

# राष्ट्रीय प्रौद्योगिकी संस्थान दुर्गापुर National Institute of Technology Durgapur

NEWSLETTER VOL.-1 ISSUE-1 (JAN-DEC 2019 EDITION)

*"Everything comes to us that belongs to us if we create the capacity to receive it" ~ Rabindranath Tagore*

## FROM THE DIRECTOR'S DESK

I am delighted to present the first issue of the Institute Newsletter which acts as the vehicle for disseminating information regarding our academic activities comprising of research and collaboration, projects undertaken, workshops and seminars organized, invited talks delivered by the faculty members. It also depicts their enthusiasm and commitment reflected in the spontaneous engagement in various activities and involvement in numerous events celebrated by the students of the institute as well as for the welfare of the larger community outside the campus, through our outreach programmes. The institute is constantly striving to achieve excellence in the field of education and innovation. In our last Convocation (15<sup>th</sup>), 768 B. Tech, 205 M. Tech, 28 MBA, 33 MCA, 30 MSc, 10 MSW and 79 PhD degrees are awarded. On behalf of NIT Durgapur fraternity, I wish to place on record, our gratitude to all stakeholders of the institute for their constant support and encouragement in our endeavours.



Prof. Anupam Basu, Director, NIT Durgapur





# WORKSHOPS, SEMINARS, SYMPOSIUMS AND SHORT-TERM COURSES

- Five-day workshop titled “Robotics and Assistive Technologies (RAT - 2019)” was organized during January 3 - 5, 2019 by the Dept. of Electrical Engineering and sponsored by TEQIP-III.

- Five-day workshop titled “Recent Trends in Intelligent Systems (RTISD- 2019)”, was organized during January 08-12, 2019 by the Dept. of Electrical Engineering and sponsored by TEQIP-III.

- Five-day workshop titled “Emerging Trends in Photonics and Applications (ETPA-2019)” was organized during February 11-15, 2019 by the Dept. of Physics. Dr. M. K. Mandal & Prof. P. Kumbhakar were the coordinators. G. C. Bhar (Vivekananda University), U. Chatterjee (BU, WB), T. Ganguly (JU, WB), D. Mukherjee (IACS, Kolkata), A. Sinha (Kalyani Univ), S K Mondal (JCBCAT, Kolkata), T. Gangopadhyaya (CGCRI, Kolkata) delivered lectures in this workshop.



- Three-day workshop titled “Principles and Practices of Coalbed Methane and other Unconventional Gases (CMUG - 2019)” was organized during on March 25-27, 2019 by the Dept. of Chemical Engineering.

- Five-day workshop titled “Recent Trends on Remediation of Contaminated Water Bodies and Soil” was organized during March 25-29, 2019. Dr. Hirok Chaudhuri (Physics), Dr. S. Pal (Civil), Dr. M. K. Mandal (Chemical) were the

coordinators. Prof. Sun Z, ECUT, China, Dr. Evgeniya, TPU, Russia, Dr. N. Bhattacharaya, CDAC, Prof. P. Roy, JU, delivered lectures in the programme.

- One-day workshop titled “Miles to Go with Biotechnology” was conducted on April 4, 2019, by the Dept. of Biotechnology. Dr. Pradip Nair, Research Scientist, Biocon Research Limited delivered lecture in the programme.



- One - day workshop titled “Intellectual Property Rights” was organized by the Dept. of Chemistry and Chemical Engineering on May 14, 2019. Prof. T. K. Bandopadhyay, Prof. Gautam Saha from IIT Kharagpur and Mr. Anjan Sen (Patent Attorney) delivered lectures in the workshop.

- Five-day workshop titled “Media, Gender and Globalization: Emerging Issues, Trends and Challenges” was organized during June 3-9, 2019 by the Dept. of Humanities and Social Sciences. Dr. Sutanuka Banerjee, Dr. Debasis Chakraborty and Prof. Partha Pratim Sengupta were the co-ordinators.



- Five-day workshop titled “Recent Trends in Machine Learning and IoT” was organized during June 17 - 21, 2019.



- Five - day workshop titled “Structural Dynamics , Vibrations and Control” was organized during June 24-28, 2019 by the Dept. of Mechanical Engineering.



- TEQIP-III sponsored one-week GIAN course on “Clean Steel Technology” was organized during July 22 - 26 , 2019 by the Dept. of Metallurgical & Materials Engineering. Dr. Susanta Pramanik was the co-ordinator of the workshop. Prof. Olena Volkova was the Chief Guest of the inaugural programme.



- Two - day workshop titled “ Life Skills Management and Women Empowerment” was organized during August 6 - 7 , 2019 by Dr. Monidipa Ghosh, Dept. of Biotechnology &

Dr. Sutanuka Banerjee, Dept. of HSS with the financial support from TEQIP-III.



- Two - day National Symposium on Waste Management and Resource Circulation (NSWMRC-2019) was organized during August 9-10, 2019 by National Institute of Technology Durgapur jointly with CSIR-Central Mechanical Engineering Research Institute , Durgapur.



- One - day workshop titled “ From Smart Sensing to Smart Living” was organized on August 14, 2019 . Prof. Sajal K. Das, IEEE Fellow & Daniel St. Clair Endowed Chair, Department of Computer Science, Missouri University of Science and Technology, USA was the esteemed resource person.





- National Workshop titled “Current State of Affairs in Cyber Security & Cryptology” was organized during September 13 - 14, 2019.



- Five-day workshop titled “Intelligent Systems: Challenges, Techniques and Applications (ISCTA 2019)” was organized during October 15 - 19, 2019 by the Dept. of Electrical Engineering and sponsored by TEQIP-III.
- Five-day short term course titled “Machine Learning for Biomedical Image Analysis”, was organized during November 12-16, 2019 by the Dept. of Electrical Engineering and sponsored by TEQIP-III.



- One-day national workshop on the topic “Prospect of transition from academia to the health-sector industry” was conducted on December 6, 2019. The resource persons of the workshop were Dr. Sibabrata Mukherjee, Industry Technology Specialist, Novozymes South Asia Pvt. Ltd, Bangalore and Dr. Sebak Datta, Senior Research Scientist, TCG Lifesciences Pvt. Ltd, Kolkata.

- Five-day workshop titled “AICTE Training and Learning Academy (ATAL) Program on Robotics” was organized during December 9 - 13, 2019 by the Dept. of Mechanical Engineering. Experts from CMERI, IIT Delhi and NIT Durgapur delivered lectures accompanied by hands-on exercises.

- One-week short term course titled “Indian Iron & Steel Technologies: Challenges and Remedies (IISTCR-2019)” was organized during December 09 - 13, 2019 by the Dept. of Metallurgical and Material Sciences Engineering and sponsored by TEQIP-III. Dr A K Mandal, Dr. S. Ghorai and Dr. M. K. Mondal were the co-ordinators.

