

Bi-Annual

# NEWSLETTER



**NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR**



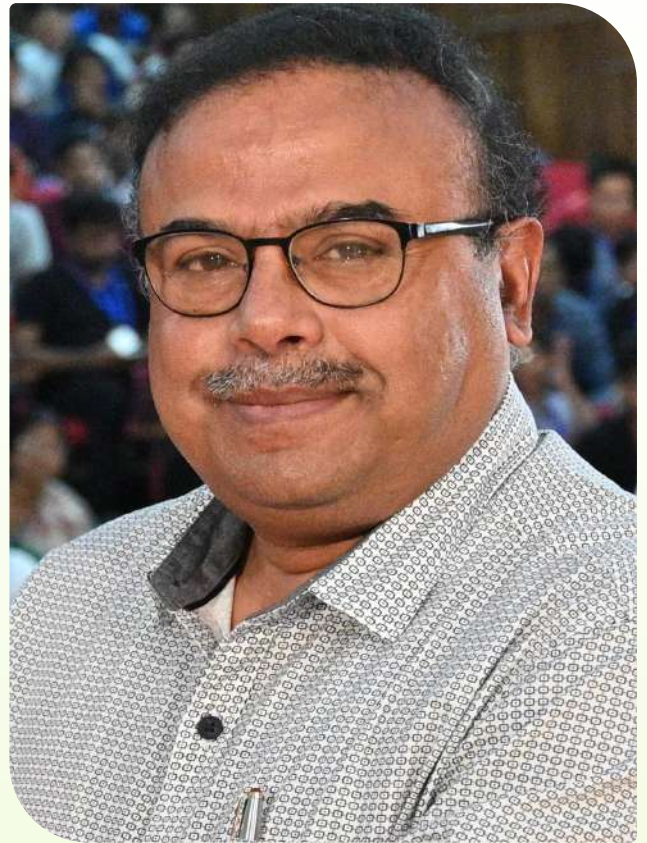
# FROM THE DIRECTOR'S DESK

**Dr. Anupam Basu**

Greetings from NIT Durgapur!

I am glad to inform you that the Pandemic has not dampened the spirit of Teaching-Learning-Research-Innovation of our faculty members and students as exhibited in the promising signs of development in the NIRF ranking. The institute is expanding and refurbishing its infrastructure in line with the growing needs. It is my pleasure to state that NIT Durgapur is setting up Utkarsh Bhavan, a multi-storied central research academic building (with the HEFA loan) which will house central research facility, central laboratory facility and four state of the art centres for advanced research. A state-of-the-art studio has also been established to supplement online teaching learning process. A 1500 capacity new auditorium has also been inaugurated recently.

The institute took all possible measures to stand up to the challenges posed by Covid-19. Faculty members especially took active interest in innovation to combat the pandemic. More than 71 percent students have been placed in reputed companies and organizations through campus selection. The faculty members and the students are collaborating for research with the leading universities and industries of India and the world. A series of webinars were organized to disseminate scientific knowledge and thus networking with the global partners has been possible. This edition of the Newsletter summarizes the multidimensional activities (both academic and extracurricular) of the institute during the period concerned.





# Seminars & Invited Talks Hosted

■ A seminal lecture on the role of students and youth in the freedom struggle of India was delivered by Prof. Kunal Chattopdhyay of Jadavpur University on March 12, 2021 as a part of Azadi Ka Amrit Mahotsav - an initiative of the Ministry of Education for celebrating 75 years of India's independence. The programme commenced with introductory comments by Prof. Anupam Basu, Director, National Institute of Technology, Durgapur.



■ Nobel laureate Prof. Ada E. Yonath (Nobel Prize in Chemistry, 2009) delivered an online talk on “next-generation antibiotics’ on April 4, 2021 to UG/PG students of the Chemistry department. The seminar was co-hosted by Dr. Deb Ranjan Banerjee, Department of Chemistry, NIT Durgapur and SRM University Haryana.



■ One-day national Webinar on “Optimization Problem and its Application”, WOOPA- 2021 in collaboration with ORSI Durgapur chapter was held on April 18, 2021 at the department of Mathematics. Dr. Aniruddha Samanta and Dr. Supriya Kar, members of ORSI Durgapur delivered invited talks.



■ The EU and India’s Strategic Partnership Agreement is concerned about the transition to renewable energies and it focuses on ensuring coverage to all households. But when solar energy is only supplied during the day, how to strike a balance between quantity and quality? How can a remote village become energy independent with solar, wind, and other forms of renewable resources? “Energy Security” was organized on May 02, 2021. Dr. Victor Mukherjee (Senior Research & Development Engineer in ABB OY, Finland) talked to Dr. Sukumar Mishra (Professor, IIT Delhi), Dr. Tapas Kumar Saha (Professor, NIT Durgapur), and Dr. Rahul Walawalkar (President & MD of Customized Energy Solutions, India) on the future of India’s energy transition.



# Conference Organized

- Three days International Conference titled 'Recent Development in Chemistry (RDC-2021)' was organized during March 3-5, 2021 by the Department of Chemistry. Nobel laureate Prof. Jean-Marie Lehn delivered the keynote lecture in this conference. Prof. Sankar Chandra Moi, Dr. Subhas Ghosal, and Dr. Deb Ranjan Banerjee were the organizing Secretaries of the conference. The conference was chaired by Prof. Rajnarayan Saha (HOD, Chemistry).



# Workshop Organized

- Five-day online Faculty Development Program (FDP) on "Waste Valorization towards a Sustainable Environment" was organized during June 14-18, 2021, by Dr. Bimal Das, Prof. Gopinath Halder and Dr. Bikash Mondal, Department of Chemical Engineering and sponsored by AICTE Training and Learning (ATAL) Academy.



