

July - Dec 2021

Bi-Annual

# NEWSLETTER



75  
आज़ादी का  
अमृत महोत्सव



**NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR**



# FROM THE DIRECTOR'S DESK

## Prof. Indrajit Basak

Greetings from NIT Durgapur!

It is my pleasure to notice that the Pandemic situation has been handled through strict adherence to the SOPs issued by the Government of India and the Government of West Bengal. The teaching-learning-evaluation process was efficiently continued through the online mode. The academic session 2020-21 was concluded in time.

The faculty members, staff and students have exhibited commendable resilience throughout this time. The institute started the expansion of its infrastructure after a lull period of stagnation during the pandemic. It is a great relief to see that the construction of Utkarsh Bhavan, the multi-storied central research academic building has resumed with great pace. The state-of-the-art studio has also been established to supplement online teaching learning process and the 1500 capacity new auditorium is now fully functional.

In response to the national need during the pandemic, Pranayam, a low-cost indigenous portable Oxygen Concentrator, was developed under the Make in India program to combat the oxygen crisis. The technology has been transferred to several companies to manufacture and market it at an affordable price. A plug-and-use, semi-automatic Am-bu-bag ventilation system, Pranesh, was also developed in this period.

The NIRF ranking has improved significantly, which reflects the growth of the Institute in line with the national and global need. More than 74 percent students have been placed in reputed companies and organizations through campus placement even in the pandemic situation. A series of webinars were organized to disseminate scientific knowledge and thus networking with the global partners has been possible.

I wish the Institute will be able to break out from the pandemic shadow very soon. This edition of the Newsletter summarizes the multidimensional activities of the institute during the period concerned.

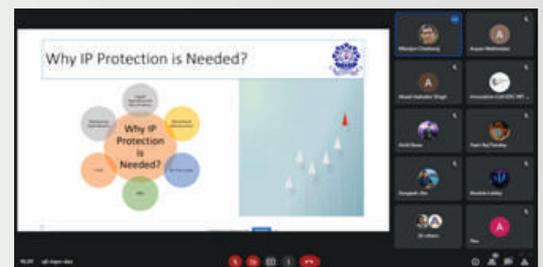


# Workshop Organized

- Five Days FDP on ‘Cognitive Load Theory and its application’ was organized by Department of CSE, NIT Durgapur Coordinators: Dr. Bibhash Sen and Dr. Suchismita Roy, Department of Computer Science & Engineering and Sponsored by AICTE-ATAL during December 21-25, 2021.
- One-day Workshop on ‘Entrepreneurship and Innovation as Career Opportunity’ on behalf of Innovation and Incubation Cell (IIC) was organized on 17th December by Dr. Sandip Kumar Lahiri, Department of Chemical Engineering.
- Workshop in online mode on ‘Workshop on Innovation Design’ was organized by Dr. Arjyajyoti Goswami, Department of Mechanical Engineering under the aegis of IIC on December 14, 2021.



- One-day Workshop on ‘Entrepreneurship Skill, Attitude and Behaviour Development’ on behalf of Innovation and Incubation Cell (IIC) was organized on 13th December by Dr. Sayantari Ghosh, Department of Physics.



- Two days Webinar on “Cognitive Science and Its Applications”, Sponsored by MeitY, GOI (Project Ref. No.: NITD/SRCC/TP/CSE/2020/4) and Technically Sponsored by IEEE CIS, Kolkata Chapter, jointly Coordinated by Tandra Pal and Parag Kumar Guha Thakurta, during December 11-12, 2021.

List of speakers:

- Prof. (Retd.) Sadanand Sadashiv Gokhale, Chairperson, BoG, NITD
  - Prof. Anupam Basu, Director, NIT Durgapur
  - Prof. Nikhil R Pal, ISI, Kolkata
  - Dr. Aniruddha Sinha, TCS, Kolkata
  - Prof. Nischal Verma, IIT Kanpur
  - Prof. Sanjay K Saha, Jadavpur University, Kolkata
- Workshop on ‘Gender Sensitization for multi-task assistants, security personnel and cleaning and scavenging personnel of National Institute of Technology Durgapur’ was organized by Internal Complaints Committee (ICC), in collaboration with GATI pilot project on December 10, 2021. Resource Persons: Prof. Mallika Ghosh Sarbadhikary (IEST, Shibpur) and Prof. Madhumita Jajodia (Principal, Durgapur Women’s College).

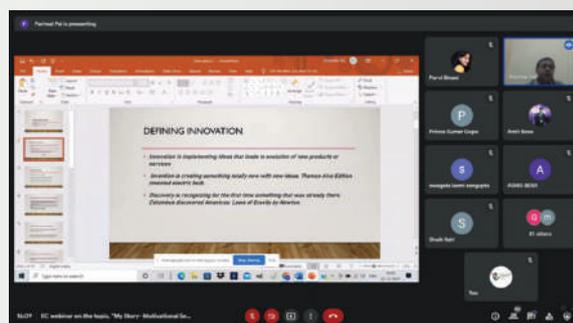
- Workshop in online mode on ‘Workshop on Design Thinking and Critical thinking’ was organized by Dr. Arjajyoti Goswami, Department of Mechanical Engineering under the aegis of IIC on December 09, 2021.



- Faculty Development on “System Control & Computational Intelligence (SCCI 2021)” was Organized by Dr. P. S. Bhowmik, Dr. A. K. Bohre, Dr. A. Bhattacharya, Prof. C. Koley, Prof. N. K. Roy, Dr. T. K. Bera, Dr. B. K. Saha Roy, Department of Electrical Engineering, Sponsored by AICTE Training and Learning Academy, AICTE, New Delhi, India. October 04 -08, 2021.
- One-day workshop (Online) on “Wireless trends in transforming industries” was organized on 28th September 2021 by the Department of Electronics and Communication Engineering.

