <i>Smart e-campus</i> Lab (New)	Dr. Ranjana Vyas
19	Introduction to Computer Lab (Hardware)	Mr. Shailendra Singh (U/G of HoD IT)
20	Computer Lab CC2	Prof. Shekher Verma/Dr. Pavan Chkraborthy

Biomedical Imaging Laboratory

This is a teaching cum research laboratory. Phantom experiments will be conducted to demonstrate basics of ultrasound imaging. The generation of acoustic signal due to absorption of light referred to as the photoacoustic effect will also be demonstrated through simple experiments. Its use in medical imaging will be shown. Experiments for image reconstruction in tomography imaging will be carried out too. Existing as well as prospective PhD students will perform experiments to develop methods for quantifying several blood parameters (e.g. blood oxygenation, aggregation level, hemolysis level, presence of melanoma and malaria infected cells in blood stream etc.). Moreover, experimental data will help to design various computational reconstruction algorithms as well as to validate those protocols. Hopefully,



developed methods will find applications in clinics. Many other experiments will also be accomplished along with internal and external collaborators. Facilities are-

- (i) Ultrasound transducers (JSR, center frequency- 3.5, 5, 7.5 MHz, bandwidth- 30%, diameter- 0.5 inch).
- (ii) Ultrasound pulser/receiver (DPR 300, JSR, bandwidth- 35 MHz, driving voltage- up to 400 V, gain- 0-60 dB)
- (iii) Nano-second pulsed laser (NT352C-10-SH-H, Ekspla, frequency- 10 Hz, wavelength range- 1064, 532, 350-500, 660-2600 nm, maximum energy at 532 nm- 405 mJ)
- (iv) Oscilloscope (WaveSurfer 3034, Lecroy, number of channels-4, bandwidth- 350 MHz, sample rate per channel-4 GS/s)

Spintronic and Magnetic Materials Lab and Photonic and Metamaterials lab

In the Nanomagnetism and Spintronics research work focuses on experimental studies of magnetic, magneto-optical, and spin-transport phenomena in new functional materials and hybrid nanoscale structures. Current research topics include electric-field control of ferromagnetism, spin transport in ferrimagnetic and ferroelectric tunnel junctions, and magneto-plasmonics of patterned nanostructures.

VLSI laboratory

1. Tunable Light source (TLS) (NwePort TLS 300XU): This instrument provides highly confined and monochromatic light source ranging from 300 nm to 2500 nm wavelength range which is used to characterize the optical behavior of the optoelectronics devices. This instrument was customized with the attachments of slits, iris and filters to get accurate wavelength. Power can be varied from 200 W to 300 W.
2. Precision LCR Meter with Temperature Controller (Keysight E4980AL): This instrument is used to measure inductance, capacitance and resistance of any bulk and thin film material in the frequency range of 2 Hz to 1MHz. This instrument is separately connected with a 2 probe probing-station. The stage of probing-station is attached with a programmable temperature controller which heats the stage up to 350 °C, hence providing the facility of measurement with respect to temperature too.



IRCB Laboratory

1	Cold centrifuge	Thermo Scientific (Sorvall ST8)
2	Fluorescence Spectroscopy	Analytical Technologies Limited FS 2060
3	Nanodrop spectroscopy	Nabi
4	-20 deep freeze	Vestfrost
5	Ice Flaker	BR Biochem Life sciences
6	Fridge	Samsung

Robotics and Machine Intelligence Laboratory

The main vision of the laboratory is to nurture young minds towards creativity and steer their talents towards high quality research in different areas of Robotics and Intelligent Systems using Information Technology. Our mission is to create an international standard for research and teaching, excel in the area of robotics and cognitive sciences, produce high quality engineers having self-confidence and who can take part in nation's knowledge building endeavor and create a brand name for the Institute as a temple of learning.

The laboratory provides state-of-the-art facilities to learn complex concepts of Artificial Intelligence. Students are encouraged to learn by doing it through many available development environments like Robot Operating System (ROS), MobileSim, Humanoid Open Architecture Platform (HOAP), Interactive Graphics Robot Instruction Program (IGRIP), Humanoid & Mobile Robot Simulation Platform, WEBOT, where students can create and control different kinds of robots using both C++ and Java.

Laboratory purchased the Baxter humanoid robot which has a screen that acts as a face for a socialistic experience, 2 manipulating hands with an electrical and vacuum gripper each, cameras at both hands and forehead to facilitate gripping, and an inbuilt computing system. The robot is compliant to work with the Robot Operating System.