- One-week short term course titled “Indian Iron & Steel Technologies: Challenges and Remedies (IISTCR-2019)” was organized during December 09 - 13, 2019 by the Dept. of Metallurgical & Materials Engineering and sponsored by TEQIP-III. Dr. A K Mandal was the Principal co-ordinator. Mr. A. V. Kamlakar, CEO, IISCO Steel plant, with additional charges as DSP and ASP, was invited as the Chief Guest in the inaugural programme.



- Five-day workshop titled “Recent Advances in Fluid and Thermal Engineering ” was organized during December 17-21, 2019 by the Dept. of Mechanical Engineering. Prof. A. Mukhopadhyay; Prof. Swarnendu Sen, Prof. Ranjan Ganguly, Jadavpur University, delivered lectures in the programme.

# CONFERENCES AND SEMINARS

- One - day seminar titled “ Nuclear Physics (Particle Hunter’s Guide)” was organized on February 01, 2019 by the Dept. Of Physics. Dr. Hirok Chaudhuri was the coordinator. Prof. Nabakumar Mondal, delivered his talk in this seminar.
- Five - day seminar titled “Challenges in Sustainable Biofuel Synthesis over Conventional Fuel ” was organized during April 1 - 5, 2019 by the Dept. of Chemical Engineering.



- International Conference titled “1st International Conference on Clean and Renewable Energy” was organized during July 10 - 12, 2019 jointly by the Dept. of Mechanical Engineering and Dept. of Physics.





# INDUSTRY-INSTITUTE INTERACTIONS

- One day seminar titled “Connecting Industry to Classrooms” was organized by the Dept. of Physics, with the financial support from TEQIP-III. Mr. Nirvik Banerjee, General Manager (Quality), IISCO Steel Plant, Burnpur, delivered lecture in the programme.



- One-day lecture program by industry experts was organized on February 22, 2019 at the Dept. of Metallurgical and Materials Engineering and sponsored by the Centre of Excellence on Advanced Materials, TEQIP - III, NIT Durgapur. Dr. Amitava Ray, delivered lecture in this program.



- One day seminar titled “Coal to Electricity” was conducted on March 7, 2019 by the Dept. of Electrical Engineering and sponsored by TEQIP-III. Dr. D. V. Rajan, superintending Engineer (Electrical), DVC, Andal, West Bengal, delivered lecture in the programme.

- One-day lecture program by industry experts was conducted on April 12, 2019 at the Dept. of

Metallurgical and Materials Engineering. Dr. Satadal Ghorai and Dr. A. K. Mandal were convenors and Dr. Sushanta Pramanik was the organizing Secretary of the program. Dr. Ashim Kumar Mukherjee, Head, Raw Materials Research Group - R & D Tata Steel Jamshedpur delivered lecture in the program.

- Two-Day Program on the topic “Functional Analysis and Optimization” was organized during September 11-12, 2009 by the Dept. of Mathematics. Dr. Lakshmi Kanta Dey was the Coordinator of the program. Prof. Sudeshna Basu, George Washington University, United States of America and Mr. Debayan Goswami, Assistant Manager (E &T), Durgapur Projects Limited, Durgapur were the resource persons.

- One-day lecture programme by industry experts was organized on September 14, 2019 at the Dept. of Metallurgical and Materials Engineering and sponsored by Centre of Excellence on Advanced Materials, TEQIP - III. Dr. Bijay Show and Dr. A. K. Mandal were the co-ordinators and Dr. M.M. Ghosh (HoD) was the organizing Secretary of this program. Dr. Basudev Bhattacharya, Principal Scientist, R&D Division of TATA Steel, Jamshedpur and Mr. A. R. Dasgupta, Executive Director (Projects) of SAIL IISCO Steel Plant, Burnpur delivered lectures in this program.



- One-day lecture program by industry experts was organized on September 25, 2019 at the Dept. of Metallurgical and Materials Engineering and sponsored by TEQIP - III. Dr. Madan Mohan Ghosh, Dr. Manas Kumar Mondal, Dr. Satadal Ghorai and Dr. Arup Kumar Mandal were the coordinators of the programme. Dr. Kumaresan Thangaraj, Lead Scientist, R&D Center, Aditya Birla Group, Mumbai, delivered lecture in this programme.



- One day seminar titled "Recent Trends in Transformer Technology" was conducted on October 30, 2019 at the Dept. of Electrical Engineering and sponsored by TEQIP-III. Mr. Sanjay Kar Chowdhury, Deputy General Manager, Calcutta Electric Supply Corporation (CESC) Ltd., Kolkata, delivered lecture in the programme.

- One day seminar titled "Experience sharing on

Emerging trends and Industry Expectations" was conducted on November 15, 2019 at the Dept. of Electrical Engineering and sponsored by TEQIP-III. Mr. Jayanta Datta Majumdar, Associate Director, CTS, Kolkata, delivered lecture in the programme.

- One-day lecture program by industry experts was organized on November 05, 2019 at the Department of Metallurgical and Materials Engineering and sponsored by the Centre of Excellence on Advanced Materials, TEQIP - III. Dr. Madan Mohan Ghosh, Prof. K.S. Ghosh, Dr. S. Bera and Dr. M. Mallik were the coordinators of that programme. Dr. G.V.R. Murthy, Ex. GM (Quality), MIDHANI, Hyderabad (presently, Professor, MME Dept., MGIT, Hyderabad), Mr. K. Thomas Tharian, GM, MDP/MME, ISRO, Trivandrum, delivered lectures in this programme.



## INVITED TALK BY DISTINGUISHED GUESTS

- Prof. Sudeshna Basu, George Washington University, United States of America delivered expert lecture on January 17, 2019 and another lecture on December 9, 2019 on fundamental theorems in Functional Analysis and their possible applications.

- Prof. P. Chakrabarti, Director IEST Shibpur, Howrah delivered an invited talk on the topic "Nanomaterial and Devices" on February 04, 2019 in department of Physics.



- Prof. P. N. Chatterjee, Associate Professor, NIT Meghalaya, delivered an invited talk on August 13, 2019 in department of Chemistry.

- Prof. Yasuhisa Adachi, Faculty of Life and Environmental Science, Tsukuba University, Japan, delivered an expert lecture on Sedimentation and electrophoresis of porous floc and polymer coated colloid on September 24, 2019.

- Prof. P. K. Joshi, HBNI, TIFR, Mumbai delivered an invited talk on the topic "Numbers: How to handle data" on October 01, 2019 and delivered another invited talk on the topic "Activities of Nuclear World" on October 02, 2019 in the department of Physics.