# Invited Talks Delivered

- Dr. Arup Kumar Mandal delivered an invited talk on the topic "Recycling and Utilization of Integrated Plant Waste Materials" of the Short Term Course on Creating Wealth from Waste- CWW-2021, Sponsored by ATAL ACADEMY, Government of India, and organized by MME Department, NIT Durgapur on January 19, 2021.
- Dr. Anita Pal delivered an invited talk on the topic "Graph Theory and its Applications" as in the "Lecture Series on Mathematics", organized by Theivanai Ammal College for Women Villupuram, Tamil Nadu on February 04, 2021.
- Dr. Sirshendu Mondal delivered a talk on "Describing and Controlling Thermoacoustic Instability through Synchronization Theory" as an expert speaker in a five-day TEQIP-III Sponsored Online Workshop on "Recent Trends in Thermo-Fluids" (RTTF 21) organized by NIT Sikkim during February 22-26, 2021.



- Dr. Aniruddha Bhattacharya delivered an invited talk on the topic “Planning of Electrical Vehicle Charging in Distribution Network” in a TEQIP-III sponsored Workshop at NIT Sikkim on February 26, 2021.
- Dr. Gautam Bandyopadhyay delivered an invited talk on the topic “Factor Analysis using R Studio over Online Meeting Platform” at A. K. Dasgupta Centre for Planning and Development, a center sponsored by the NITI AAYOG, Govt. of India, on February 27, 2021.
- Dr. Anita Pal delivered an invited talk on the topic “Importance of Science in modern era” on “National Science Day Celebration 2021”, organized by Jawahar Navodaya Vidyalaya, Durgapur on February 28, 2021.
- Dr. Arindam Modak delivered an Invited Lecture on “Writing Research Paper” for the undergraduate students of VIT University, Vellore, on March 01, 2021.
- Dr. Anita Pal delivered an invited talk on the topic “Abstracting and Indexing of Journals” in the “One-Day National Webinar on Indexing and Referencing of Journals in Research (WIRJR-2021)” organized by ORSI Durgapur, on March 7, 2021.
- Dr. Anita Pal delivered an invited talk on the topic “Role of women in society and education” on “Women Empowerment in the International Women’s day organized by Ankit Educational and Social Welfare Society, Durgapur, on March 8, 2021.
- Dr. Sirshendu Mondal delivered a talk on “Describing and Controlling Thermoacoustic Instability through Synchronization Theory” as an expert speaker in an online Workshop on “Recent Trends in Sustainable Energy and Industrial Technologies” organized by The ICFAI University Tripura during March 17-19, 2021.
- Dr. Arindam Modak delivered an Invited Lecture on “How to Write an Effective Research Paper” for the PhD students of VIT University, Vellore, on March 26, 2021.
- Dr. Aritro Dey delivered an invited talk on the topic, “Control Law for Light Combat Aircraft: An Overview”, in a short term training program organized by Silicon Institute of Technology, Bhubaneswar in association with IEEE Bhubaneswar subsection PES and IES Chapter on April 5, 2021.



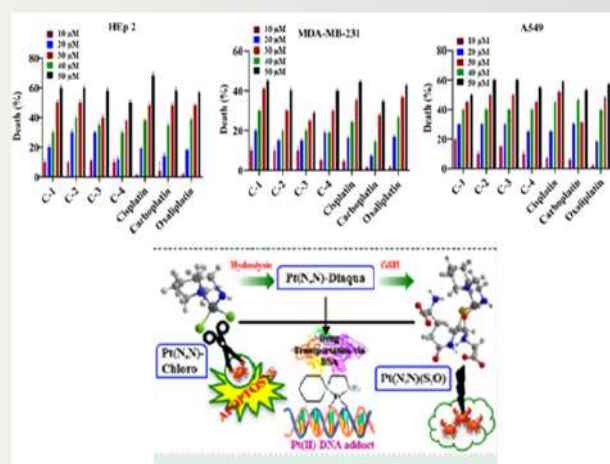
- Dr. Gautam Bandyopadhyay delivered an invited talk on the topic “Dimension Reduction Using R Studio” at Bharatiya Vidya Bhavan Institute of Management Science, Kolkata, sponsored by AICTE over Online Meeting Platform on April 24, 2021.
- Dr. Gautam Bandyopadhyay delivered an invited talk on the topic “Dimension Reduction in Business Analytics” at CSE Department of MCKVIE on April 24, 2021, sponsored by ATAL-AICTE.
- Prof. Seema Sarkar (Mondal) delivered an invited talk during a one-day state level webinar on some areas of advanced mathematics in undergraduate level, organized by Sitananda College, Nandigram, West Bengal on April 30, 2021.
- Dr. Gautam Bandyopadhyay delivered an invited talk on the topic “Dimension Reduction Using R Studio” at Bharatiya Vidya Bhavan Institute of Management Science, Kolkata, sponsored by AICTE, on May 1, 2021.
- Dr. Gautam Bandyopadhyay delivered an invited talk on the topic “Dimension Reduction Using R Studio” at Bharatiya Vidya Bhavan Institute of Management Science, Kolkata, sponsored by AICTE on May 8, 2021.
- Dr. Gautam Bandyopadhyay delivered an invited talk on the topic “Principle Component Analysis and Discriminant Analysis” at A. K. Dasgupta Center for Planning and Development, a center sponsored by the NITI AAYOG, Govt. of India, on May 16, 2021.
- Dr. Aniruddha Bhattacharya delivered an invited talk on the topic “Future Development of the Electricity Systems with Distributed Generation”, in a Faculty Development Program, organized by GMIT, Kolkata, technically sponsored by IEEE-PES, Kolkata Section, on May 28, 2021.
- Dr. Gautam Bandyopadhyay delivered an invited talk on the topic “1) Linear Model & Regularization 2) Feature Selection & Feature engineering” at CSC Department of NIT, Durgapur in the ATAL Program sponsored by AICTE, on June 1, 2021.
- Dr. Aniruddha Bhattacharya delivered an invited talk on the topic “Effect of EV growth on Grid Security”, in a HRD Training program, organized by ERLDC, Power System Operation Corporation, on June 15, 2021.
- Dr. Gautam Bandyopadhyay delivered an invited talk on the topic “Research Methodology” as a part of Ph. D. coursework, organized by the Department of Commerce & Management of West Bengal State University on June 19, 2021.
- Dr. Gautam Bandyopadhyay has acted as a speaker in Plenary Session of the 1st International Conference on Emerging Issues in Business and Technology (ICEiBT) on June 26, 2021 on the topic “New Normal: Challenges and Opportunities for Academia”, organized by School of Management and Commerce, Brainware University, India.
- Dr. Gautam Bandyopadhyay delivered an invited talk on the topic “Correlation & Regression using Jamovi” at Exceller Open in collaboration with University of Calcutta Affiliated Naba Ballygunge Mahavidyalaya (NAAC accredited B+) on June 27, 2021.