Apart from that we have hardware robots which include:

- **Humanoids:** Baxter Robot, NaO, HOAP-2
- **Mobile Robots:** Pioneer LX, Amigobot, Firebird V, Firebird VI
- **Kits:** Robix, SCARA, LEGO Mind storm, roubdbots
- **Specialized Sensors:** Quanergy 3D Lidar, Microsoft Kinect, ZED Stereo camera (given by NavAjna Technologies for a specific project)



The lab has also made some indigenously developed robots such as:

- Development of Adaptive Modular Active Leg (AMAL)
- Social Mobile Autonomous Robot Testbed (SMART)
- Autonomous Navigation Testbed (SMART)
- Social Interactive Mobile Robot (TINKU)
- Elephant Trunk Manipulator

At present the laboratory has a number of collaborations like:

- Bio inspired robotics group of EPFL, Switzerland
- Instituto de Robótica para la Dependencia, Barcelona
- University Rovira Virgili, Spain
- Artificial Limb Manufacturing Corporations (ALIMCO), Kanpur
- NavAjna Technologies Limited
- Addverb Technologies limited
- Mercedes Benz Research and Development India

The laboratory is currently pursuing numerous projects such as Human Robot Interaction for Emotions, Robot Grasping and Learning by Demonstration, Simultaneous Localization and Mapping in Urban and Extreme Conditions, Social Robot Motion Planning, Synthesis and kinematics of continuum robots, etc.



New Research/Teaching Laboratory

- Bio-MEMS (Bio-micro-electro-mechanical system) and Nanotechnology Lab

The amalgamation of microfabrication-technology with biology and medicine is producing a large collection of BioMEMS devices that could transform the biomedical-exploration and clinical-practice.

The *Bio-MEMS* & Nanotechnology Laboratory at IIIT Allahabad was established in early 2017 with major funding support from the *DST* (WTI-2015, Grant), as well as, *SERB* (Start-up Grant) sponsored research Grant.

It is in the process of constant remodelling and sophistication to accommodate world-class research facilities in this domain. The lab has been established in Room No.: 4114, CC-II, ground floor; and serves to (1) support BME/ BI/ ECE/ IT student's "Bio-MEMS-Lab" and



“Biosensors & Transducers-Lab” courses, and train students with hands-on microfabrication/ simulation - skills; and (2) provide innovative research opportunities for undergraduate/ Postgraduate/ PhD students interested in interdisciplinary Bio-MEMS projects. The decisive ambition of the BioMEMS lab is to augment the collection of students that have both acquaintances of microtechnology/nanotechnology and an interest in applying it to medically and biologically pertinent problems.

The BioMEMS lab consists of *four Lab-sections*

(i) Polymer Microdevice/ Nanodevice fabrication Section

Polymer BioMEMS present exclusive advantages over Si or glass-based microdevices in providing a biocompatible, adaptable and low-cost platform for cell-based studies. In this lab section, we are at present focusing on fabricating poly(dimethylsiloxane) (PDMS) based microdevices, using soft lithography.

(ii) Biophotonics Section

This section of the lab offers dark-room facilities related to the optical detection based microdevices or nanodevices.

(iii) Cell / Tissue on micro-chip section

This section of the lab offers critical facilities related to growing/ assorting living cells on microfabricated micro-chip to perform various tissue-engineering/ cell-on-chip based innovative experiments.

(iv) Bio-Medical-instrumentation section

This section of the lab offers critical electrical/electronics facilities related to assembling/ characterizing/ packaging the created bio-medical microdevices or nanodevices, which may lead to proper product design and development.

Equipments

• NUV exposure system	• Syringe Pump
• 3-D versatile printer (custom made)	• Peristaltic Pump
• Laser ablation system	• Laminar Flow system
• Spin coater	• Optical Bench
• Convective oven	• Optical fiber Spectrometer
• Stereozoom microscope	• Mini laser light sources
• Fluorescence microscope	• Precision Hot plate



Other Labs

- Physics Lab
- Modeling and Simulation laboratory
- Biochemistry & Molecular Biology Lab
- Chemistry & Nanotechnology Lab
- Bioinformatics/Advance Programming Lab
- Bio-signal Acquisition and Analysis Laboratory
- IIITA-IAPT Anveshika Laboratory
- Biomedical Informatics Laboratory
- System Biology laboratory
- Biomedical Imaging Laboratory
- Spintronic and Magnetic materials
- Photonic Crystals and Meta Materials

Intellectual Property Right Cell (IPR Cell):

IPR Cell has been recently reallocated in Room No. 1127 of Admin Block, IIITA. It has the ambition to expedite the Intellectual Property Rights (IPR) related activities in IIITA.

One of the crucial plans of action for the present IPR Cell under the R&D Committee is hiring Professional Legal Consultancy Services for enhancing the pace of generation of IPRs. *Further, to fulfil the aforesaid objectives, IIITA has signed, MOU with MyCrave Consultancy (for one year), because of their ultimate cost-effective professional fee structure.* IPR-Cell has been regularly organizing workshops for “Intellectual Property Rights (IPR)” related matters, to educate the students and faculties of the institute, so that they could pursue their projects and creativity in the direction of IPR, and can develop Intellectual Asset for the Institute.

Library Facilities

The Central Library of IIIT Allahabad is a central pillar of the institute. It is located centrally in the campus at equal distance with other academic wings. The main function of Central Library is to provide support in research and resource linkage for students and faculty members of the institute. It provides a quiet study space for students and researchers. Central Library is stocked with books that cater to the student's academic and research requirements. Audio and multimedia versions of some course modules are also available. In addition, dictionaries, journals, thesaurus and encyclopedias are also provided for reference purposes.



There, an E-Media Section equipped with 25 computers is maintained inside the library for reading e-resources being subscribed by the institute. There is a premier section of Theses/Project Reports for the students. The library has already acquired more than 61,000+ books on various courses along with IT related latest titles. The library uses open source software 'KOHA', for maintaining the database and circulation related daily operations.