- Dr. Anjil Kumar Srivastava, Department of Biosciences, Durham University, Durham, UK delivered an invited talk on the topic "Functional diversity of SUMO proteases and its potential in crop improvement" on October 15, 2019 in the department of Biotechnology.

- Prof. A. N. Sekarlyengar SINP, Kolkata, delivered an invited talk on the topic "Excitement in plasma and nonlinear dynamics research" and Dr. J. R. Kayal, GSI, Kolkata delivered an invited talk on the topic "Great Earthquakes in the Himalaya and Tectonic Model" on October 17, 2019 in the department of Physics.



- Prof. A. K. Mishra, Dean Academic Research, IIT Madras delivered captivating lecture on the topic entitled "Research at IIT Madras: The Approach and the Priorities" on November 08,

2019. He stressed on the advantages of creating interdisciplinary environment in academics and applied research for germinating innovative ideas. He also stressed on multiple opportunities in Higher Studies by focussing on several facilities available for pursuing MS, M.Tech and PhD courses at the esteemed institution.



- Prof. V. R. Dhanak, Professor, Department of Physics, & Stephenson Institute for Renewable Energy, University of Liverpool, United Kingdom, delivered an invited talk on the topic "Earth Abundant Sulphides for Solar Photovoltaics" on November 27, 2019.

- Prof. Sushanta Dattagupta, Bose Institute, Kolkata, delivered an invited talk on the topic Hybridization to Dirac Solid -- the Wonder World of Graphene on December 05, 2019.

- Prof. Subir Kumar Ghosh, Scientist H, BARC, delivered an invited talk on December 05, 2019 in the department of Chemistry.

- Dr. G. S. Kar, Senior Program Director, IMEC, Belgium, delivered invited talks on the topic "Are we ready to deal with the Zettabyte era?" on December 16, 2019.



# SPONSORED AND CONSULTANCY PROJECTS

- **TITLE:** - Water sample collection and analysis of 10 numbers big outfalls in Damodar at Asansol area  
**PRINCIPAL INVESTIGATOR:** Dr. Aniruddha Mondal, Dept. of Physics  
**CO-PRINCIPAL INVESTIGATOR:** Dr. Rabindra Nath Barman, Dept. of Mechanical Engineering & Dr. Sandip Mondal, Dept. of Earth Sciences  
Kolkata Metropolitan Development Authority (KMDA), Govt. of West Bengal;  
**SANCTIONED AMOUNT:** Rs. 1, 92,170/-
- **TITLE:** Understanding Host - Circuit Interaction & Resource Sharing in Synthetic Biology  
**PRINCIPAL INVESTIGATOR:** Dr. Sayantari Ghosh, Dept. of Physics  
**SPONSORING AGENCY:** DST, Government of India  
**SANCTIONED AMOUNT:** Rs. 7,00,000/-
- **TITLE:** Microbial production of Lactic Acid using wastes (dairy waste & rice straw) as substrates, for the production of bioplastic.  
**PRINCIPAL INVESTIGATOR:** Prof. Kaustav Aikat, Dept. of Biotechnology  
**CO-PRINCIPAL INVESTIGATOR:** Dr. Utpal Adhikari, Dept. of Chemistry  
**SPONSORING AGENCY:** DST-SERB  
**SANCTIONED AMOUNT:** Rs. 13, 70,000/-
- **TITLE:** Role of adenosine monophosphate activated protein kinase (AMPK) activators in reducing cancer cell aggressiveness.  
**PRINCIPAL INVESTIGATOR:** Dr. Ashish Bhattacharjee, Dept. of Biotechnology  
**CO-PRINCIPAL INVESTIGATOR:** Dr. Surabhi Chaudhuri, Dept. of Biotechnology & Dr. Suparna Chatterjee (IPGMER, Kolkata).  
**SPONSORING AGENCY:** Department of higher education, Science & Technology and Biotechnology, Govt. of West Bengal.  
**SANCTIONED AMOUNT:** Rs. 20, 75,647/-
- **TITLE:** Environmental geochemistry and treatment of organic pollutants in aquatic systems in the selected areas of China, India and Russia  
**PRINCIPAL INVESTIGATOR:** Dr. Supriya Pal, Dept. of Civil Engineering  
**CO-PRINCIPAL INVESTIGATOR:** Dr. Hirok Chaudhuri, Dept. of Physics, Dr. Mrinal Kanti Mandal, Dept. of Chemical Engineering  
**SPONSORING AGENCY:** DST, Govt. of India (Under BRICS multilateral project call)  
**SANCTIONED AMOUNT:** Rs. 44,00, 000/-
- **TITLE:** Isolation and identification of novel bacteriocin producing probiotic microbial species from Northeast region, exploration of probiotic traits and application of purified bacteriocin in food preservation  
**PRINCIPAL INVESTIGATOR (Non-NER):** Dr. Surabhi Chaudhuri, Dept. of Biotechnology  
**PRINCIPAL INVESTIGATOR (NER):** Dr. Surabhi Chaudhuri, Dept. of Biotechnology, Dr. Suchrita Sen Maiti, CIT Kokrajhar  
**SPONSORING AGENCY:** Dept. of Biotechnology (DBT), Government of India (Twinning project)  
**SANCTIONED AMOUNT:** Rs. 23,71,996/-