# Awards & Honours

## FACULTY

- Prof. Pathik Kumbhakar, Department of Physics, and Dean (Academic Research) has been admitted as a Fellow of the Royal Society of Chemistry (FRSC, England).
- Prof. Amit Chakraborty, Department of Physics, has become a Fellow of the Royal Society of Chemistry (FRSC), London.
- Prof. Subrata Banerjee, Department of Electrical Engineering has been nominated as Associate Editor with Transportation Electrification IEEE(USA) (specialty section of Frontiers in Future Transportation) on June 25, 2021.
- Prof. S. C. Moi and his co-workers, Department of Chemistry have developed novel platinum based anticancer agents, which is published as research article in prestigious Journal ACS Applied Bio Materials (J. of American Chemical Society). Anticancer activities of these compounds are comparable to cis-platin. Cis-platin is a well-known anticancer drug, used throughout the globe as a chemotherapeutic drug.



## STUDENTS

- Sucharita Pal was awarded the Certificate for the Best Presenter in the Machine Learning and Artificial Intelligence Division. The paper titled “Artificial Intelligence based modelling and multi-objective optimization of commercial Ethylene Oxide reactor’ by Sucharita Pal, Sandip Kumar Lahiri, Department of Chemical Engineering, NIT Durgapur was presented in the International Conference on “Interdisciplinary Research in Technology and Management” held during February 26-28, 2021.
- Following students from the Dept. of Chemistry have exhibited remarkable feats:
  - Sarbajit Layek, 2-yr MSc, Sem IV, Shortlisted for INSPIRE fellowship by DST, GOI
  - Rituparna Bhaduri, PhD student under the supervision of Prof S. C. Moi secured Best Poster Award at NIT Surat in two days international webinar



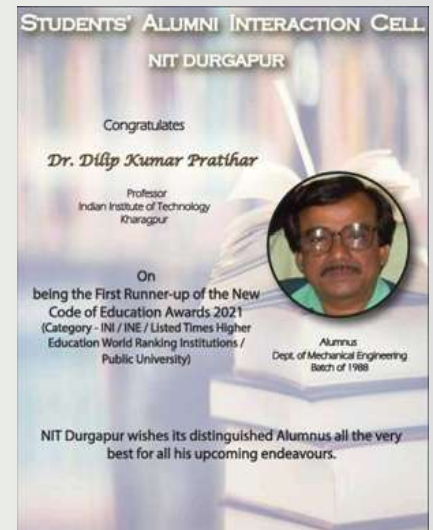
- Manoj Singh, 5-yr Int. MSc, Sem 8, Selected for summer internship at ONGC

- Dolly Singh, 5-yr Int. MSc, Sem 8, Selected for summer internship at ONGC

- Ankan Pramanik, student of 5<sup>th</sup> semester, Dept. of Mechanical Engineering, and team leader of 'The Brain Scripts' was selected in the Final Round of ToyCathon, a national level Hackathon organized by the Govt. of India. Pritam Chakraborty and Sayak Das were his teammates.

## ALUMNI

- Dr. Dilip Kumar Pratihari, Dept. of Mechanical Engineering, batch of 1988, became the First Runner-up of the New Code of Education Awards 2021 (Category - INI/ INE/ Listed Times Higher Education World Ranking Institution/ Public University). The Students' Alumni Interaction Cell, NIT Durgapur has congratulated Dr. Pratihari for his achievement.



- Siddharth, an alumnus of the Dept. of Chemical Engineering (UG 12-16), joined Harvard as a Post-Doctoral fellow. In this connection, mention may be made of one of institute's former M. Tech. (AMST) students, Avishek Dey (who did his M. Tech. project under the guidance of Prof. Amit Chakraborty) has started working as a Post-Doc at University College London since March 2021. Avilash Singh Yadav, an alumnus of NIT Durgapur and associated with the Dept. of Biotechnology, recently completed his PhD from Monash University and received a postdoc offer from Cornell University USA.