## Seminars & Invited Talks Hosted

- An invited talk, part of the ‘Alumni Talks’ event on “Custom Digital Circuit Design including SRAM” was organized by the Electronics and Communication Engineering Students’ Society (ECESS) on July 31, 2021.
- An invited talk, part of the ‘Alumni Talks’ event on “Digital Design in VLSI” was organized by the Electronics and Communication Engineering Students’ Society (ECESS) on August 27, 2021.
- The ‘Research Scholar Day-2021’ was organized by the Department of Electronics and Communication Engineering on December 28 and 29, 2021.
- An Invited Talk on the topic ‘My Story - Motivational Session by Successful Entrepreneur/Startup founder’ was delivered on behalf of Innovation and Incubation Cell (IIC) on 23rd December by Mr. Saurabh Jain, founder Fun2Do Labs.
- An Invited Talk on the topic ‘My Story - Motivational Session by Successful Innovators’ was delivered on behalf of Innovation and Incubation Cell (IIC) on 22nd December by Dr. Parimal Pal, Department of Chemical Engineering.



- A Seminar on ‘Business Plan’ on behalf of Innovation and Incubation Cell (IIC) was organized on 10th December by Dr. Aniruddha Bhattacharya, Department of Electrical Engineering.



## Invited Talks Delivered

- Dr. Sayantari Ghosh delivered a lecture on “Entrepreneurial skills and behavior development”, organized by Entrepreneurship Development Council, NIT Durgapur in December 2021. Date
- Dr. Md Firoz Ali delivered an Invited talk (over online platform) on “Variability regions of certain analytic functions” on the occasion of National Mathematics Day organized by Amity University, Gurgaon, on December 22, 2022.

- Dr. Aniruddha Chandra delivered a talk titled ‘Cache-aided NOMA networks’ on Dec. 23, 2021, as a part of AICTE-ISTE Sponsored Induction/ Refresher Program on Artificial Intelligence in Cooperative NOMA (5G) Network (Dec. 21-27, 2021), organized by Poornima College of Engineering, Jaipur, Rajasthan.



- Dr. Lakshmi Kanta Dey chaired a session in the “International Conference on Nonlinear Applied Analysis and Optimization 2021” at Department of Mathematical Sciences, IIT (BHU), Varanasi during December 21-23, 2021.
- Dr. Lakshmi Kanta Dey delivered an Invited Talk (over online platform) on “Discontinuity at fixed points of contractive type mappings” in the “International Conference on Nonlinear Applied Analysis and Optimization 2021” at Department of Mathematical Sciences, IIT (BHU), Varanasi during December 21-23, 2021.
- Prof. Samarjit Kar delivered an invited talk (over online mode) on “Uncertain Combinatorial Optimization and Applications” in the International Conference on Nonlinear Applied Analysis and Optimization” during December 21-23, 2021.
- Prof. Seema Sarkar (Mondal) delivered an Invited Talk (over online platform) on “Inventory Management” in the International Symposium on ‘Mathematical Modelling and Technical Writing: A Research Perspective’ organized by Department of Computer Science, Amrita Vishwa Vidyapeetham, (Deemed to be University) Mysuru Campus, Karnataka on December 18, 2021.

- Dr. Nilanjan Chattaraj delivered a talk on "Intellectual Property Rights (IPRs) and IP management for startups" as an innovation ambassador, which was organized the Entrepreneurship Development Cell in collaboration with the Institute's Innovation and Incubation Council of National Institute of Technology, Durgapur, on Dec 16, 2021.



- Tandra Pal delivered “Unsupervised Machine Learning techniques & Probabilistic Theory” in the 5 days ATAL Academy sponsored online Faculty Development Programme on Advance Statistical & Machine Learning Models (ASMLM-2021) organized by IIIT Ranchi, on December 15, 2021.
- Prof. Samarjit Kar delivered an invited talk (over online mode) on “Uncertain Combinatorial Optimization and Applications” in the International Webinar on “Linguistics, Machine Learning and Uncertainty Theory, 2021” (LMLAUT-2021) Jointly organized by Haldia Institute of Technology and Maulana Abul Kalam Azad University of Technology, Kolkata, during December 14-18, 2021.
- Professor Parimal Pal of the Department of Chemical Engineering delivered Keynote Lecture on ‘Managing Coke Waste Water with a Circular Economy Approach’ in the International Conference on Promoting Environmental Technologies for Waste Management and Sustainable Development (WMSD-2021) at KIITS, Bhubaneswar, December 13, 2021.
- Prof. Seema Sarkar (Mondal) chaired paper presentation session in International Conference on Recent Developments in Mathematics and Mathematical Sciences [ICRDMMS 2021] (over online platform) organized by Calcutta Mathematical Society, AE 374, Sector I, Salt Lake City, Kolkata-700064, West Bengal, India, on December 11, 2021.
- Dr. Gautam Bandyopadhyay was invited by Department of Management Studies of North Bengal, Siliguri, Dist. Darjeeling, West Bengal, India, to act as a resource person on the topic “Basic Statistics for Management Research” on 7-December – 2021.
- Dr. Arjyajyoti Goswami delivered a talk on "Smart Manufacturing and Surface Coating Methods " in an FDP on Current & Future Prospects in Mechanical Heavy Industries (CFP-MHI), organized by the Department of Mechanical Engineering (School of Engineering and Technology), Sharda University, on December 06, 2021.