- TITLE: - Synthesis of Semiconductor and Metal Nanostructures and the Investigation of Their Role as Active or Passive Scatterer in Random Laser Generation  
PRINCIPAL INVESTIGATOR: Prof. Pathik Kumbhakar, Dept. of Physics  
SPONSORING AGENCY: WB DST, Government of West Bengal  
SANCTIONED AMOUNT: Rs. 14,00,000/-
- TITLE: - A universal advanced low-cost nano-hybrid platform for air pollution, water, and bio-fluids  
PRINCIPAL INVESTIGATOR: Dr. Aniruddha Mondal, Dept. of Physics  
Co-Principal Investigator:-Dr. Rabindra Nath Barman, Dept. of Mechanical Engineering  
SPONSORING AGENCY: Scheme for Promotion of Academic and Research Collaboration (SPARC), MHRD, Govt  
SANCTIONED AMOUNT: Rs. 58,46,065/-
- TITLE: - Development of Some 2D Transition Metal Dichalcogenide Semiconductor Nanostructures and Nanocomposites For Photocatalytic Dye Degradation, Light Energy Harvesting and Hydrogen Production.  
PRINCIPAL INVESTIGATOR: Prof. Pathik Kumbhakar, Dept. of Physics  
SPONSORING AGENCY: CSIR, Government of India.  
SANCTIONED AMOUNT: 17,00000/-
- TITLE: - Study of quantum Hall effect, high energy physics phenomena and mechanical properties of graphene  
PRINCIPAL INVESTIGATOR: Dr. Sukadev Sahu, Dept. of Physics  
SPONSORING AGENCY: CSIR, Government of India,  
SANCTIONED AMOUNT: Rs. 4,80,000/-
- TITLE: - Demographic & Socio-economic Survey of Siduli (UG+OCP)  
PRINCIPAL INVESTIGATOR: Prof. Partha Pratim Sengupta, Dept. of Humanities and Social Sciences  
CO-PRINCIPAL INVESTIGATOR: Dr. Debasis Chakraborty, Dept. of Humanities and Social Sciences  
SPONSORING AGENCY: ECL, Coal India  
SANCTIONED AMOUNT: Rs. 15,34,000/-
- TITLE: - Molecular characterization of a small-molecule based reprogramming of non-adipocyte cells to brown adipocytes for its potential use as anti-obesity drug.  
PRINCIPAL INVESTIGATOR: Dr. Debojyoti De, Dept. of Biotechnology  
SPONSORING AGENCY: DST - SERB  
SANCTIONED AMOUNT: Rs. 31,67,164/-
- TITLE: - Determining the role of the gastric microbiota in Helicobacter pylori infection to utilize it for the development of a probiotic therapy.  
PRINCIPAL INVESTIGATOR: Dr. Oindrilla Mukherjee, Dept. of Biotechnology  
SPONSORING AGENCY: DST-SERB  
SANCTIONED AMOUNT: Rs. 31,05,318/-
- TITLE: - Regulation of MCP-1-induced calcium-independent phospholipase A2 (iPLA2)-dependent monocyte migration  
PRINCIPAL INVESTIGATOR: Dr. Ashish Bhattacharjee, Dept. of Biotechnology  
CO-PRINCIPAL INVESTIGATOR: Dr. Monidipa Ghosh, Dept. of Biotechnology  
SPONSORING AGENCY: DBT  
SANCTIONED AMOUNT: Rs. 57,07,703/-



- TITLE: Design of modular peptide nanotubes platforms by the self-assembly of shortest helical building blocks for application as ion channel mimic.  
PRINCIPAL INVESTIGATOR: Dr. Sudipta Mondal, Dept. of Biotechnology  
SPONSORING AGENCY: SERB, DST, Government of India  
SANCTIONED AMOUNT: Rs 28, 58, 000/-
- TITLE: Template based fabrication for development of various micro nano structured surfaces and their characterization  
PRINCIPAL INVESTIGATOR: Dr. Arjyayoti Goswami, Dept. of Mechanical Engineering.  
FUNDING AGENCY: SERB (DST)  
SANCTIONED AMOUNT: Rs. 23, 93, 680/-
- TITLE: Universal advanced low-cost nano-hybrid platform for air pollution, water and bio-fluids.  
PRINCIPAL INVESTIGATOR: Aniruddha Mondal, Dept. of Physics  
CO-PRINCIPAL INVESTIGATOR: Rabindranath Barman, Dept. of Mechanical Engineering  
SPONSORING AGENCY: SPARC (IIT KGP),  
SANCTIONED AMOUNT: Rs. 58 ,46, 000/-
- TITLE: Dual Hamming Distance of two Weighted Codes from Trace Codes over a Chain Ring  
PRINCIPAL INVESTIGATOR: Satya Bagchi, Co-PI: Dr Lakshmi Kanta Dey, Dept. of Mathematics  
SPONSORING AGENCY: NBHM, DAE, Govt. of India  
SANCTIONED AMOUNT: Rs. 3, 80, 000/-
- TITLE: Nonlinear waves and structures in dusty and quantum plasma.  
PRINCIPAL INVESTIGATOR: Dr. Sarit Maitra, Dept. of Mathematics  
SPONSORING AGENCY: CSIR, INDIA  
SANCTIONED AMOUNT: Rs. 10,55,833/- (Till now)
- TITLE: Development of hybrid numerical tools to study the electrokinetic transport of bio-colloids.  
PRINCIPAL INVESTIGATOR: Dr. Partha Pratim Gopmandal, Dept. of Mathematics  
SPONSORING AGENCY: DST, SERB  
SANCTIONED AMOUNT: Rs. 6,60,000/-
- TITLE: Extreme events in networks of dynamical systems  
PRINCIPAL INVESTIGATOR: Dr. Pinaki Pal, Dept. of Mathematics  
SPONSORING AGENCY: DST, India and DAAD, Germany  
SANCTIONED AMOUNT: Rs. 11, 80,000/-
- TITLE: IntAirSense: Intelligent Air Pollution Monitoring System for Smart Cities using Low-Cost Sensors.  
PRINCIPAL INVESTIGATOR: Sujoy Saha, Dept. of Computer Science  
CO-PRINCIPAL INVESTIGATOR: Mousumi Saha, Dept. of Computer Science; Dr. Jaydeep Howlader, Dept. of Computer Science  
SANCTIONED AMOUNT: Rs. 12, 00, 000/-
- TITLE: Forward-osmosis integrated membrane distillation coupled with solar-photocatalytic reactor for textile wastewater treatment: A sustainable approach for commercial exploitation.  
PRINCIPAL INVESTIGATOR: Dr. Jaya Sikder, Dept. of Chemical Engineering  
CO-PRINCIPAL INVESTIGATOR: Dr. Utpal Adhikari, Dept. of Chemistry  
SPONSORING AGENCY: Government of West Bengal, Department of Science & Technology and Biotechnology  
SANCTIONED AMOUNT: Rs. 14, 66, 000/-

# PLACEMENT STATISTICS

Total number of 107 company visited the campus for placement in 2019. 431 students received offer out of 634 eligible students. Microsoft offered the highest package of Rupees 43.13 Lakhs per annum (Lpa), followed by D. E. Shaw (Rs. 37 Lpa), Code Nation (Rs. 31 Lpa) etc\*.