## Sponsored & Consultancy Projects

- **Title:** Proof checking of different projects

**Principal Investigator:** Dr. Somnath Karmakar, Dept. of Civil Engineering

**Sponsored Agency:** NHAI (GOI), Railway (GOI), Central University Jharkhand, Ranchi, GOI, Smart city network at Bhagalpur, GOB, Housing Board, GOWB

**Month & Year of Sanction:** 01.01.2021 to 30.06.2021

**Total Fund:** ₹ 33, 97,900

- **Title:** Structure elucidation of simple hydrocarbons through Global Optimization using Density Functional Theory and post HF methods.

**Principal Investigator:** Dr. Subhas Ghosal, Dept. Of Chemistry, NIT Durgapur

**Co-Principal Investigator:** Anoop Ayappan, Dept. of Chemistry, IIT Kharagpur

**Sponsored Agency:** DST under NSM

**Month & Year of sanction:** March, 2021

**Sanctioned fund:** ₹ 25, 52,000



# Patents

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

# Collaborative Activites

- Dr. Achintya Kumar Pramanick of Dept. of Mechanical Engineering has started collaboration with University of Stuttgart, Germany, Duke University, USA; University of Lorraine, France; Universidade Do Vale Do Rio Dos Sinos, Brazil on Thermodynamics. He is also collaborating with Central Mechanical Engineering Research Institute, Durgapur on Heat transfer.
- Dr. Aparesh Datta, Dept. of Mechanical Engineering is continuing his collaboration with Dr. Sudev Das (NIT Calicut) on ‘Boiling heat transfer’. He is also collaborating with Dr. Nirmalendu Biswas (Jadavpur University) on ‘Natural Convection’.
- Dr. Sirshendu Mondal, Dept. of Mechanical Engineering has started collaboration with Dr. Aparesh Datta (NIT Durgapur) on ‘Non-linear fluid dynamics in solar air heater’. He is continuing collaboration with Prof. Achintya Mukhopadhyay (Jadavpur University, Kolkata) and Prof. Swarnendu Sen (Jadavpur University, Kolkata) on ‘prediction of lean blowout in gas turbine engine using time series analyses’. He is also collaborating with Dr. J. Venkatramani (Shiv Nadar University, Noida) on ‘synchronization in aeroelastic systems’.
- Dr. Tanmay Kumar Saha, Dept. of Chemistry is collaborating with Dr. C. Halder, Dept. of Chemistry (IIT ISM Dhanbad). Area: Collaboration work and instrumental support towards the synthesized molecules.
- Dr. Subhas Ghosal, Dept. of Chemistry is collaborating with Dr. Anoop Ayappan, Dept. of Chemistry (IIT Kharagpur) on High Performance Computing.
- Dr. Arup Kumar Mondal, Dept. of MME is collaborating with Prof. O.P. Sinha, (IIT BHU) on Iron and Steel making, E-waste, and Plasma melting. He is also collaborating with Dr. Mohd. Talha, School of New Energy and Materials, Southwest Petroleum University, China. He has collaborated with Dr. Nawshad Haque, CSIRO Australia on Life Cycle Assessment (LCA) of Iron and Steel Making and Hydrogen energy.

# Outreach Activities

- Prof. Subrata Banerjee has examined a PhD Thesis of Electrical Engineering of MAKAUT University in January, 2021.
- Dr. Lakshmi Kanta Dey has acted as an adjudicator in a Refresher Course-Mathematics organized by the University of North Bengal on January 20, 2021.
- Prof. Seema Sarkar (Mondal) has acted as Chairperson of the program “Aarohan 2021” and also acted as judge for virtual TechMela 2021.
- Dr Anita Pal has acted as judge in “Aarohan 2021”, in virtual mode.
- Dr. Sutanuka Banerjee acted as a judge in Youth Parliament 2021.
- Dr. Anita Pal has acted as a Guest of Honor and delivered an invited talk on “Development of Economy through Trade & Industry” organized by India International Grand Trade Fair (IIGTF), Gandhi Maidan, Durgapur, India during February 5-15, 2021.
- Prof. Seema Sarkar (Mondal) has acted as an Expert to the Selection Committee for appointment to the post of Assistant Professor for the Department of Mathematics, Jadavpur University, Kolkata, held on February 18-20 and 22-23, 2021.
- Prof. Seema Sarkar (Mondal) has chaired the session titled “Coding, Algebra, Optimization” in the 7th ICMC, 2021 on March 4, 2021 in IEST, Shibpur, West Bengal.
- Dr. Gautam Bandyopadhyay has acted as a member of the Board of Studies of School of Management of JIS University on March 12, 2021, through online platform.
- Prof. Kajla Basu has acted as the external examiner for PhD candidate Ms. V. Vidhya at Department of Mathematics, SRM IST, Kattankulathur, Chennai on April 8, 2021.
- Dr. Gautam Bandyopadhyay has acted as an external member of Academic Advisory Board of Calcutta Business School (an unit of Shikshayatan Foundation) on May 18, 2021.
- Dr. Sutanuka Banerjee acted as a paper setter for Research Methodology and essay writing for RET Examination at the department of Mining Engineering in Kazi Nazrul University.
- Prof. Kajla Basu has joined as external Doctoral Committee (DC) member for PhD student at Department of Mathematics, SRM IST, Kattankulathur, Chennai on June 22, 2021.





# Institutional Activities

## 16<sup>th</sup> CONVOCATION

The 16<sup>th</sup> convocation of NIT Durgapur was held online on January 12 2021. The chief guest and the guest of honor of the ceremony were Dr. Ramesh Pokhriyal Nishank, honourable Sikshamantri, Govt. of India and Prof. Asutosh Sharma, Secretary, Department of Science and Technology, Ministry of Science and Technology, Govt. of India. Chairperson, BoG Prof. Sadanand Sadashiv Gokhle graced the occasion with his esteemed presence. The achievements made and the new initiatives taken by the institute in last one year were shared by our honorable Director, Prof. Anupam Basu. He observed:

“Safety and security was insured during the lockdown and an unlocked period through strict adherence to the SOP’s issued by the Govt. of India from time to time. Online teaching learning process was effectively implemented through various reforms. The faculty members of the institute took active interest in innovations to combat the pandemic. The interest of the students was always ascribed top priority during the crisis. Their financial burden was lessened by the way of reduction in various fees and the installment payment scheme.”