- Dr. Lakshmi Kanta Dey delivered an Invited talk (over online platform) on “Basics of fixed point theory and its applications in different fields” in the Lecture Series of “MEET THE LEADERS” program at the School of Basic and Applied Sciences, Adamas University, Kolkata, on November 27, 2021.
  - Dr. Gautam Bandyopadhyay acted as a resource person in the FDP on “Advanced Quantitative Research Methods for Social Sciences Using SPSS & AMOS” on 19th and 20th November’2021 organised by Bharatiya Vidya Bhavan Institute of Management Science, Kolkata.
  - Dr. Tushar Kanti Bera delivered an Invited Talk (through online) on “Electrical Impedance Based Noninvasive Systems: Technology, Instrumentations and Applications” in the FDP titled as “ELECTROPHYSIOLOGY AND NEURO-INSTRUMENTATION” organized by the Dr. Ambedkar Institute of Technology, Bangalore, India on November 08, 2021.
  - Dr. Manoj Kumar Ozha delivered a talk titled ‘Recent Developments in Earth Sciences’ organized by Department of Geology, Arya Vidyapeeth College during 1st to 8th of November 2021.
- 
- Prof. Subrata Banerjee (EE) delivered lectures on ‘Modeling and Control of Switch-mode power converters for EV applications’ for the ATAL FDP (virtual mode) ‘Emerging Trends and Developments in Electric Vehicles’ at NIT Manipur, on October 27, 2021.
  - Prof Kajla Basu delivered an invited talk on “Solving Multi-Criteria Decision Making (MCDM) problems under uncertain environment” at 27th International Conference of International Academy of Physical Sciences (CONIAPS XXVII) on "Recent Advances in Mathematical and Computational Optimizations (RAMCO-2021)" (ONLINE) in association with International Academy of Physical Sciences (IAPS) during October 26-28, 2021.
  - Dr. Monidipa Ghosh delivered a lecture in a One Week Online Faculty Development Programme (FDP) on “Development and applications of Sensors in Modern life” during 25th -29th Oct. 2021. The event was sponsored by ATAL and AICTE, Organized by NIT Arunachal Pradesh.
  - Dr. Oindrilla Mukherjee delivered a talk on “Host contact and its role in bacterial pathogenesis” organized by Institute of Biotechnology, Saveetha School of Engineering, Chennai on 23rd October. 2021.

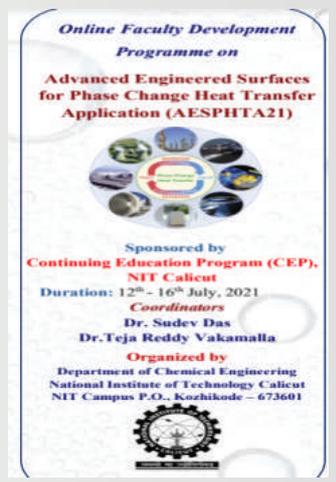
- Dr. Nilanjan Chattaraj delivered a talk on "The IoT and IIoT Associated to Biomedical Applications" as an invited speaker of the short term course "Internet of Things (IoT) Opportunities, issues and challenges for control and Biomedical Applications", organized by the Department of Instrumentation and Control Engineering, Dr B R Ambedkar National Institute of Technology Jalandhar, on Oct 8, 2021.
- Prof N K Roy delivered the invited lecture on "Monitoring of Electrical System and Its Test facilities: Roll of ICT & IoT" in Online FDP under AICTE Teaching & Learning (ATAL) Academic on "System Control and Computational Intelligence (SCCI-2021)" at National Institute of Technology Durgapur on October 06, 2021 (Virtual Mode).
- Prof. Subrata Banerjee (EE) delivered lectures 'On Some Aspects of Electromagnetic levitation and Control (Part-II) for the ATAL FDP (virtual mode) 'Magnetic Levitation Systems' at NIT Mizoram on October 01, 2021.
- Prof. Subrata Banerjee (EE) delivered lectures 'On Some Aspects of Electromagnetic levitation and Control (Part-I) for the ATAL FDP (virtual mode) 'Magnetic Levitation Systems' at NIT Mizoram, on September 30, 2021.
- Tandra Pal delivered following two lectures in 10 days FDP on "Data Science using AI and Machine Learning" being organized by E & ICT Academy, NIT Warangal in association with SRM Institute of Science and Technology, sponsored by MeitY, GOI:
  - (i) "Multi-objective GA for Machine learning" on September 25, 2021.
  - (ii) "SOM and Clustering" on September 27, 2021.
- Prof. Samarjit Kar delivered an invite talk (Online Platform) on Faculty Development Program on "Big Data Analytics with Multi-Criteria Decision-Making Method" Organized by Center for Continuing Education, NIT Warangal and Department of Computer Science and Engineering, Heritage Institute of Technology Kolkata, during September 24-28, 2021.
- Dr. Gautam Bandyopadhyay acted as a resource person on 5-Days Online ATAL - Faculty Development Program on "Data Science", which is sponsored by AICTE and is going to be organized by Department of Computer Science & Engineering, MCKVIE on 20th September, 2021 and 21st September, 2021.
- Prof. Samarjit Kar delivered two invite talks (Online Platform) on "Optimization Techniques for Machine Learning" in the National Workshop on "Mathematical Methods for Machine Learning (MMML-2021)" organized by Department of Mathematics, Heritage Institute of Technology Kolkata, during September 20-24, 2021.