## PATENTS

- TITLE: System and method of Stable rotation of a magnetically levitated ferromagnetic cylindrical body  
AUTHOR(s): Prof. Subrata Banerjee  
DATE OF PATENT GRANTED: 20/09/2019  
PATENT No.: 320921
- TITLE: A green process for continuous and direct production of l-glutamic acid  
AUTHOR(s): Prof. Parimal Pal & Dr. Ramesh Kumar  
DATE OF PATENT GRANTED: 30/09/2019  
PATENT No.: 321961
- TITLE: Amorphous silicon mono oxide-based nanowire electrode biosensor.  
AUTHOR(s): Aniruddha Mondal, Monidipa Ghosh, Shyam Murli Manohar Dhar Dwivedi, Chiranjib Ghosh, Sagarika Deepthy, Rini Lahiri  
DATE OF PATENT FILED: 28/02/2019  
PATENT No.: 2019310079 81 (Filed).  
APPLICATION NO.: TEMP/E-1/8348 /2019-KOL, Ref. No.: 201931007981 (filed)
- TITLE: An electrode-based system for analysis of biomarkers/biological specimens  
AUTHOR(s): Monidipa Ghosh, Chiranjib Koley  
DATE OF PATENT FILED: 19/11/2019  
PATENT No.: 2019310472 03 (Filed).
- TITLE: A system for measurement of Vitamin D level in serum samples.  
AUTHOR(s): Monidipa Ghosh, Chiranjib Koley, Doel Pal, Moumita Maji, Sourav Dhara  
DATE OF PATENT FILED: 12/12/2019  
PATENT No.: 201931051578 (Filed).
- TITLE: Bio-Waste Ash Based Low Cost, Light Weight, And Eco- Friendly Self-Rechargeable Battery  
AUTHOR(s): Prof. Pathik Kumbhakar  
DATE OF PATENT FILED: 24/01/2019  
APPLICATION NO.: 201931002942 (Under the Examination Stage)  
INVENTORS: Srikanta Karmakar, Partha Kumbhakar, Ashim Pramanik and Prof. Pathik Kumbhakar

\*The companies offering more than 30 Lpa have been mentioned.



# COLLABORATIVE RESEARCH ACTIVITIES

- Dr. Amit Kumar Chakraborty, Dept. of Physics has undertaken collaborative work with Anhui University of Technology, Anhui, China during January 2019, regarding VOC sensor.
- Prof. Pathik Kumbhakar, Dept. of Physics, has undertaken collaborative work with Jadavpur University, West Bengal and INST Mohali in January, 2019. He also carried out collaborative work with Department of Microbiology, RK University, Rajkot, Gujarat during February, 2019. In April 2019, he collaborated with Material Science and Engineering Department, IIT Kharagpur, and he has recently executed collaborative research activity with Burdwan University, West Bengal in October 2019.
- Dr. Sayantari Ghosh, Dept. of Physics has carried out collaborative work with Department of Electrical engineering, IIT Kanpur in February, 2019.
- Dr. Aniruddha Mondal, Dept. of Physics has undertaken collaborative work with IIT Bombay on Characterization of InN NWs in August 2019. He has also undertaken collaborative research with Nanotechnology, Jadavpur University, Kolkata, Nanotechnology, Saha Institute of Nuclear Physics, Kolkata, Nanoelectronics, University of Nottingham, UK, Nanotechnology, NIT Nagaland, Federal University of Sao Carlos, Brazil in May, 2019, August, 2019, July, 2019, June, 2019, August, 2019 respectively.
- Dr. Ashish Bhattacharjee, Department of Biotechnology has undertaken collaborative research work with Institute of Post-graduate Medical Education & Research (IPGMER), Kolkata in the area "Expression of Monoamine Oxidase A (MAO-A) in human cancer tissue samples and its implication in epithelial-mesenchymal transition (EMT): a pilot study" in November, 2019.
- Prof. Subrata Banerjee of Electrical Engineering department has received Joint Research Project with IIT Delhi entitled "Modelling and Control of Electromagnetic Levitation Devices" No.: CRG/2018/002856 from DST, SERB.
- Mr. Partha Kumbhakar, Prof. Subrata Biswas and Prof. Pathik Kumbhakar of Department of Physics have carried out research work successfully on the topic "Nanotechnology Enabled Smartphone Based Detection of Latent Fingerprints". The research work including the development of materials and its applications have been carried out at Nanoscience Laboratory, Dept. of Physics, National Institute of Technology Durgapur in collaboration with Mr. P. Pandey and Dr. C. S. Tiwary of IISc., Bangalore and IIT Kharagpur respectively.
- Dr. Anita Pal is collaborating with Prof. I.N. Congul, Uludag University, Turkey, Prof. N. Debnath, School of Computing and Information Technology, Eastern International University, Vietnam, Prof. Hoang Viet Long, Ton DucThang University, Hochi Minh City, Vietnam, Prof. M. Voskoglou, Graduate Technological Educational Institute of Western Greece, Greece.
- Dr. Lakshmi Kanta Dey is having collaboration with Prof. Adrian Petrusel, Professor of Mathematics, Babes-Bolyai University Cluj-Napoca, Romania, Prof. Stojan Radenovic, Professor, Belgrade University, Serbia during 2019-2020 regarding some joint projects on fixed point theory and allied topics.
- Dr. Partha Pratim Gopmandal has started collaboration with Prof. J. F. L. Duval, CNRS Research Director, Université de Lorraine, Laboratoire Interdisciplinaire des Environnements Continentaux (LIEC), UMR 7360 CNRS-Université de Lorraine, Vandoeuvre-lès-Nancy F-54501, France.

- Dr. Sirshendu Mondal, Dept. of Mechanical Engineering has started and continued collaboration with Prof. Achintya Mukhopadhyay (Jadavpur University, Kolkata), Prof. Swarnendu Sen (Jadavpur University, Kolkata), Prof. R. I. Sujith (IIT Madras, Chennai) and

Dr. J. Venkatramani (Shiv Nadar University, Noida) during 2019.

- Dr. Hirok Chaudhuri is collaborating with East China University of Technology, China.

## ACHIEVEMENTS AND AWARDS

### FACULTY:

- Dr. Dakshina Ranjan Kisku; IEI-FCRIT Excellence Award jointly conferred by The Institution of Engineers (India) & FCRIT; January 2019.

- Prof. Parimal Pal was selected as a Member of the Editorial Board of the Journal of Environmental Engg. and Landscape Management (Taylor and Francis) in January 2019.

- Dr. Parag Kumar Guha Thakurta, Best Researcher in Mobile Networks, RULA Award, World Research Council & United Medical Council, February 2019.

- Prof. Dakshina Ranjan Kisku; Fellow of the Royal Society for Public Health, London, U.K. March 2019.

- Dr. Dakshina Ranjan Kisku; Outstanding Reviewer Award conferred by Informatics in Medicine Unlocked, Elsevier, Amsterdam, Netherlands, March 2019.

- Prof. Pathik Kumbhakar, Department of Physics, has been selected as SENIOR, OSA in USA, June 2019 with membership ID 972901.

- Prof. Apurba Dey received best paper award in International Conference of Excellence in Research and Innovation, in 14th PARIS International Conference on Agriculture, Biological and Environmental Sciences (PABE-19), Paris, France, September 5-7, 2019.

- Prof. Sajal Mukhopadhyay, Best Paper Award for: A Framework for Allocation of IoT devices to The Fog Service Providers in Strategic Setting, In 14th International conference on P2P, Parallel, Grid, Cloud, and Internet Computing (3PGCIC), Springer, University of Antwerp, Belgium, November 7-9, 2019.