662 papers were published and accepted for publication in premier journals and 370 papers were presented in conferences in 2019-2020. 3 patents were granted and 7 more were filed in the last year. 6 faculty members of the institute were included in a list of the top 2% of scientists published by a team of scientists of Stanford University.

In 16<sup>th</sup> convocation, 663 B. Tech, 220 M. Tech, 18 MBA, 28 MCA, 39 MSc, 6 MSW, and 128 Ph.D. degrees have been awarded.



## MATRIBHASA DIWAS

NIT Durgapur observed International Mother Language Day on February 21, 2021.

## WOMENS' DAY

National Institute of Technology Durgapur commemorated International Women's Day on March 08, 2021 on online platform. Inauguration took place in the morning with lectures by distinguished dignitaries including Hon'ble Director Sir Prof. Anupam Basu and BoG, Chairperson Prof. Sadanand Gokhale. Prof. Bula Bhadra delivered an illuminating lecture on substantive equality and deliberated on the issue of gender neutrality with the audience. An online celebration with the involvement of female faculty members of the institute was scheduled to be held in the evening and they enthusiastically shared their journey and experience and actively took part in impromptu presentations.



## GATI PILOT PROJECT OF DST

The proposal submitted by NIT Durgapur, expressing interest in joining the GATI (Gender Advancement for Transforming Institutions) Pilot Project of Department Of Science and Technology (DST), Govt. of India was accepted on April 26, 2021. Project GATI was one of the three initiatives of DST announced on 28 February 2020, the National Science Day, by the Hon'ble President of India at a celebratory programme dedicated to Women in Science held at Vigyan Bhavan, New Delhi. It aspires to create an enabling environment for equal participation of women in Science, Technology, Engineering, Medicine and Mathematics (STEMM) disciplines at all levels, addressing deep-rooted problems. GATI draws inspiration from the Athena SWAN Gender Equality Charter and accreditation framework operated by Advance HE, UK since 2005. A growing number of universities, science departments and research institutes in UK have voluntarily joined the charter and been recognized for their accomplishments. Recognizing the framework's evidence-based approach to analysis, action and demonstrable impact, several countries have been inspired to join the Athena SWAN collaborative international network and launch similar initiatives.



# INDIGENOUS OXYGEN CONCENTRATOR

The Department of Mechanical Engineering, NIT Durgapur under the initiative of Prof. (Dr) Shibendu Shekhar Roy, manufactured an indigenous low-cost Oxygen Concentrator named "Pranayam". It has garnered much appreciation from Dr. Ramesh Pokhriyal Nishank, former Education Minister, MHRD, Govt. of India as well as from prominent institutions all over India. The news of the Oxygen Concentrator was also published in popular regional and national dailies including The Statesman, Ananda Bazar Patrika, Bartaman and Dainik Jagran.

The product has successfully passed the medical trials at Sanjiban Hospital & College, Howrah and has been tendered for mass manufacturing.

## NIT Durgapur develops cheap O2 concentrator

DEBAJYOTI CHAKRABORTY  
DURGAPUR, 12 MAY

Scientists of National Institute of Technology (NIT) Durgapur after successfully developing affordable ventilators for critical Covid-19 patients last year have now developed a low-cost portable oxygen concentrator machine with completely indigenous technology.



NIT Durgapur's Registrar told The Statesman that as part of the country's 'Atmanirbhar Bharat' initiative the low-cost oxygen concentrator machine has been developed to meet the growing demand of liquidified medical oxygen as its scarcity has been catastrophic.

"We have handed over the first such machine (SLPM) to Sanjeevan Hospital in Ulubaha

in Howrah district for clinical testing and application on moderate patients. The design and development of this product is being led by professor SS Roy of the mechanical engineering department and his team and it is being funded by the institute," he added.

The machine runs on electricity and a switch should be pushed to operate it.

Oxygen flow will be regulated through valves.

Three companies of Mangaloo, Murabai and Kolkata have expressed interest to purchase the know-how of the technology of the low-cost oxygen concentrator machine developed by NIT Durgapur, sources said.

During the first wave of Covid in the country, NIT Durgapur scientists have successfully developed the arti-

ficial breathing units-AMBU which automatically pumps oxygen to patients. The machine has been a success even in primary health care.

There has been a tremendous crisis of LMO in the country as the demand has touched the peak due to increase in number of Covid-19 patients.

Almost every day patients are dying due to lack of oxygen both in private and government hospitals. The National Highway Authority (NHAI) has also come forward to set up two oxygen concentrator units in Asansol district hospital and Durgapur sub-divisional hospital. Within 15 days these units will be installed and the area has already been finalised. NHAI project director said.