Institute is a core member of eShodhSindhu (INFLIBNET) consortium, through which number of e-resources like ACM Digital Library, Economic & Political Weekly, Institute for Studies in Industrial Development (ISID) Database, JGate Plus (JCCC), JSTOR, Oxford University Press, SpringerLink, Web of Science (WoS), etc. are being made available on complimentary basis. Apart from this, the library subscribed a good collection of online e-journals- IEEE Digital Explore, Elsevier-Science Direct, Emerald Management, Sage Online Journals, IOP, APS, AMS and EBSCO etc. directly from the publishers on IP based multiple user access.

Collection

Books	Online Journals	Magazine	CDs / Softwares	Lectures / Video Couses
61616	12961	56	2484	1005

Functioning

(a) Procurement

- Library procures books, e-books, e-journal databases and magazines etc. based on the recommendations received from faculty members and researchers/students. Orders for the proposed requisitions are placed in consultation with the competent authority.
- Database entry of procured books is done in Library Management System (LMS) according to the accession register.
- Any item procured by the library can be searched on library portal/OPAC (<https://library.iita.ac.in>)
- Books are properly arranged in various shelves according.
- At least one copy of every title is kept in the library for reference purpose
- The library has optimum blend titles, covering reference interests and also text books.

(b) Circulation

Library provides self registration facility to the students/researchers based on their ID card issued by the institute. Once registration process is completed, registered member can self issue the books using LDAP credentials. Online book reservation facility is also available through OPAC if the book is not readily available in the library. Auto generated e-mail alert



for New Arrivals, Loan Status, Overdue Reminder and availability status of reserved books etc. are sent to every registered member.

(c) Digital Repository

IIITA Digital Repository (IDR) preserves and enables easy and open access to all types of digital contents including theses, research articles and other scholarly publications etc. The main objective of the IDR is to preserve and enable easy and open access of all types of digital contents to the library users. It developed as an initiative to create and update a comprehensive database of research works becoming a gateway to digital and electronic information.

(d) Subscription

Central Library subscribes various online e-resources as mentioned above. Subscribed digital contents can be accessed throughout the campus as publishers are providing IP based multiple user accessibility with unlimited download facilities. E-resources are:

S.No.	Title of the Subscribed e-Resource (eSS)	S. No.	Title of the Subscribed e-Resource (Direct)
1	ACM Digital Library	1	IEEE Digital Library
2	Economic & Political Weekly	2	EBSCO Business Source Itimate
3	Institute for Studies in Industrial Development (ISID) Database	3	Emerald Insight
4	JGate Plus (JCCC)	4	Sage Publication
5	JSTOR	5	American Mathematical Society
6	Oxford University Press	6	Institute of Physics
7	Springer Link	7	Elsevier-Science Direct
8	Web of Science	8	American Physical Society

Plagiarism Detection Software

- URKUND (Complimentary through eShodhSindhu)
- Turnitin

NDL E-Resources

- World e-Book Library
- South Asia Archive (SAA)





EVENTS

Events

International conference on “Advances in Electronics: Electrical: Computational Intelligence”- 2021 (ICAEEEC-21)

13th March 2021

International conference on “Advances in Electronics: Electrical: Computational Intelligence”- 2021 (ICAEEEC-21), held at one of the most ancient and holy city of India “Prayagraj”, Uttar Pradesh from 13th - 14th March, 2021 with an aim to provide a platform for researchers, scientists, technocrats, academicians and engineers to exchange their innovative ideas in the field of Electrical, Electronics and application of Computer Science & Engineering



“Entrepreneurship development” in online mode

1st March 2021

Entrepreneurs play a key role in any economy, using the skills and initiative necessary to anticipate needs and bring good new ideas to market. Entrepreneurship development will be immensely helpful for the Research community, Utility professionals, and Industry Stakeholders as a major domain of Interdisciplinary subjects. This is a DST sponsored Workshop, Technically co-sponsored by IEEE UP SECTION (INDIA) for motivating budding technocrats to participate and learn the techniques of setting up a business unit.



Self-Financed Course-cum Workshop on Supply Chain and Logistics - Modeling and Analysis

22nd January 2021

The workshop is being organized with an intent to provide recent developments and research practices in the field of Logistics and Supply Chain for the students, researchers and practitioners. It is aimed to provide an understanding about the principles and practices, knowledge required in the increasingly complex global business environment and rising difficulties in competitive positioning of firms. Various experts from IIMs, IITs, NITs and Industry along with our internal resource persons will act as resource persons for this workshop.





Union minister visit to IIITA

11th December 2020

Minister of State for Education Shri Sanjay Dhotre visited IIIT A on 11.12.2020 and interacted on "Transforming Policy laid down New Education Policy-2020 into Practicality". The minister visited the campus and took the stock of progress being made by the institute. As Chief Guest he addressed the institute fraternity on this occasion. He also dedicated ERP software (remote and faceless single window admission system) to the nation and released the student hand book.