- Prof. Subrata Banerjee of Electrical Engineering department has received 'Outstanding Paper Award' in 26th West Bengal State Science & Technology Congress, 2019.

- Prof. Sudip Chattopadhyay, Department of Biotechnology has been selected as Member of the Sectional Committee, Indian National Science Academy (INSA) for selection of Academy Fellows.



- Prof. Subrata Banerjee of Electrical Engineering department has been appointed as Associate Editor of IET Power Electronics & IEEE Access Journals.

## STUDENTS:

- Purnima, a student of Semester 6, Biotechnology department participated in Smart India Hackathon 2019 (Software Edition), and won a cash prize by presenting Brain Image segmentation technique using machine learning.
- Sayari Mukherjee and Sayanti Dey are selected for Mitacs Globalink Research Internship Program 2019.
- Four students were fully sponsored by the Institute for internship in CERN Geneva.
- Sourav Mukherjee received Summer Research Fellowship Programme (SRFP) 2019 at National Institute of Cancer Prevention and Research
- Pratyay Sengupta received Summer Research Fellowship Programme (SRFP) 2019 at Institute of Bioinformatics Bangalore.
- Sayoni Saha received Summer Research Fellowship Programme (SRFP) 2019 at Center for Cellular and Molecular Biology Hyderabad.
- Aniq Ur Rahman, a final year student was invited to participate in the 7th Heidelberg Laureate Forum.
- Amit Yadav and Jyoti Gupta have been selected in the Indian Youth Delegation to China under Youth Exchange Programme-2019.
- Three students received the prestigious DAAD WISE Scholarship
- Seven B.Tech students have been selected for Google Summer of Code (GSoC) program 2019.
- A student team "Hexa-Codie" led by Swati Kanchan won the Smart India Hackathon 2019 Software Edition Grand Finale.
- NIT Durgapur Chess (Women) team secured the 3rd Position in the All India Inter NIT Tournaments held at Agartala during March 08 to 10, 2019.
- Aiswarya Sahu, visiting M. Tech. student of CUJ, Dept of Physics, participated on "International Conference on Green and Efficient Energy Technology and Materials (GEETAM)", held on Central University of Jharkhand, Ranchi, INDIA and achieved Best Poster Award, in March, 2019.
- Punam Tiwary, PhD student working in collaboration with ECE & PH, has attended International Conference on Science & Engineering of Materials (ICSEM 2019), Sharda University, Noida, INDIA and achieved Best Poster award during July 2019.
- Anshu Kumari, Jyoti Gupta and Shreya Srivastava won first position in a competition organised by Larsen and Turbo- CreaTech 2019 Engineering the Future held in Mumbai. The team from NIT Durgapur presented an interesting topic which is indeed a need of the hour- "Developing a solution for solid waste management using new age technologies like IOT, Drones, Predictive Analytics."
- Punam Tiwary, PhD student, and working in collaboration with ECE & PH, received International Travel Grant from SERB, DST, India in September 2019 to attend International conference on Recent Appointees in Material Science (RAMS 2019), University of Liverpool, UK.

- NIT Durgapur Yoga team (Men) secured 3rd position in All India Inter NIT Tournaments organized by NIT Silchar during October 11-13, 2019.
- Mr. R S S M R Krishna, a PhD Research scholar of ECE participated on "International Conference on "Communications, Signal Processing and VLSI (IC2SV 2019) held at NIT Warangal between Oct 23-24 2019 and received BEST PAPER award.
- Four B.Tech (ECE) and three M. Tech (Micro-electronics and VLSI) students have received "Student Fellowship" supported by the 28th IEEE Asian Test Symposium (Dec. 10-13, 2019) held at Lalit Great Eastern, Kolkata, India. This conference is one of the reputed conferences in the field of 'Testing and Verification'.
- S. Mahata, a research scholar of ECE has received Premium Award 2019 for Best Paper in IET Signal Processing.

## ALUMNI:

- Prof. Bikramjit Basu, the distinguished alumnus of National Institute of Technology Durgapur (NITD), has obtained recognition as the prestigious Fellow, American Ceramic Society & Fellow, Biomaterials Science and Engineering (FBSE). He is presently working as Professor at the Materials Research Center with joint appointment at Center for Biosystems Science and Engineering and Interdisciplinary Centre for Energy Research at Indian Institute of Science (IISc), Bangalore. He is also honorary professor at University of Manchester, UK and Guest professor at Wuhan University of Technology, China. He earned his PhD degree in Engineering Ceramics at Katholieke Universiteit Leuven, Belgium (2001). Following post-doctoral stint at University of California, Santa Barbara, he served as the faculty of IIT Kanpur during 2001-2011. Prof. Basu received India's most coveted science and technology award,

- Mr. Gaurav Kumar, Department of Metallurgical and Materials Engineering, NIT Durgapur has been selected by IIT Bombay under Prime Minister Research Fellowship (PMRF).
- Mr. Sourav Datta, Dept. of BT has received award in Khorana Program for Scholars 2019.
- Ms. Trishaa Bhattacharya secured the best Woman Athlete position in All India Inter NIT Athletics Championship 2019.
- Amit Yadav and Jyoti Gupta were selected in Indian Youth Delegation for visiting China under Youth Exchange Programme in 2019.
- Icon SWM Excellence Award 2019 received by Sayantan Sarkar for the Paper "Re-refining of industrial lubricating oil by an environment-friendly non-acidic extraction- flocculation method" in the 9th International Conference on Sustainable Waste Management towards Circular Economy" held during November 27 - 30, 2019.

Shanti Swarup Bhatnagar prize (2013).

- Dr. Poulami Chakraborty received the prestigious Young Engineer Award 2019 of the Indian National Academy of Engineering (INAE). She is a graduate from the Metallurgical Eng. Dept. of NIT Durgapur in 2018 and is presently working as a scientific officer at Bhabha Atomic Research Center (BARC), Mumbai.
- Poulami Das has received the prestigious 2020 Microsoft Research PhD Fellowship. She completed her graduation from the Dept. of ECE, NIT Durgapur in 2012. She is currently a third year PhD student at Georgia Institute of Technology. She received her MS from the University of Texas, Austin in 2014 and worked as a design engineer at LSI Corporation (Bangalore) and NXP Semiconductors (Austin).

# OUTREACH ACTIVITIES

- Prof. Anupam Basu, Director, NIT Durgapur, deliberated on the issues of disabilities as a panelist of "Tech4Sewa - Three Day National Workshop" at IIT Delhi on August 11, 2019.



- Prof. Anupam Basu, Director, NIT Durgapur delivered a Keynote at the Explainable Machine Intelligence course at IIT Jammu.