- Dr. N. B. Hui delivered an invited lecture on “Skill Development and Employment in combating Covid 19” on Engineers Day program at Institution of Engineers, Durgapur Chapter on September 15, 2021.
- Prof. Seema Sarkar (Mondal) delivered an Invited Talk on “Linear Programming Problem - Its Formulation and Graphical Solution” on mathematics session on digital platform during the JBNSTS-WBDSTBT Science Teachers’ Training Program on September 15, 2021.
- Dr. Gautam Bandyopadhyay acted as a resource person on “Business Analytics and Modeling by Spreadsheet and R” on 10th September 2021 organized by School of Management & Commerce Brainware University.
- Dr. Gautam Bandyopadhyay acted as a resource person on Two-day' Online Workshop on Multivariate Statistical Techniques in Social Science and Business Research organized by ADAMAS University on 4th September'2021.
- Dr. Aniruddha Bhattacharya delivered a technical talk on “Few Important Aspects of Electric Vehicle Charging Infrastructure Installation” in the Alumni Meet “Virtual Reunion-21” organized by Alumni of Assanol Polytechnic at Asansol Polytechnic, on September 4, 2021.
- Dr. Tushar Kanti Bera delivered an Invited Talk (through online) on “IoT Based Wearable Instruments for Biomedical Applications: Recent Advancements in Modern Healthcare” in the “IEEE Workshop on IoT and Wearable Technologies: August 25-27, 2021” organized by the Sarvajanic College of Engineering & Technology, Surat, Gujarat 395001, India, on August 26, 2021.
- Prof. Samarjit Kar delivered an invited talk (over online mode) on “Mathematical Foundation on Machine Learning” in the Faculty Development program on “Machine Learning – Foundation, Methodologies, and Interconnections” at Amity University Kolkata, during August 16-21, 2021.
- Prof N K Roy delivered the invited lecture (Virtual Mode) on “Research, Innovation & Ranking in NEP 2020” on “Theme based Webinar Series on Transformative reforms under new education policy 2020” conducted by BCRP , Durgapur on August 9, 2021.
- Prof. Samarjit Kar delivered an Invited talk (over online platform) on “Fuzzy Optimization” in the Lecture Series of “MEET THE LEADERS” program at the School of Basic and Applied Sciences, Adamas University, Kolkata on July 28, 2021.
- Prof. Samarjit Kar delivered an Invited talk (over online platform) on “Heuristic Optimization in Machine Learning” in the Faculty Development Program (ATAL) on Artificial Intelligence for Computer Vision (Advanced)” in the Department of Computer Science and Engineering, IIT Roorkee, during July 26-30, 2021.

- Dr. Aashish Kumar Bohre delivered a lecture on “Electric Vehicle Technology” in One Week Online Faculty Development Program on “Opportunities and Challenges for Electric Vehicles in the Automotive” Sponsored by AICTE Training and Learning (ATAL) Academy Organized by the National Institute of Technology Srinagar, J&K during, July 26-30, 2021.

- Dr. Tushar Kanti Bera delivered an Invited Talk (through online) on “Research Opportunities in Electric Vehicle Technology” in the ATAL FDP titled as “Opportunity and Challenges for Electric Vehicles in the Automotive” organized by the National Institute of Technology Srinagar on July 26, 2021.

- Dr. Aparesh Datta delivered a talk on “Heat transfer enhancement with or without disruptive structures in microchannel using the single phase flow and Multiphase flow,” in online Faculty Development Program on Advanced Engineered Surfaces for Phase Change Heat Transfer Application (AESPHTA21) at the Department of Chemical Engineering, NIT Calicut on July 12, 2021.



- Tandra Pal delivered "Self-Organizing Map and Clustering" at the AICTE STTP Programme on Tools and Techniques for Machine Learning and its Applications organized by Maulana Abul Kalam Azad University of Technology (MAKAUT), West Bengal, on July 5, 2021.

# Conference Organized

- Conference organized: Dr. Sayantari Ghosh was Track Chair of IEEE-India Council’s flagship conference IEEEINDICON 2021, which took place in IIT Guwahati in December, 2021. Will it be here or under “outreach activity”

- Prof. Subrata Banerjee (EE) organized a special session on ‘Static and dynamic wireless charging solution for EVs: Coil configuration, design and control of power electronics converters’ on 15.10.2021 in IEEE IECON 2021 held at Toronto, Canada in virtual format. Will it be here or under “outreach activity”



- An International Conference (Virtual) on “Recent Advances in Molecular Plant - Pathogen Interactions” (RAMPPPI 2021) was organized during 6th to 10th September 2021.

- A National Conference on “Philosophy of Immunology in Health Sciences” was organized on 18th September 2021, by Dept. of Biotechnology. Organizing Secretary: Dr. Monidipa Ghosh and Dr. Oindrilla Mukherjee.



- An International Conference on “Women’s Leadership in Science and Technology” was organized during 30th October to 31st October 2021, by Dept. of Biotechnology. Organizing secretary: Dr. Monidipa Ghosh, Associate Professor, Dept. of Biotechnology.



## Awards & Honours

- TCS Research and Innovation has offered the position of Research Advisor to Prof. Rowdra Ghatak of Electronics and Communication Engineering Department in the domain of design and development of radiating systems for 5G and beyond communication systems.
- Dr. Aniruddha Bhattacharya placed as top 2% of scientists in the world in 2020, by a survey conducted by a team of scientists at Stanford University.
- Prof. Subrata Banerjee placed as top 2% of scientists in the world in 2020, by a survey conducted by a team of scientists at Stanford University.
- Prof. N K Roy included as member in BOARD OF PROFESSIONAL STUDIES (BOS) of Department of Electrical Engineering, Mizoram University.
- Prof. Tandra Pal of the Department of CSE has chaired the Session SPM, INDI-CON-2021, on 21.12.2021.
- Professor Parimal Pal of the Department of Chemical Engineering has been recognized as one of the top 0.5% of the World Scientists across all disciplines and his international rank is 277 based on research citations in the Chemical Engineering category as per Stanford University (USA) Report October, 2021.
- Professor Parimal Pal of the Department of Chemical Engineering has been selected Editorial Board Member of the Journal of Ionic Liquids, Elsevier Science, September, 2021.
- Professor Parimal Pal of the Department of Chemical Engineering has been selected a Fellow of the Royal Society of Chemistry (London) in September 2021.