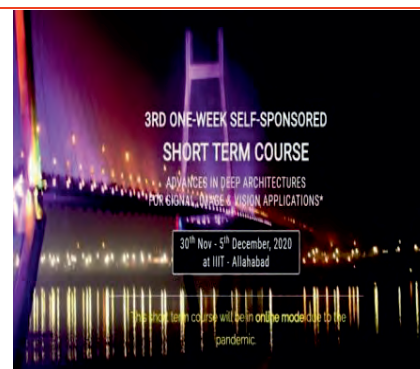


"Beyond Twenty by 2020"

ADASIVA 2020

30th November 2020

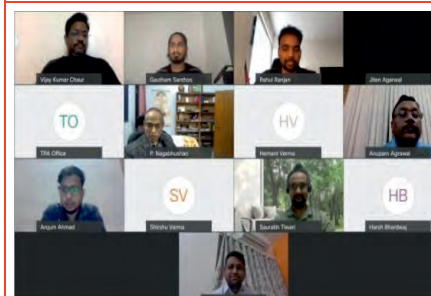
Deep architectures are playing the most important role in the area of machine learning and are considered as the future technology and anticipated a complete paradigm shift in the area of artificial intelligence by the researchers. It is considered to be one of the most active areas of research in signal, image, vision and biometrics and comprises of supervised and unsupervised models of approach for detection/ recognition/ classification/synthesization of objects. With the advent of extraordinary computation power and huge data sets, it is possible to model the most complex processes using deep architectures.



Alumni Interaction Webinar Series

17th October, 2020

The Webinar series was started with a mission of strengthening the linkage between the Alumni and the Institute i.e. IIITA. The **first Alumni Webinar** meet titled "**Getting Connected Again**" was organized on 17-10-2020 to enable the alumni to walk down the memory lane while their stay at IIITA and also building stronger association with their Alma mater. Hon'ble Director addressed the audience to narrate about his vision towards building strong relationship between Alumni and their Alma mater. A few interested Alumni were given an opportunity to tell about their success journey after passing out from IIITA and also to tell how they would like to support/ contribute to their Alma mater with an aim to make it one of the top institutions of the world. Approx. 230 alumni joined the Webinar remotely using Webex and YouTube. A total of nine alumni spoke during the Webinar in addition to Dean (TPA), Register (Acting) and ADean(SA).





15th Convocation

12th September 2020

The 15th Convocation of the Institute conducted on September 12, 2020 at 10:45 a.m. at its Jhalwa Campus, Allahabad in online mode. Hon'ble Dr. K. Sivan, Secretary, Department of Space and Chairman, Space Commission was the Chief Guest. Hon'ble Chairman (Officiating), Board of Governors and Director of IIIT-Allahabad Prof. P. Nagabhushan presided over the ceremony.



Colloquium on information flux & its impact on societal resilience: a cause of conflict or concord

23rd August 2020

The colloquium aims to provide a platform for the students, researchers and academicians to share the knowledge and ideas on recent trends in the field of technology and management on the issues and challenges presently faced in the networking folklore particularly in the prevailing pandemic scenario that has given quantum jump to the flow of information and social networking. Moreover, the economic and political issues in the international level also provided a boost to the phenomenon of information flow and accordingly created various sentiments and moods in the social network environment.



FDP on Exemplary Practices in Teaching-Learning and Evaluation of Courses in CS & IT

3rd August 2020

The FDP is aimed to motivate the faculty in CS and IT, largely from North Eastern Region of Karnataka, and VTU affiliated Institutions, to adopt good practices in implementing effective Teaching, Learning and Evaluations of CS/IT Courses





5 Days Workshop On Innovation Management and Entrepreneurship Development

20th July 2020

Innovation Management and Entrepreneurship Development is gradually becoming very significant in various areas of business. Innovative start-ups and new enterprises act as a catalyst for the economy. Novel opportunities and market gaps are identified and resources are allocated to them to produce something new and useful. The present firms innovate in order to beat the competition and have an edge from their counterparts. The need of the hour is to develop effective policies to cater to the new challenges such that the modern day problems can be solved.



Online Workshop on "Women Equality Sensitisation"

10th July 2020

Sexual equality or Gender equality is a fundamental human right which is required to achieve peaceful societies with full human potential. It also shows that empowering women leads in enhancing productivity and economic growth. But, unfortunately there is along way towards achieving the full equality (rights and opportunities) between women and men.

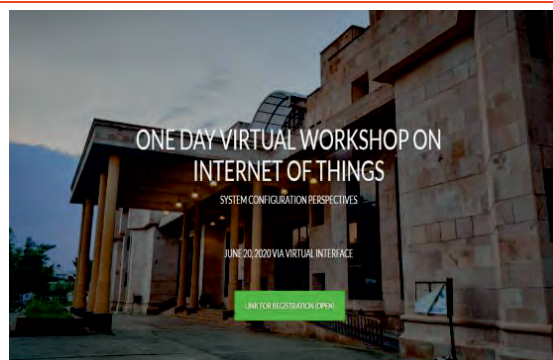
ONLINE WORKSHOP ON WOMEN EQUALITY SENSITISATION



Internet of Things (System Configuration Perspectives) IoT-2020

20th June 2020

Wireless Sensor Networks Lab Integrated with Internet of Things and Aerial Mesh Networks is organizing a workshop on Internet of Things on June 20, 2020. The objective of workshop is to equip Research and Engineering students with the essential tools for designing and configuring IoT related projects. The workshop will comprise of hands-on related to system configuration, with theoretical description