- Swacchata Pakhwada was organized from September 1-15, 2019. The programme started with pledge taking and covered many campus cleaning drive during the pakhwada.

- NSS organized cleaning drive in around the campus. It's role in 'Swachhata Pakhwada' and 'Plastic Free Campaign' was praise worthy.

- Prof. Partha Pratim Sengupta, Dept. of Humanities and Social Sciences was invited as a speaker in a seminar on Geopolitical scenario of India and impact on Indian Steel Industry, organized by MTI of SAIL, Ranchi, in September, 2019. He was also invited as guest speaker on a National Symposium on New Education Policy, organized by MHRD, at a Institute at Allahabad in November 2019.

- A socio-economic survey was conducted by Prof. Partha Pratim Sengupta and Dr. Debasis-Chakraborty, Dept. of Humanities and Social Sciences, at Siduli Colliery area under ECL. It is a consultancy project of Coal India.

- TEQIP-III Sponsored One-day seminar on Plastic Waste Management under Swachhata Hi Seva 2019 was organized on October 19, 2019 at NIT Durgapur. Prof. Brajesh Kumar Dubey, Dept. of Civil Engineering, IIT Kharagpur, Prof. Somnath Mukherjee, Dept. of Civil Engineering, Jadavpur University, Dr. Tapas Kumar Gupta, Chief Engineer, West Bengal Pollution Control Board delivered expert lectures and shared their insights on the pertinent issue.



- Dr. Hirok Chaudhuri, Dept. of Physics, visited SERB School on "Smart Energy Materials & Device" at IIT-ISM Dhanbad, on April 29, 2019, as a resource person. He was also invited as a speaker in the "Workshop on Remote Sensing & GIS", in UGC-HRD Centre, The University of Burdwan, on March 12, 2019. He delivered talk in the "Workshop for BRICS Water Resources and Pollution Treatment" at East China University of Technology; he also delivered lectures in the Class for the Post Graduate and Undergraduate Students at Hohai University, China; As a resource person he lectured in several places, such as, "Triennial Conference, Pachim Banga Vijgyan Mancha, Pachim Bardhaman District Committee", Durgapur, "National Workshop on Applications of Nuclear Science in Biochemical Engineering, Agricultural Productivity and



Food Safety”, “Water Conservation and Water Harvesting” at Central Industrial Security Force Unit ISP, Burnpur, West Burdwan, Short Term Training Programme (STTP) on Environmental crisis and sustainable development at JIS Engineering College, ASET colloquium, Tata Institute of Fundamental Research, TIFR, Mumbai, “National Consultative Workshop on PG Diploma in Environmental Hygiene, Water and Solid Waste Management”, Mahatma Gandhi National Council of Rural Education, Hyderabad, “3rd Annual Conference of BRICS Network University”, Stellenbosch University, South Africa.

- Dr. Supriya Pal, Dept. of Civil Engineering, delivered talks in the conferences as resource person on the topic “Environmental geotechnics”, East China University of Technology; “Workshop for BRICS Water Resources and Pollution Treatment”, Hohai University, China.



- Dr. Shri Krishan Rai of HSS department delivered invited talk at NPTI, and West Bengal Union of Journalists, Durgapur Chapter at Durgapur on November 25, 2019 and December 21, 2019 respectively.



- Industrial visit to Mother Dairy, Dankuni on

19th September 2019 for final year B. Tech students (elective Food Biotechnology) where the resource person was Mr. S.K. Bhoumik, Chief General Manager, Mother Dairy, Dankuni.

- Industrial visit to Bio Bharati Live Science Pvt Ltd, Kolkata for M. Tech 1st year students on 12th September 2019.



*Industrial visit to Mother Dairy plant, Dankuni*



*Industrial visit to Bio Bharati Live Science Pvt. Ltd, Kolkata*

• Prof. Amit Kumar Chakraborty, Dept. of Physics, delivered Invited Lecture at 10th International Conference on Materials for Advanced Technologies (ICMAT 2019), Singapore, June 23-28, 2019. There were more than 3000 delegates including 4 Nobel laureates. He also delivered Invited Lecture at the International Symposium on Carbon Nanomaterials Electronics (SCNE), November 8-9, 2019 at BITS Pilani.

- Dr. Monidipa Ghosh, Associate Professor, Dept. of Biotechnology, NIT Durgapur visited University of Bath, UK during March 25- April 30, 2019.



- Dr. Anita Pal, Dept. of Mathematics, acted as the external member of DRC Committee of NIT Sikkim on Feb 08, 2019, chaired a session in All India NIT Students Conference at NIT Surat during September 15-16, 2019, acted as an Invited Speaker at International Conference AMSE-2019 at SOA University, Bhubaneswar during October 24-26, 2019 and delivered invited talk at NIT Sikkim on Feb 08, 2019.

- Dr. Sarit Maitra, Associate Professor, Dept. of Mathematics, participated and delivered talk as an invited speaker at an International Conference during October 24-26, 2019, held at Dept. of Mathematics ITER, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, Odisha, India.



*Dr. Monidipa Ghosh at University of Bath, UK.*



*Prof. Amit Kumar Chakraborty at ICMAT, 2019 held in Singapore.*



*Bihari More Education Project, a volunteer driven Independent Social Initiative by NIT Durgapur Students mentors the under-privileged children in & around the Campus.*



# TECHNICAL FEST AND CLUB ACTIVITIES

- The annual sports and technology festivals like Aarohan, Aavishkar, Motor Zundung, and cultural festivals such as Verve, Ank, Recstasy, SPIC MACAY Virasat were celebrated with great zeal and passion.

- SPIC MACAY NIT DURGAPUR CHAPTER presented the glorious Annual Cultural Extravaganza VIRASAT in March 2019. This spectacular event showcased the talents of the budding artists and enriched the minds of the audience with extraordinary performance by the luminaries.



- Literary Circle has organized NITMUN and VERVE with smashing success.

- Recstasy



- Prakriti (Nature Club) organized Swachhta Hi Seva campaign and other events to keep the surrounding clean and initiate discussion on the protection of environment. They also launched awareness drive and marched in response to global action programme on climate change.



- "Angdaan", by Enteract Club, the drama club of NIT Durgapur was performed on April 8, 2019 in Recstasy 2019, the annual cultural fest of NIT Durgapur.



- NIT Durgapur was one of the organizers of "Students' Engineering Model Competition" in India International Science Festival held in Kolkata during November 6-7, 2019.





- Maths N Tech Club

- A two day workshop on 'Cybersecurity and Blockchain' was conducted in association with Team Cognito on March 01-02, 2019.



- Scholarship test was conducted in association with T.I.M.E Institute on July 22, 2019.