# Sponsored & Consultancy Projects

- Dr. Aniruddha Mondal received a CRG grant titled “Titanium dioxide (TiO<sub>2</sub>)/Vanadium dioxide (VO<sub>2</sub>) NWs heterostructure as a stable optical switch” from SERB, for three years from 28th Dec 2021.
- Title: Studies on the effect of anammox group of bacteria for the treatment of wastewater containing nitrogenous contaminants  
Principal Investigator: Dr. Apurba Dey  
Co-Principal Investigator: Dr. Tamal Mandal, Dr. Dalia Dasgupta Mandal  
Sponsored Agency: SERB                      Month & Year of sanction: December 2021  
Sanctioned fund: Rs. 33,00,000
- Title: Introducing protein folding paradigm in misfolding diseases: An attempt to re-define the structural understanding of amyloid aggregation following nucleated conformational conversion pathway  
Principal Investigator: Dr. Sudipta Mondal  
Co-Principal Investigator: NIL  
Sponsored Agency: SERB  
Month & Year of sanction: November 2021  
Sanctioned fund: Rs. 46,00,000
- Title: Role of protein arginylation in the regulation of IL-1 $\beta$  expression and inflammatory response in macrophages and airway epithelial cells  
Principal Investigator: Dr. Sougata Saha  
Co-Principal Investigator: NIL  
Sponsored Agency: SERB  
Month & Year of sanction: December 2021  
Sanctioned fund: Technically Approved
- Title: Universal multi-modal interface for different disabilities  
Principal Investigator: Dr. Nilanjan Chattaraj  
Co-Principal Investigator: Dr. Sujoy Saha (Co- PI), Dr. Mousumi Saha  
Sponsored Agency: Tata Consultancy Services  
Month & Year of sanction: September & 2021  
Sanctioned fund: Rs. 29,00,000

# Patent Granted and Filed

- Goutam Panigrahi et al. filed the Patent Titled “System and Method for performing Secure Transactions of Digital Cryptocurrencies using Block chain Technology”. Application Number: 202141032739, Date: 21.7.2021.

# Collaborative Activities

- Name of the Faculty: Dr. Ashis Kumar Dhara  
Department: Electrical Engineering  
Area: Artificial Intelligence for Affordable Screening and Prediction of Diabetic Retinopathy in the Framework of Big Data  
Collaborating Institute: Multi-centric collaborative research
- Name of the Faculty: Dr. Ashis Kumar Dhara  
Department: Electrical Engineering  
Area: Computer-aided Glioblastoma and Intracranial Aneurysms Treatment Response Quantification in Neuroradiology  
Collaborating Institute: Indo-Swedish collaborative research work
- Name of the Faculty: Achintya Kumar Pramanick  
Department: Mechanical Engineering  
Area: Heat Transfer  
Collaborating Institute: Central Mechanical Engineering Research Institute, Durgapur
- Name of the Faculty: Achintya Kumar Pramanick  
Department: Mechanical Engineering  
Area: Thermodynamics  
Collaborating Institute: Universidade Do Vale Do Rio Dos Sinos, Brazil
- Name of the Faculty: Achintya Kumar Pramanick  
Department: Mechanical Engineering  
Area: Thermodynamics  
Collaborating Institute: University of Lorraine, France
- Name of the Faculty: Achintya Kumar Pramanick  
Department: Mechanical Engineering  
Area: Thermodynamics  
Collaborating Institute: Duke University, USA
- Name of the Faculty: Achintya Kumar Pramanick  
Department: Mechanical Engineering  
Area: Thermodynamics  
Collaborating Institute: University of Stuttgart, Germany

# Students' Activities

## ● Academic Achievements

- Three research papers published in this duration in peer-reviewed journals and conferences from Dr. Sayantari Ghosh's lab focusing on COVID-19 dynamics, surface-based spreading of the virus and emergent genetic circuit behavior.
- Mr. S. Charan Balajee, Biotechnology, 7th Sem received SRISTI-BIIS grant of Rs. 1 lakh. Ms. Anamika Nayak, PhD Scholar in BT Dept. (under the guidance of Dr. Debjani Dutta) received the best poster presentation award in the National Conference on CRISPR/Cas: From Biology to Technology (iCRISPR-2021); January 2022.
- MOU has been signed with RCB, Faridabad on 24.12.21, joint collaborative activity with Biotechnology Department.  
MOU has been signed with CMTI Bengaluru on 2.12.21, joint collaborative research activity with Dr. Monidipa Ghosh, Asso. Prof. Dept. of Biotech.

- IEEE SB NIT Durgapur won third prize in the 2021 World Standards Day Video Contest 2021, a global competition organized by IEEE Standards Association (SA). The theme of the contest was "IEEE Standards that transform your life".

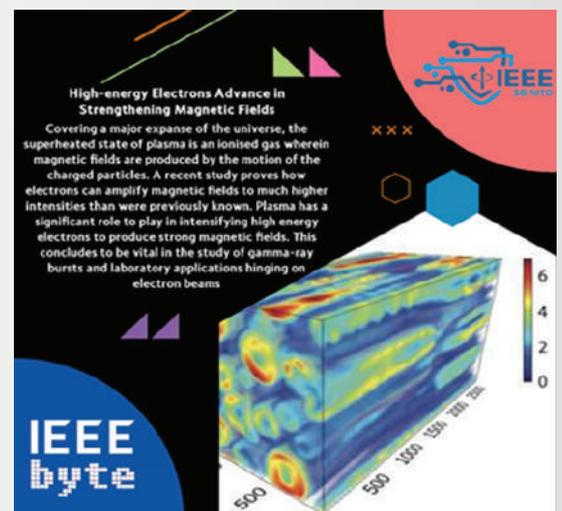


## ● Extracurricular Activities

- Sneha Roy, Biotechnology, 7th, First in Nationals in the "voice for BT" Inter collegiate public speaking contest on Biotechnology, December, 2021.

## ● Outreach Activities

- IEEE SB NIT Durgapur started a biweekly series over social media (LinkedIn etc.) which focused on posting important technical and research related news of the week. This includes important updates on Coronavirus pandemic, virtual reality updates, new inventions in astronomy and other important news.