GYMKHANA

STUDENTS'
GYMKHANA



Student's Gymkhana

Presidential Council

Harsh Bhardwaj President IEC2017066	Kamlesh Kumar Verma Vice President MIT2019084	Sahil Udayasingh General Secretary IEC2018021
Pravin Kumar Member PHC2016003	Kush Mishra Member IEC2017083	

Secretariat

Agathamudi Rahul Naidu Cultural Council Secretary IIT2018192	Pranjal Maurya Sports Council Secretary IEC2018077	Chinmay Nagar Academic Council Secretary IEC2018057
Prateek Mishra Technical Council Secretary IIT2018199	Harsh Kochar Student welfare council Secretary IIT2018049	

Activities of Gymkhana

The Indian Institute of Information Technology, Allahabad has been a center of excellence in academia, sports and technology for over 23 years now. It has pushed the allegorical boundaries, scaled the emblematic mountains and struggled against every metaphorical obstacle thrown our way. The aim of any education system is to produce leaders who can contribute to the society they are a part of. Sports and extracurricular activities have for long been considered a brilliant tool to groom and mold students into team players and leaders. IIIT Allahabad has continually endeavored to push the boundaries in all disciplines. IIIT Allahabad provides excellent infrastructure for its residents to ensure that academic development is duly supplemented by sufficient physical and personality development as well.

Today the institute is offering its students a creative ecosystem where inquisitiveness and ingenuity is not only encouraged but also rewarded. A healthy amalgamation of academic, sports and cultural undertakings is helping students excel in what they want, making the institute a haven for visionaries and game changers. We have come a long way in such a short time and I hope we continue on this exponential growth trajectory and go far beyond the figurative skies of human struggle and triumph.

Few things in the world are more powerful than a positive push. A smile, A world of optimism and hope. Hope and optimism made us do things with a smile in this deadly pandemic.

Indian Institute of Information Technology, Allahabad has created a self-governing democratic organization called Students' Gymkhana. The Students' Gymkhana is empowered to achieve



the following objectives with the active help and support of its members and the infrastructure available at its disposal:

- To foster and develop all student activities in the Institute.
- To promote and develop organizational abilities in students.
- Identify student issues and promote discussion on them.
- To develop a well-informed, articulate and participative student community life, and to increase social awareness.

Student's Gymkhana together with its councils and societies, is successfully organizing several events in the institute. Some of the important events organized by various councils of Gymkhana are listed below:

Sports Council

The Sports Society of IIIT Allahabad brings you the SPIRIT of life, the SPIRIT of competition, the SPIRIT to win, the SPIRIT to raise, the SPIRIT to participate and ultimately prove the one within you. We have the energy, the courage and the enthusiasm to bring to you the most lively sports events of IIITA. We as a sports society organized various events last year that were amazing and well organized and everyone enjoyed it with full enthusiasm.

The sports council organized the following events in the calendar year: -

- Game of Guess: An online guessing event based on the ongoing IPL season.
- Logo Designing: An online event where participants designed the official logo for spirit and the best was chosen to be the new logo for the society.

ASMITA

The Sports Council of Students' Gymkhana Organizes the Annual Sports Meet of IIIT Allahabad named ASMITA in the Month of February Every Year which is of three days.

In last annual year during ASMITA, various sporting events were organized like cricket, basketball, football, volleyball, kho- kho, kabaddi, swimming, athletics, table tennis, carrom, chess and many other team and individual events (both indoor and outdoor).

But in this annual year due to covid-19 pandemic, ASMITA was organized in online mode. Lot of colleges participated in our sports fest ASMITA. They participated in each and every event with full spirit. Year by year, the level of ASMITA is increasing with the help of the students, faculty and staff members by participating in various sports. And the level of ASMITA was taken up a notch with students from various other institutes coming in to showcase their sporting talents. Participation from various colleges helped in foster true sportsmanship, friendship and a sense of cooperation amongst students.

Following are some online events in this year held during ASMITA month:

- TRIXTER – Online Trick- Shot Contest



- ONLINE CHESS
- SKRIBBL – Online game guessing
- Sports Quiz , Auction, Challenge Week
- Online Gaming Contest

In addition to ASMITA, INTER IIIT and INTER YEAR, Sports Council also organizes the annual Independence Day marathon and various intra-college and inter-college events where teams from various other colleges participate.

Technical Council

Without our amazing Technical Council, we wouldn't have half of the events at our fests. Continuing with our marvel superheroes theme, the Technical Society definitely is the Batman -the silent guardian and watchful protector looking out for all of us.

Aparoksha:

Aparoksha, the annual Technical Festival has grown into one of India's largest and most anticipated platforms for technocrats and served as a medium for young innovators from our institute as well as others colleges to show off their technical prowess in the events held as a part of the fest.