The Statesman Thu, 13 May 2021  
<https://epaper.thestatesman.com/c/60417622>

## অর্ধেক দামে সম্পূর্ণ দেশীয় প্রযুক্তিতে অক্সিজেন কনসেন্ট্রেটর বানিয়ে ফেলল এনআইটি দুর্গাপুর

সম্পূর্ণ দেশীয় প্রযুক্তিতে অর্ধেক দামে সম্পূর্ণ দেশীয় প্রযুক্তিতে অক্সিজেন কনসেন্ট্রেটর বানিয়ে ফেলল এনআইটি দুর্গাপুর।

এনআইটি দুর্গাপুরের প্রকৌশল বিভাগের অধ্যাপক ড. স.স. রয় এবং তার দলের গবেষকরা অক্সিজেন কনসেন্ট্রেটর তৈরি করেছেন। এই যন্ত্রটি অক্সিজেনের ঘনত্ব বাড়িয়ে দেয় এবং এটি সহজে পরিবহন করা যায়।

এনআইটি দুর্গাপুরের প্রকৌশল বিভাগের অধ্যাপক ড. স.স. রয় এবং তার দলের গবেষকরা অক্সিজেন কনসেন্ট্রেটর তৈরি করেছেন। এই যন্ত্রটি অক্সিজেনের ঘনত্ব বাড়িয়ে দেয় এবং এটি সহজে পরিবহন করা যায়।

### বর্তমান

মঙ্গলবার ২৮ এপ্রিল ২০২০

পুরানো সংস্করণ | শিল্প-বাণিজ্য | শিক্ষা-কোরিয়ার | ভ্রমণ | রাশিফল | বঙ্গভূমি

কলকাতা রাজ্য দেশ বিদেশ উত্তরবঙ্গ দক্ষিণবঙ্গ খেলা বিবেচন শরীর ও স্বাস্থ্য বিজ্ঞান

অন্যদিকে, এনআইটি দুর্গাপুর কিছুদিন আগেই একটি প্রাথমিক ভেন্টিলেটর প্রস্তুত করে চমক দিয়েছিল। এবার অধ্যাপক শিবেন্দু শেখর রায় ও তিন পড়ুয়া ধ্রুবজ্যোতি গুপ্ত, অমিতকুমার বসু ও অনন্যা নাথ মিলে বিশেষ মাাস প্রস্তুত করেছেন। প্রস্তুতকারকদের দাবি, থ্রি-ডি প্রিন্টার টেকনোলজি ব্যবহার করে মুখ ও নাককে ঘিরে রাখবে এমন একটি পলিমারের কাঠামো প্রস্তুত করা হয়। এরপর সেই কাঠামোর ভিতরের দিকে এন ৯৫ মাাসে ব্যবহৃত ফিল্টার বা মেমব্রেন লাগানো হয়। প্রয়োজন হলে সেই মেমব্রেন পাশ্বে দের সেই পলিমারের স্থায়ী কাঠামোতে লাগিয়ে পুনরায় নতুনদের মতো ব্যবহার করা যায়। মাত্র ২৫০ টাকা খরচেই এটি বানানো সম্ভব হয়েছে।

## অব প্রাণায়ম বচাএগা কোরোনা মরীজों की जान

● হোমস্টাফের বস্তুনিষ্ঠ অধ্যয়ন ম কামের সীমিত করে নেওয়া

● অসহন ম কনস্ট্রেটর কমা হওয়া বা যুক্ত, ফরসরী ম কমা ধরবে মীজাজ

কিলাসাম টি, জী বসিমাৰ্গ ক লিফ কাকী হরেকলে হওয়া। জিলা প্রমোজন কমন বিখিন মােসমাৰ্গ নে হরমি বসি থিহাই টি। কিলাসাম হরলমা যালীস প্রাণায়ম কনস্ট্রেটর টীমার কর হই টি। বসি বসিমাৰ্গ, হিলা, মুইর্গ কী কসমিমাৰ্গ সৈ মাাখাণা যল হই টি, জির্গে বহ তরকনী টী জায়েমী। তরকনী করা কি বিবালারোট কে মাাযম সৈ হই সৈ মাাযমজন কা বীকাকর সীকসীসাম হিরা জা হই টি। পাচ সীর্গে প্রি মিনার ফল্ট ম হরমি ১০ ফীর্গে অক্সিজেন মিলমা। থিহাই বসি কসীসাম অর্গ হই বা তর মরীর্গ কে লীর্গা ম পরমাণী হই হই টি। তরমি অক্সিজেন কী মাা হই বই টি। তরমি হিহাই হুয় হরলমাৰ্গ নে হই হিরা ম কদম বদমাযা পূর্গ হরমি নিহিহাই প্রা. অসহন বসু নে হরমা তরমাযা হরমায।

অসহনবীল কী অসহন কসরী কী টেই [www.jagran.com](http://www.jagran.com)

Director of NIT Durgapur Prof. Anupam Basu and Prof. Roy from Department of Mechanical Engineering jointly delivered online lecture on "Low-cost Portable Oxygen Concentrators" on May 11, 2021 on the occasion of National Technology Day at Science City, Kolkata.

Science City, Kolkata cordially invites you on the occasion of

# National Technology Day May 11 2021

Specification of developed oxygen concentrator at NIT Durgapur:  
Oxygen Conc: 93±2%  
Flow rate upto 5 LPM  
Operating temperature: 5-45°C  
Power consumption: 550W

Online popular lecture on "Low-cost portable oxygen concentrators: An alternative medical oxygen source to fight against COVID 19"

Prof. (Dr.) Anupam Basu  
Director, National Institute of Technology Durgapur

Prof. (Dr.) Shibendu Shekhar Roy  
Professor, Department of Mechanical Engineering, NIT Durgapur