- Dr. Partha Sarathee Bhowmik (EE) acted as a moderator of the B.Tech. Odd semester examination 2021-22 for the subjects namely “Power System-I” and “Computer Applications in Power System” JIS College of Engineering Kalyani (An Autonomous Institute).
- Dr. N. B. Hui has acted as a Primary Evaluator in Toycathon 2021, Organized by Ministry of Education’s Innovation Cell and AICTE (<https://toycathon.mic.gov.in/>)
- Dr. N. B. Hui has acted as the external examiner for a PhD candidate at Department of Mechanical Engineering, NIT Patna on December 21, 2021
- Dr. Partha Sarathee Bhowmik chaired one technical session (Track 08: Power, Energy and Power Electronics Power Generation) on 17.12.2021 in 6th International Conference on Computing, Communication and Automation (IEEE IAS ICCCA 2021) held at NCR New Delhi (virtual mode) during December 17-19, 2021.
- Dr. Aniruddha Bhattacharya acted as an Evaluator in the District Level Competition of “NCSC-2021”, held at DAV Model School Durgapur on 5th December 2021.
- Dr. N. B. Hui has acted as Chairman, technical committee, 35th National Convention on of Production Engineers & National Conference on Emerging Technologies for Sustainable Manufacturing, organized by Institution of Engineers, Durgapur Chapter during October 30-31, 2021.
- Prof. Subrata Banerjee (EE) chaired one technical session (T134) in 47th Annual Conference of the IEEE Industrial Electronics Society (IEEE IECON 2021) held at Toronto Canada (virtual mode) during October 13-16, 2021.
- Prof. Subrata Banerjee (EE) chaired one special session (S731-SS) in 47th Annual Conference of the IEEE Industrial Electronics Society (IEEE IECON 2021) held at Toronto Canada (virtual mode) during October 13-16, 2021.

## ● Institute Innovation and Incubation Council (IIIC)

- NIT Durgapur had the honor of receiving the highest rating of 4 stars from the Innovation and Incubation Council, Ministry of Education, Government of India, in parity with other premier engineering institutes of India, including IIT Madras, IIT Bombay and IIT Kharagpur.



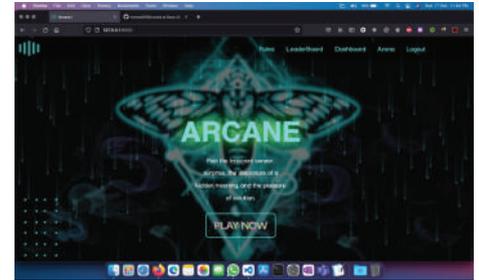
# Club and Society Events

## • Institute of Electrical and Electronics Engineers Students' Branch

### ■ Arcane

October 23, 2021 - October 25, 2021

IEEE Student Branch, NIT Durgapur, recently embodied Arcane, an epic quest, the online treasure hunt aimed to break the boredom of daily life to lead the participants into some impregnable conundrums.



The event was conducted from 23 October 2021, 7 pm to 25 October, 7 pm on a website created by the society members, especially for the event. A well thought and specially-themed poster were designed by the design theme to make aware the participants of the event and to build up the event hype which eventually lived up to the same. We have received more than 200 enrolments from students of different college.

The theme of this year was based on “Cicada 3301”, a real-life mystery of the dark web. Keeping that in mind, we designed our website, and framed riddles so that participants get the experience that was exactly thought and framed in the planning of the quest. The quest was held into two rounds: one preliminary and a final round. The preliminary round consisted of 15 questions, which were accessible only after the participant had solved one question i.e. one after another, and the final round consisted of 7 questions that were available all at once. The top 30 participants were sent to the final round. After completing the final round, the winner, first runner-up, and the second runner-up were awarded Amazon vouchers worth 500, 400, and 200 Rupees respectively. We believe the event was a success, as we managed to revive the lost creativeness of the participants during these times and in terms of giving the participants a thrilling pursuit on the weekend days.

### ■ Polaris

October 25, 2021

IEEE SB NIT Durgapur continued with our successful event Polaris. This year, Mr. Gaurav Kumar, Prime Minister Research Fellow, delivered a highly illuminating talk session which encouraged the students to come forward to pursue their career by overcoming their inhibitions, focussing on their own field of interest.

The entire session was recorded and released in our YouTube channel. It received massive enthusiasm and encouragement from students across all years and departments.



## Demystifying the World of Research

October 31, 2021

The second edition of Demystifying the World of Research was held on October 31, 2021, as a part of the IEEE Day celebration, featuring speakers from diverse streams who have made exceptional achievements in the field of technological research and innovations and have a prominent voice in the technical world. This provided the participants a scope for an unequalled network of professionals, experts, and advisers who can help them design your career, giving resources for learning new skills to promote their professional growth.



## Signals Decoded

December 4, 2021 - December 5, 2021

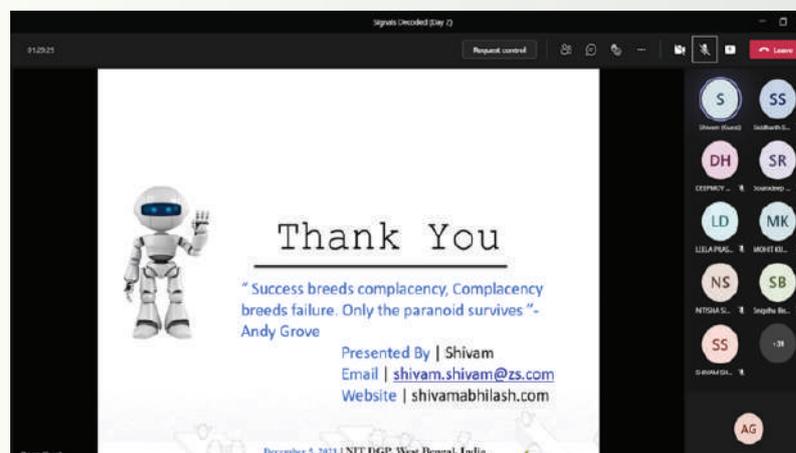
IEEE Student Branch, NIT Durgapur in collaboration with Electronics and Communication Engineering Student's Society NIT Durgapur, organized Signals Decoded, a workshop seminar on Signal Processing on Matlab, and an exclusive event on Emergence of Graphs and NLP. The event was conducted on MS Teams on 4th and 5th December 2021.