Aparoksha serves as a perfect launch-pad for tech enthusiasts to showcase their intelligence and inventiveness and a massive platform for various activities, featuring an interesting line-up of more than 50 Sci-tech events including Competitive events, technical conferences, Guest Lectures, and workshops during the three days of March. Boasting a huge roster of exciting and engaging events, Aparoksha'21 was totally held on DISCORD (online) platform. Being an technical fest, it got successfully conducted in online mode. The events which were conducted pre-Aparoksha are as follows:

- Aparoksha Month: One month of pre-fest workshops aimed to teach and provide hands-on experience on various technical skills like Web Development, App Development, Python, CC, Cyber Security, Machine Learning and AI etc. open for all, this edition witnessed 250+ participants including students from other local colleges as well.
- CodeRed: A team of three competitive coding event in which students from all over the country can participate. It witnessed a participation of 1200+ coders.
- CodeQueen: A competitive coding event, exclusively for the female coders, with a participation of more than 250 female coders.
- HumbleFool Cup: It is an online programming event organized during Aparoksha, in the fond memory of Late Harsha Suryanarayana.



- Alkharizm: A rated competitive coding event consisting of only one online round. This edition it garnered a participation of 900+ coders, out of which 63 were international participants.
- GrayHound: It is the flagship quizzing event of Aparoksha.
- B00t2root: A Jeopardy style CTF Challenge that tests cryptography, application security, binary analysis and all sorts of other technical non-coding skills of the best players teams from all over India.
- Nova: An online UI/UX design challenge, where a fictional company will be given.
- She-Hacks: An 18-to-24-hour long hackathon, solely for female coders to build projects catering to real-world problems. It witnessed a participation of 250+ female developers.
- Decode: A coding contest without the problem statements.
- GitHero – Git challenges
- WebKriti – A web-infused tournament

Apart from the tech-fest, the technical council manages three technical societies:

Geekhaven: It is the Technical society of IIIT- Allahabad. It has the following wings:

- FOSS
- Web Development
- Competitive Coding
- App Development
- Design
- Cyber Security
- Artificial Intelligence

These wings organize a number of workshops and tech talks to make the students familiar with the respective domains and help them choose one of these domains and kick-start a career in it. Geekhaven also organizes a number of events:

- PRAGMA- A series of Design and Dev workshops and talks.
- Tech-Talks- It also organizes a number of tech-talks by the alumina of the institute and other renowned people.
- OpenCode - OpenCode was a month-long open-source event conducted in the month of February.
- 30 Days of Code - This was a month-long event where mentors taught the students basics of app development, web development, open-source software etc.

Tesla: It is the Electronics and Automation Society of IIIT-Allahabad. It has 3 wings- Robotics, IOT and EDA. These wings organize a number of workshops and tech talks to make the



students familiar with the respective domains and help them choose one of these domains and kick-start a career in it. Tesla also organizes number of events:

- Projects – Members of Society made various number of projects based on IoT, Robotics.
- BUILD-N-HACK – A week long hackathon for tech enthusiasts to showcase their skills of making project as a individual or in group. This was first year of this hackathon still it witnessed 25+ teams.

Following are the events organized by Tesla in APAROKSHA:

- TOPBOT 5.0 – Beginner-friendly robotics contest.
- ELECTOBUZZ – Online quizzing events based on circuits.
- PRO-AURDINO - Totally hardware-based event for ECE enthusiasts.

Gravity, aims to foster scientific innovations with the amalgamation of various disciplines in Science and Technology, Engineering, Medicine, Mathematics, Biology etc.

The basic concept behind Gravity is the fact that we attract innovation and talent from students curious in learning about science and technology and latest scientific interventions.

This comprises the following wings:-

- Aeromodelling
- Computational Biology
- Innovation and Instrumentations in Healthcare
- Nanotechnology
- ICT Technologies – AI, ML, IoT, Big Data.

This year Gravity organized its first two events:

- Virtual World Food Day Summit'20
- Innovation Fest '21

Cultural council

This council is responsible for the promotion of cultural activities in order to preserve the heritage of the Institute and inculcate among students, a sense of cultural unification.

Effervescence:

The Cultural Council of Gymkhana Organizes three days Annual Cultural Festival named Effervescence in the Month of October Every Year. Due to covid-19 pandemic this year fest was held in month of December. During Effervescence, various competitive cultural events are organized. Effervescence gives a platform to the students, faculty and staff members of the Institute to showcase their extracurricular ability to compete and win various events organized



during the three days of December. Apart from competitive events many workshops and other fun filled activities are organized during Effervescence which let the students to de-stress from the academic activities and rejuvenate them to perform better in the academic activities. The events organized during Effervescence are as follows but due to COVID-19 not all events were conducted:

Tasveer

The flagship event for the Acoustics and Media Society, Tasveer was held during the cultural fest Effervescence. This is a themed event open for students from all around the country. With a handsome prize money at stake, Tasveer had enthusiastic participation from 100 colleges from all around the country.

Many informal events were also organized this year in online mode.

This year mainly cultural talks with various artists from different industries were held. About 15+ talks were conducted in different events. Events are as follows:

- VIBECHECK Talks
- TRIBEVIBE Talks

Apart from these cultural talks ONLINE RUMBLE was also organized where various Dance, Gaming, Music events were conducted.