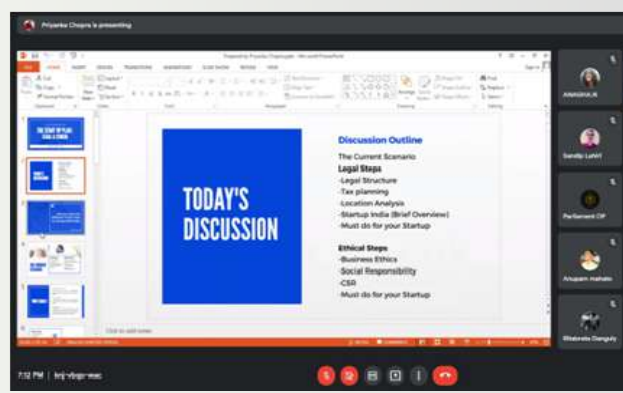
Science City  
National Council of Science Museums,  
Ministry of Culture, Govt. of India



# IIC Activities

The Institute Innovation and Incubation Council (IIC), NIT Durgapur in association with Entrepreneurship Development Cell (EDC) conducted the following events:

- A Logo Design Competition was held during February 2-6, 2021.
- Ms. Deepali Saini delivered a talk on "How to Plan for a Startup, with special reference to Legal and Ethical Steps". The seminar was conducted on February 28, 2021.
- Dr. S. K. Lahiri was invited as a keynote speaker for the session, "INNOVATION - The new ENGINE of the century" on June 25, 2021.
- Ms. Priyanka Chopra delivered a talk on the topic "How to Plan for Startups- Legal and Ethical Steps" and "Knowing IPR's and IP Management" on June 26, 2021.
- Mr. Ankit Tripathi delivered a lecture on the topic "Building an Innovative Product Fit for the Market" in a seminar on June 28, 2021.
- Dr. Shibendu Shekhar Roy delivered a talk on the topic "Prototype/ Process Design and Development: Prototyping", in a seminar conducted on June 30, 2021.

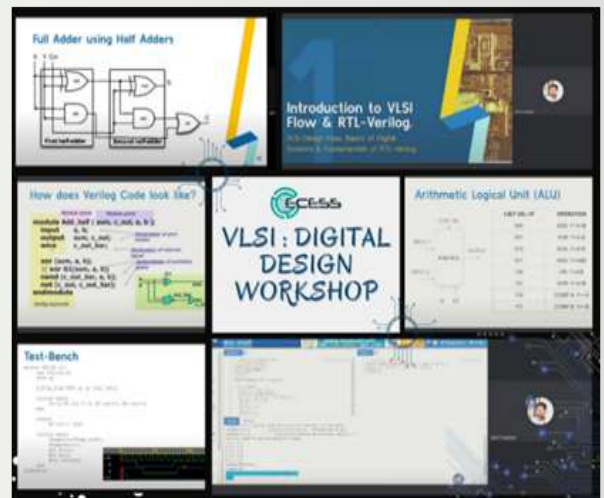




# Society Events

## ● Electronics & Communication Engineering Students' Society

- ECESS organized a webinar on 'Placement Talks' on January 26, 2021. The event focused on the placement scenario of NIT Durgapur, much needed skills and preparation strategy with a greater emphasis on the ECE companies. It was conducted by the Training & Placement Representatives for the Batches 21 and 22.
- A two-day workshop was conducted on March 13 & 14, 2021 on Embedded Systems. Basic concepts of sensors, protocols used in embedded systems like I2C, SPI, UART and their applications, modules like temperature and humidity sensor were explained using Arduino Uno as a micro-controller. The simulation was done on TinkerCad. The final stage followed explanation of the project which is real time weather forecasting and displaying on Nokia display with images.
- A workshop on 'VLSI- Digital Design' was organized on April 10&11, 2021. The workshop focused on the working of Digital systems, what VLSI is and how millions of transistors are put together to make an integrated circuit. It also gave the students idea about RTL Verilog, writing Verilog codes properly and to design Combinational and sequential circuits. The participants were asked to design an Arithmetic Logic Unit (ALU) in an online simulator at the end of the workshop. The workshop was intended to make the students familiar with the concept of VLSI Designs and RTL Verilog.

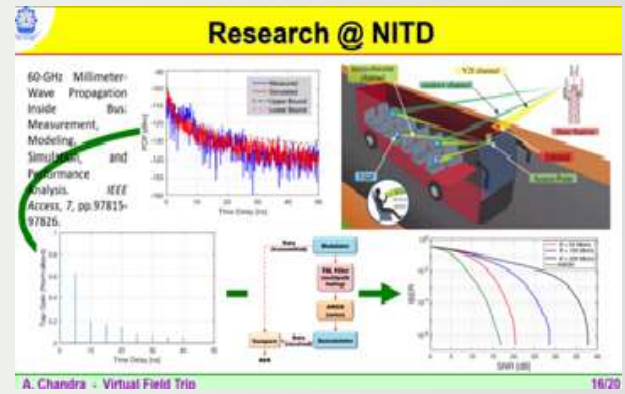


## ● Institute of Electrical and Electronics Engineers Students' Branch

- A Virtual International Field Trip was conducted by IEEE SB NIT Durgapur on March 13, 2021 in collaboration with the University of British Columbia, Canada. The trip served as a platform for highlighting the numerous technological accomplishments of the Institute in the recent years and provided a scope for exchange of scientific ideas between the two institutes.



- A webinar was conducted on the possible career options after B.Tech/B.E. on June 6, 2021. The lecture was delivered by Prof. Baseet Alam, Motivational Speaker and Senior Faculty Member of ACE Engineering Academy, who had secured an All-India Rank of 7 in OPGC (PSU). The webinar discussed the importance of an excellent GATE score for pursuing post-graduate programs at reputed institutes and highlighted the numerous career opportunities that GATE opens up.