A well thought and specially-themed poster were designed to make aware the participants of the event and to build interest in the event which eventually lived up to the same. We have received more than 150 enrollments from students of different colleges.

On the first day (4th December), the session was spearheaded by Dr. Sudhan Majhi, who is an Associate Professor in the Department of Electrical Communication Engineering at the Indian Institute of Science(IISC) Bangalore, and Sir Visvesvaraya Young Faculty Research Fellow. He thoroughly elucidated and helped the participants to visualize the concepts pivotal to Signal Processing using MATLAB in one place.

On the next day (5th December), Mr. Shivam Abhilash, Senior Engineer at ZS Associates, shared his ideas on the Emergence of Graph and NLP and acquainted the attendees with the intricacies of it.

The event was a huge success, as students from different domains and different academic years attended the sessions enthusiastically.



## ■ Arcane 2.0

December 25, 2021 - December 26, 2021

IEEE Student Branch, NIT Durgapur, recently conducted Arcane 2.0-Into the IEEEVerse, an epic online quiz hunt aimed for the freshers to lead the participants into some impregnable conundrums. The event was conducted from 25 December 2021, 3 pm to 26 December 2021, 7 pm on a website created by the society members, especially for the event.



A well thought and specially-themed poster were designed by the design theme to make aware the participants of the event and to build up the event hype which eventually lived up to the same. The website received more than 250 enrollments from students of different colleges.

The theme of this year was based on “Spiderman”, the hit film of our times. Keeping that in mind, we designed our website, and framed riddles so that participants get the experience that was exactly thought and framed in the planning of the quest. The quest was held into two rounds: one preliminary and a final round. The preliminary round consisted of 15 questions, which were accessible only after the participant had solved one question i.e. one after another, and the final round consisted of 7 questions that were available all at once. The top 30 participants were sent to the final round. After completing the final round, the winner, first runner-up, and the second runner-up were awarded Amazon vouchers worth 500, 400, and 200 Rupees respectively. The event was a huge success, as we managed to revive the lost creativeness of the participants during these times and in terms of giving the participants a thrilling pursuit on the weekend days.

## ● Electronics and Communication Engineers Students’ Society

- Alumni Talks by Mr. Amritrakshar Mohanta - July 31, 2021
- Alumni Talks by Mr. Kashyap Mattoo - August 27, 2021
- Workshop on wireless trends in transforming industries - September 28, 2021

## ● Indian Society of Technical Education Students’ Chapter

- RUNTIME TERROR - July 8, 2021 - July 10, 2021
- CRYPTONOVA - August 29, 2021

## ● Indian Institute of Metals Students’ Chapter

- Quiz on Phase Diagrams, Metallography and microstructures - October 10, 2021

## ● Society of Automotive Engineers Students' Chapter

- Webinar on Hybrid Vehicles under the initiative of F.I.S.T. by Dr. Naveen Kumar Marathi - August 28, 2021
- Webinar on Hybrid Vehicles under the initiative of F.I.S.T. by Dr. Samraj Jabez Dhinagar - August 29, 2021
- Comprehensive workshop on braking system- Understanding the fundamentals of Automobile Engineering - August 29, 2021
- TEDxNITDurgapur - October 31, 2021
- SAE Orientation - December 23, 2021
- Webinar on "Arduino for Beginners"- December 27, 2021

## ● SPIC MACAY NIT Durgapur Chapter

- BARSHA Monsoon Dance Performance on Rabindra Sangeet - July 4, 2021
- Semi Classical Dance Performance - July 18, 2021
- Bihu Dance Performance - August 1, 2021
- Folk Song Performance - August 8, 2021
- Bharata Bhagya Bidhata Song performance on Independence Day - August 15, 2021
- Independence Day Dance Performance - August 15, 2021
- Thumri Song Performance - August 22, 2021
- Madhubani Art Presentation - August 25th 2021
- Radha Krishna Art Work - September 9, 2021
- Phad Art Presentation - September 23, 2021
- Mahalaya Dance Performance - October 6, 2021
- Warli Painting Presentation - October 6, 2021
- Song Performed on Vijaya Dashami - October 15, 2021
- Kalighat Painting Presentation - November 3, 2021
- Raas Leela Dance Performance - Nov 10, 2021
- Story Presentation About Queen Keladi Chennamma - Nov 24, 2021
- Mandala Art Presentation - December 1, 2021
- Bharatanatyam Dance Performance - December 7, 2021
- Presentation on Puri Jagannath Temple - Date: December 22, 2021
- Kalamkari Art Presentation - Date: December 30, 2021



## ● GNU/Linux Users' Group

- Mindersnatch - August 20, 2021
- Ask Me Anything - Oct 2, 2021 - Oct 3, 2021
- Ten Days of Code - Oct 17, 2021 - Oct 26, 2021
- GLUG Fresher's Orientation- December 24, 2021



## ● Centre for Cognitive Activities

### ■ Core Cell

- The Knight's Regium - July 23, 2021
- The Maze - December 21, 2021

### ■ E-Cell

- Collaboration with Finlatics Enabling Insights - July 22, 2021
- Startup Series in collaboration with Pimbl - August 10, 2021
- Collaboration with Startup Grind - August 28, 2021
- Ballywho? 6.0 - December 26, 2021