- 'Ankshala', a test aimed at enhancing aptitude and logical acumen, was conducted in schools of Durgapur and nearby during the period between July 15- Sept 20, 2019.



- 'NASA Space Apps Challenge', a one day HACKATHON was hosted at NIT Durgapur on Sept. 08, 2019.



- 'BRAIN DARTS', a fun event based on logical aptitude was conducted on October 23, 2019.



- Online Activities: 'KNOCK KNOCK', event was conducted exclusively for freshers on weekends during August 17- Sept 08, 2019. 'EVENTually', an online picture connect event was conducted on Dec 21, 24, 26, 27, 28, 2019.

# PROGRAMS AND EVENTS

## • Induction Programme

National Institute of Technology Durgapur organised a week-long Induction Programme starting from July 29 for the newly admitted students to its B.Tech. Programme. Dr. Anita Pal and Dr. Arindam Modak were the coordinators of the programme. Resource Persons include Swami Atmapriyananda, V. C, Ramkrishna Mission Vivekananda University; Sri. K. N. Raghunandan, Educationist & Social Activist and several renowned personalities.



•Teacher Training Workshop was coordinated by Dr. Hirok Chaudhuri on February 01, 2019, under Rashtriya Avishkar Abhiyan.

• Celebration of National Science Day 2019: "Perspectives of Women in Science: Explorations and Experiences" was held on February 28, 2019 under Rashtriya Avishkar Abhiyan.

•Tree Plantation Programme at NIT Durgapur on July 20, 2019: About 100 trees were planted around NIT Durgapur in the first phase. The saplings were made available to the people from the Forest Department on the occasion of "forest week", which was celebrated during July 14-20, 2019.

•NIT Durgapur organized several programmes under Unnat Bharat Abhiyan.



• National Unity Day, Swachata hi Sewa, Vigilance awareness week, International Yoga Day, Hindi Pakhwara, MatribhashaSaptah, Anti-Terrorism Day, National Fitness Day and Communal Harmony Week were observed in the institute. Two MHRD training programs on "Computer per Hindi mein karya" were also organised.



• East zone Pre Republic Day Parade Camp was organized at NIT Durgapur during November 8-17, 2019.

## • Matribhasha Saptah

Matribhasha Diwas was celebrated as MatribhashaSaptah from February 19-24, 2019. Food festival, traditional fashion walk and events like rangoli making were the centre of attraction.



## • Constitution Day

Constitution Day was celebrated on November 26, 2019, when students, faculty and staff members took the pledge at Senate Hall at SN Memorial Building. An essay completion was also organized on this day where students expressed their views on Indian Constitution in present scenario.



• “ICC Workshop on Gender Sensitization and Prevention of Sexual Harassment at Workplace” was organized on November 01, 2019 with financial support from TEQIP-III and the Institute, Prof. Seema Sarkar Mondal (Presiding Officer, ICC) and Dr. Sutanuka Banerjee were the Coordinators of the workshop. Ms. Chandreyi Alam, Advocate, High Court, Kolkata & Prof. Amita Dutt, Rabindra Bharati University, Kolkata were the eminent Resource Persons.



## • 15<sup>th</sup> Convocation

The Honourable Chief Guest in the Convocation Ceremony was Padma Bhushan Dr. Bikash Sinha, Indian National Science Academy (INSA) Emeritus Scientist and former Director, Variable Energy Cyclotron Centre and Saha Institute of Nuclear Physics, Kolkata; The Guest of Honour was Professor Indranil Manna, Jagadish Chandra Bose Fellow and Institute Chair Professor Metallurgical and Materials Engineering Department, IIT Kharagpur and former Director, IIT Kanpur and CGCRI Kolkata. Presiding over the ceremony Prof. Anupam Basu, Director, NIT Durgapur observed “What the country needs today is not a mere engineer, nor a mere scientist, but a strong human being, armoured with knowledge and skills and with the emanating rays of wisdom”.





# NIT DURGAPUR IN NEWS

• Dr. Pathik Kumbhakar has developed a mobile app to measure pH and this has been covered in Nature India with the title “Glowing nanoparticles help image fingerprints” on January 14, 2019. The Hindu has covered a topic titled “Reconstruction fingerprints: The new nanomaterials may help CID go high tech” on January 16, 2019. The media Down to Earth Covered the topic “Now, a technology that can make reading latent fingerprints faster” on January 16, 2019. NIT Durgapur stamps its marks on fingerprint technology is covered by The Times of India Media on February 20, 2019 (link). Researchers come up with technology for enhanced finger printing system has been covered by The Indian Express on March 23, 2019 and telecasted in Science Monitor (RSTV) IMAK News and Entertainment, New Delhi, under news programme, “Science Monitor” for Vigyan Prasar, under the Ministry of Science

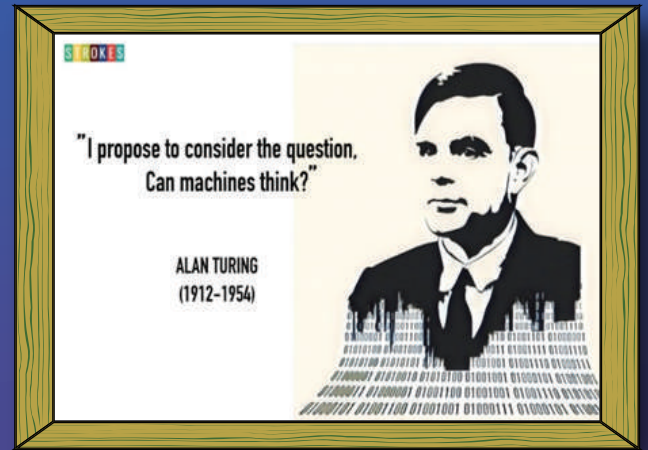
and Technology, Govt. of India, Rajya Sabha TV. Researchers from the Dept. of Physics, have come out with one research paper titled “A temperature and weight sensor made on paper” and a mobile app to measure pH respectively, which have been covered by the Nature India.

• Dr. Monidipa Ghosh and her students have developed a self-checking blood test device that can detect the possibility of breast cancer at an early stage and this has been covered in Campus Varta, The Times of India, and News18.

• Kolkata News CN telecasted how groundwater is slowly going down and river pollution is increasing on August 1, 2019. “Dushan Ruktey-tatpur Biswas, samil Bharat o” was telecasted on November 17, 2019.







Artwork and Creatives by photography club STROKES



BONDING : Our Heritage Tree

## EDITORIAL BOARD:

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The newsletter is designed by Ankan Pramanik, Arghya Gorai, Meenakshi Harikumar and Tamoghna Basak, four B. Tech students of the Institute under the guidance of the editorial team.

Cover photographs and heritage tree photo captured by Prof. Partha Pratim Sengupta