SUNBURN was international band invited this year to organize live DJ night in online mode. In this deadly pandemic this was certain entertainment for many college students.

Apart from this, the cultural council manages a number of societies which organize the events related to their respective domains. The following societies come under the cultural council of Gymkhana:

Dance Society

Synergy of thought, symphony of movement, artistic expression and a sense of idyllic beauty - this symbolizes the GeneticX Crew of the dance society. It is one of the most active societies of IIIT -A. It manages dance performances in Effervescence and other society events. The society has performed various dance forms.

- Funk Hunt: An online competitive dance event held during the lockdown period and was successfully conducted.
- Move to Groove: Online dance event having special prizes for freshers and having 100+ participation from various colleges too.

The Fine Arts Society



The Fine Arts Society endeavors all of its members to pull off something unique, creative and out of the box each time. It is for the art lovers of the institute. All the creative work and art in and around the campus you see may very likely be a part of their work and creativity.

- Sketchers- Online sketch making competition.
- Rainbow Influenza – Online Event held on Instagram page of society

Literary Society

Sarasva is home to all things literary: from admirably articulate articles to penetratingly pensive poetry, to stories that leave one delighted, appalled or touched. It has a bit of everything since there's literature in everything.

It organizes debates, group discussions, writing and other literary competitions. This is the place to take a halt and unveil your talent of appreciating the beauty of expression.

Following are the events conducted and initiatives by the society during the academic year 2020-21 in online mode:

- Anchoring - Sarasva's team managed the anchoring for most of the on-stage events held throughout the entire session, including but not limited to all three fests and E-Summit.
- Group Discussions- Various enriching group discussions were held throughout the session over a plethora of topics which were organized to promote deliberation over social and political themes, and to learn the art of civil and logical discussions.
- Fresh Verses- A month-long freshers-only online writing competition accepting literary pieces of all types and over any topic, held to promote the great art of writing among freshers and to identify and appreciate their talents.
- Feathers- A month-long open online writing competition accepting short verses and stories written on prompts given by the society, held as a part of Effervescence.
- MemeSlam- An online event to express one's opinions and sense of humour through memes.
- Open Mic - Eloquent storytellers and passionate poets from various colleges and all around the city gathered to share their emotions and tales during Effervescence.
- Poetry Barn - On the aesthetic occasion of America's National Poetry Writing Month, Sarasva conducted Poetry Barn, an open poetry writing event lasting for the entirety of April, in which poets were given weekly writing prompts and the best entries were published.
- Saqqara - Sarasva started publishing its own blog, Saqqara, giving the students of IIITA a platform to exhibit their flairs in writing, tell their stories, and voice their opinions.



- Lit Us Review Stuff - LURS provides a platform for students to hone their critical skills by writing articulate reviews for TV/web series, YouTube channels, and movies, after insightful analysis of their writings and content.
- Chapter by Chapter
- Virtual Group Discussion – Online event conducted successfully this year with various number of latest topics.
- Lit-a-thon - The razor sharp wit, humor and wordplay event was also held in online mode.

Acoustics and Media Society

The institute is proud to have the services of this Society, which has been very efficient in managing lights, audio equipment, and visual recording of various events staged at IIITA. All the audio and lights works of college events taken care of by this society as a whole.

Following events organized during this academic year:

- Exploracion- An online competitive photography event, exclusively for freshers in which they need to explore the institute and click some awesome pictures.
- Portrait Mysteria- An online photography event in which you click some mysterious portraits.
- Tasveer- An online photography event and a Promotional event of EFFERVESCENCE.

The dramatics society

The dramatics society at IIIT Allahabad, RangTarangini is responsible for organizing workshops (acting as well as scriptwriting) and holding drama competitions where young talent can be showcased. The society has been active in staging excellent performances both in Hindi and English at various occasions.

- Vineard- Online vine-making .
- Quarantine Qtiyapa- An online event where participants will post their funny exciting videos of what they have been doing in the lockdown.

Music Society

The Music Society of Gymkhana is responsible to provide a platform for the students to showcase their musical talent. The society apart from having a college band has been successful in putting up wonderful performances and also being helpful in letting the student bite the music bug. Society attends various concerts and musicals during the year.

Following are events which were going to held but unfortunately due to covid-19 pandemic society was unable to held the events.

CADENZA was online event held online during quarantine

An illustration of a business meeting. Five people are gathered around a round table. Three men and two women are present. One man is standing and pointing at a laptop screen. The others are seated, looking at the screen or their own devices. On the table are a laptop, a tablet, a coffee cup, and some papers. The background is a light blue with faint outlines of a world map, data charts, and office equipment. A dark blue banner with the word 'GRIEVANCE' in white capital letters is overlaid on the right side of the image.

GRIEVANCE



Grievance Redressal Measures

In pursuance of implementation of point 20 of the 20 point program relating to responsive administration as communicated vide G.O no 28-29/2002-TS.I Dated October 11, 2002 read with G.O F.No. C.36011/11/2005- PG Hol MHRD Dated November 17, 2005 as amended up-to-date and in supersession to the Office order No. IIITA/ RO/017/2019, I am directed to convey that the following Grievance Committee has been re-constituted by the Competent Authority w.e.f. 17.01.2019 for a period of two years or till further orders.