## ● Debating Society

- INCIPIO - July 3, 2021
- Interface - August 14, 2021
- Oxford Union Debate - Sept 24, 2021 - Sept 26, 2021
- Know Your Campus - December 24, 2021



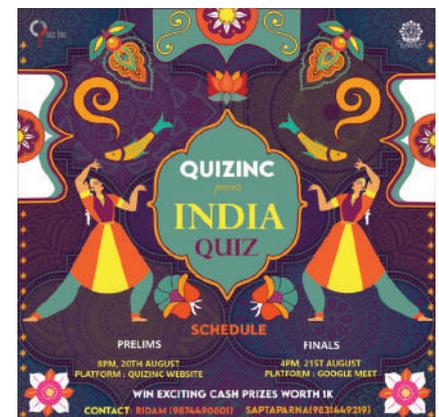
Know Your Campus 2.0 | Cafes | Debating Society, NIT Durgapur

## ● Literary Circle

- Vibe Check - Dec 24, 2021 - Dec 27, 2021
- TEDxNITDurgapur - October 31, 2021
- Humans of NIT Durgapur

## ● QuizInc

- The Retro - July 4, 2021
- Tiki Taka - July 11, 2021
- India Quiz - Aug 20, 2021 - Aug 21, 2021
- Of 24 frames and 22 yards - Nov 6, 2021 - Nov 7, 2021
- Qriosity - Dec 28, 2021 - Dec 29, 2021
- Quiz Maestro - Jan 11, 2022 - Jan 20, 2022



## ● Entrepreneurship Development Cell

- Essay Writing Competition - August 23, 2021
- Action Plan Social Entrepreneurship Workshop - October 17, 2021
- Disruptive Manufacturing in the age of 3D printing, cyber security & ML - Aug 20, 2021 - Aug 21, 2021
- Happiness Hunt- October 26, 2021
- Luminous 5.0 - Nov 1, 2021 - Nov 6, 2021
- BizCup 4.0 - Dec 24, 2021 - Dec 30, 2021

## ● Maths N' Tech Club

- IDEATHON: September 23, 2021
- BREAKOUT: November 10, 2021
- EVENTUALLY 4.0: December 29 - 30, 2021 and January 2, 2022

## ● Prakriti

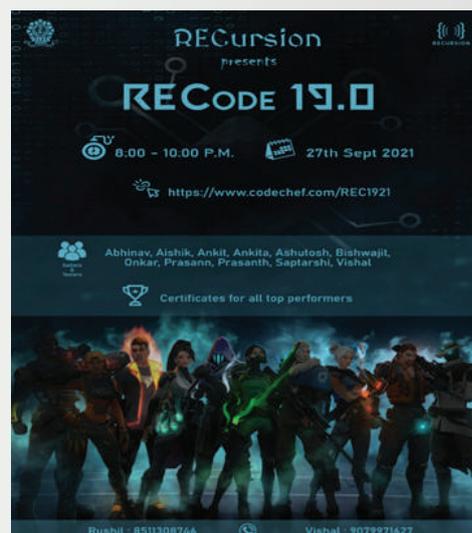
- SUBLIME - a hunt to know mother nature - August 18, 2021
- GreenPixel - selfie with prakriti - Nov 9, 2021 - Nov 12, 2021
- GREEN SERMO 2.0 - December 7, 2021

## ● Radio Nitroz

- The RN Podcast aka TRP (Jab We Met : Corona Version) - July 22, 2021
- Weekly Bulletin : "RN PULSE" - Since : July 24, 2021
- MEME-RaN-TINE 2.0 - July 26, 2021 - August 2, 2021
- T.N.T aka Terribly NITroz Tales (A Nightmare on Elm Street)  
Part 1: 18/10/2021; Part 2: 13/11/2021
- Shaam-e-noor 3.0 - Nov 3, 2021 - Nov 7, 2021
- Nexus Verse - 27/11/21 - 28/11/21

## ● RECursorion

- Classes - Aug 1, 2021 - Nov 13, 2021
- Mentorship groups
- Coding Ninjas Webinar - Aug 8 - Aug 9, 2021
- RECap - Aug 12; Sept 19; Oct 28, 2021
- RECode - Aug 31; Sept 27; Nov 15, 2021



## ● Strokes

- Prequel - July 30, 2021 - August 4, 2021
- Lokulus - August 22, 2021 - August 28, 2021
- Recherché - October 3, 2021 - October 8, 2021
- Durga Puja Comic Tales - October 10, 2021 - October 15, 2021
- Myriad - October 24, 2021 - October 29, 2021
- Uncorked - November 27, 2021 - December 2, 2021.
- Dots and Dashes - December 26, 2021 - January 2, 2021

## Darpan

- Aapki hindi - July 19, 2021 Onwards
- Aakhari khat - June 15, 2021
- Kaveri - September 14, 2021 Onwards
- Prahelika - August 12, 2021 - August 14, 2021
- Achhi ladki - September 1st, 2021
- Aankado ki hakikat tak - October 10, 2021



## ● Enteract

- Indian Independence movement : As A Gen Z Thinks - August 15, 2021
- Ek Rakhi Aisi Bhi - August 22, 2021

## ● Dance Club

- Independence Day - August 15, 2021



# राष्ट्रीय प्रौद्योगिकी संस्थान दुर्गापुर NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR

(An Institute of National Importance under Ministry of Education, Government of India)

Mahatma Gandhi Avenue, Durgapur - 713209, West Bengal, India

 <https://nitdgp.ac.in/>

## Edited and Designed by

### FACULTY

Prof. Partha Pratim Sengupta  
Dr. Sutanuka Banerjee  
Dr. Sirshendu Mondal  
Dr. Aniruddha Bhattacharya

### STUDENT

Ankan Pramanik  
Prasun Kumar Das  
Debasmita Das