1	Prof. Madhvendra Misra	Chairman
2	Prof. Pavan Chakraborty	Member
3	Dr. Vijay Chaurasiya, Faculty Representative	Member
4	Mr. Sanjay Kumar, Staff Representative	Member
5	Mr. Ajay Kr. Tiwari, Officer Representative	Member
6	Mr. Rajat Ghosh, Contractual Staff Representative	Member
7	Dr. Abdullah Bin Abu Baker, Minority Representative	Member
8	Dr. S. Venkatesan, SC/ST/OBC Representative	Member
9	Prof. Vijaishri Tewari, Women Representative	Member
10	Mrs. Padma Singh, Social Activist	External Member
11	Gymkhana Representative	Member
12	Dr. Pallavi Dixit	Secretary

Prof. Madhvendra Misra is designated as fulltime Grievance Officer of the Institute. He will be assisted by the Grievance Redressal Committee in discharge of his duties as Grievance Officer of the Institute as per orders of the Government from time to time in this regard.

The Grievance Officer is desired to amicably and promptly remove all grievances of students, employees and public at large relating to the Institute. He will, on an application/complaint filed before him and also on suo-moto, inquire into the matter and require parties to the grievances to file papers, adduce evidence and afford opportunities to the parties for examination and cross examination as per law of the land and after proper hearing, make a reasoned recommendation in all cases for action by the Director and shall maintain a record in that regard.

In discharge of his duties, he will have the right to call for any information, papers and records etc. from the office of the Institute and it will be the duty of the Institute officials concerned to promptly produce relevant records called for by the Grievance Officer for his expeditious disposal of grievances.



Committee for Prevention of Women Harassment at Workplace Committee

In supersession to the Office order no- IIITA/ODRA/153/2017, dated 11.7.2017, the Committee for Prevention of Women Harassment at workplace Committee is reconstituted by the competent authority as follows:

1	Prof. Krishna Mishra (the senior most woman faculty representative)	Chairperson
2	Prof U. S. Tiwary, Dean (Human Affairs)	Co-chair
3	Prof. Vijaishri Tiwari	Member
4	Dr. Uma Kalpagam, Professor, G.B.Pant Social Science Institute, Allahabad	Member (External)
5	Mr. Rohan Gupta, Advocate (Legal advisor)	Member (External)
6	Dr. Pavan Kumar Saini, Joint Registrar (Estt.)	Member

The term of the Committee is effective from July 12, 2017 for a period of 02 years or till further order. This is in accordance with the rules as given in the Handbook provided by Ministry of Human Resource Development (Department of Higher Education), Vigilance Section under their Letter no- 23011/01/2016-Vig, dated 07.06.2017. Services rendered by the outgoing members are highly appreciated

Prevention of Ragging in the Institute

Ragging in the educational institutions has been yet another social evil that has been taking its toll every year over the country so much so that many a youthful prodigies have lost their careers and even their lives solely on account of this evil. All preventive measures have often failed and the malady has been evading cure unabatedly.

The Supreme Court, of late, has taken a very serious view of this social evil and has issued stern directions in asking the Government and all organs under the Government to stop the menace of ragging altogether with immediate effect. It has also issued stern action against non-observance of the Appellate Court instructions through the Government and the UGC.

IIITA, therefore, has undertaken positive measures to implement the Apex Court directions in this regard through an Office Memorandum No. IIITA/DIR/1358/2009 dated 10.07.2009 and multi-structured Committees have been constituted as under for its implementation:

a. Institute level Anti-ragging Committee

1	Dean, Students' Affairs	Chairman
2	Head of the Division	Member



3	Warden/Counselor of the concerned Hostel	Member
4	Registrar/Joint Registrar/Dy. Registrar/Assistant Registrar of Institute	Member
5	Legal Counsel	Member
6	Nominated Person	Member

b. Institute level Anti-ragging Squads

1	Dean, Students' Affairs	Chairman
2	Assistant Proctor (two by rotation)	Member
3	Security Officer	Member
4	One M.Tech/Ph.D. Student Nominated	Member
5	Warden (nominated)	Member

c. Hostel Level Anti-ragging Squads

1	Warden of the Hostel	Chairman
2	Two Prefects	Member
3	One representative of Fresher's	Member

Wide publicity of these preventive measures have been made through notice boards, handouts and website of the Institute at all possible places on the Campus, hostels and other vulnerable points. The structured Committees are on the prowl all the times to deal with any inkling of the malady.

Prohibitions and Bans

The Institute is committed to ensure observance of Prohibitions and Bans promulgated under orders of the Supreme Court, Government and regulatory authorities under the Govt.

Accordingly, the following prohibitions and bans are strictly imposed in the Institute:

- Use of alcohol, tobacco and its products are totally banned in and around the Institute
- The entire area inside the Campuses of the Institute is a Smoking Free Zone. Therefore, smoking is strictly prohibited
- Use of mobiles in classrooms, labs, academic, administrative, cultural and extra-curricular activities, Seminars, Workshops and other official gatherings of the Institute is strictly prohibited under orders of the Parliament
- Any other prohibition or ban as may be promulgated under orders of the Competent Authority from time to time.