- Internship Bootcamp 2.0 was conducted on February 15, 2021 and it witnessed a participation of over 170. The event took place over multiple sessions which involved discussing the numerous internship scopes in reputed institutes across the world, the art of drafting perfect professional mails and basics of writing an SOP, and finally an interactive session where the audience got a chance to learn about the intricacies of these prestigious internships. The talks were delivered by our alumni, some of whom were Prateek Chatterjee, Monsij Biswal, Rohan Choudhury, and Subhayan Akhuli.

- MATLAB Mastery 2.0, a hands-on Webinar on learning and solving problems in MATLAB, was held from April 10-17, 2021.

Webinar on Career Opportunities after B.Tech/ B.E. was held on June 6, 2021.

## ● Indian Society Technical Education Students' Chapter

- BRAIN BLOGGER, March 13, 2021

- ISTE NIT Durgapur organised "BRAIN BLOGGER", one of its kind exciting event having two rounds for the participants. The event was conducted over Facebook page. It was a fun event with pictures all around and cash prize of Rs. 500 and had high participation of over 300 participants. It was held on June 6, 2021.



## ● Society of Automotive Engineers Collegiate Chapter

- QFIESTA, February 6, 2021

- Live Webinar on Current trends and future scope in the field of aeronautics and aerospace in India, April 22, 2021



- The team conducted a BAJA workshop on March 9, 2021, in the context of various departments of vehicle dynamics, namely: Powertrain, Rollcage, Suspension, Steering and Braking to give the students their kick-start in the domain of automobile engineering. In depth discussions were done about the above mentioned fields by the competent team members.



## ● SPIC MACAY NIT Durgapur Chapter

- Rendezvous, January 9, 2021
- Raag Bhairav, January 11, 2021
- Interaction with Vidhushi Suranjana Bose, January 14, 2021
- Abhivyakti, January 15, 2021
- Performance of the mellifluous 'Bihag', January 18, 2021
- Matribhasha Diwas, February 21, 2021
- Odissi dance based on Durga Vandana, April 20, 2021
- Dance performance on the celebrated songs of the world-renowned poet and author Rabindranath Tagore, May 9, 2021
- Performance on the queen of the Mountain Melodies, Raga Pahadi, June 27, 2021
- Anubhav, June 21-27, 2021



# Aarohan: Annual Techno-Management Fest

The 19<sup>th</sup> edition of the Annual Techno-Management Fest of National Institute of Technology Durgapur Aarohan, the second-largest of its kind in Eastern India and also the first ever virtual edition, was organized by Team Aavishkar during April 1-4, 2021. It witnessed more than 50 events, talks from eminent speakers like Vipin Sharma, Captain Raghu, Miss Archie Singh, Virendra Sharma, and many others. Moreover, there were a series of cultural events, Tech Mela, the annual science exhibition, and the WDCT corner showcasing artistic and photographic endeavours.



The 4-day event included workshops, hackathons, musical and dance performances by the Music and Dance clubs respectively and some performances by SPICMACAY.

The fest was held over a virtual platform called Airmeeet. Popular brands like GrabOn, GeeksforGeeks, Prepbytes, Indian Oil Corporation Limited, Work@Tech were the sponsors among others. Comedy nights were organised where comedians Rajat Sood and Devesh Dixit gave a hearty dose of laughter.

Aarohan 2021 proved to be a great culmination and perfect balance of fun events, motivation talks, art and technology. With a massive participation from all disciplines and even from top colleges in India, this edition of the fest was a grand success.





# Club Events

## • Centre for Cognitive Activities

### ■ Core Cell

→ Stock Pro Workshop, March 20, 2021

### ■ E-Cell

→ Youth Parliament, January 24, 2021

→ Entrepedia, June 20, 2021

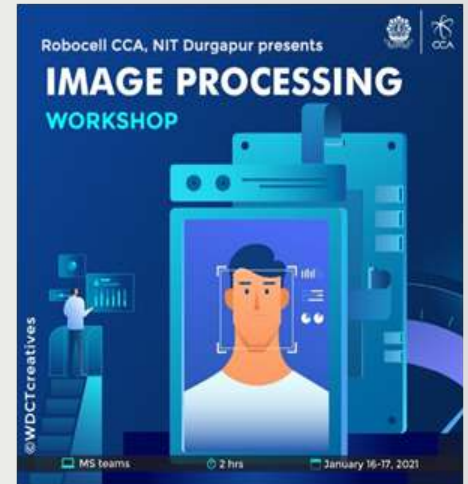
### ■ Research and Development Cell

→ Scale-Up, January 21-28, 2021

### ■ Robo Cell

→ Escaparate

→ Image Processing Workshop, January 16-17, 2021



### ■ Web Design and Creative Team

→ Maidan E Creative, January 26, 2021 – February 2, 2021

→ Trivio, April 16-17, 2021

→ Gaming Tournament, May 29-30, 2021

## • Debating Society

■ Fictionary, February 27-28, 2021

■ The Asian Parliamentary Debate, March 19-21, 2021

■ Take DeBait 3.0, April 24, 2021

## • Entrepreneurship Development Cell

■ Bizcup 3.0, January 16-18, 2021

### ■ E-Summit '21

→ E-talks, April 2-4, 2021

→ Pitchfest

→ Internship Fair

→ Quiz-A-Preneur, March 31- April 2, 2021

→ Rannit-E, April 2, 2021

→ Auction Arcadia, April 3, 2021

→ Corporate Espionage

→ Ring of Rivals

→ Founders Forum





## ● GNU Linux Users' Group

- Open Source Starter Pack, January 14-16, 2021
- Mentorship Program, January 20-22, 2021
- Capture the Flag, February 2-4, 2021
- Junior Code Cracker, February 15, 2021
- GSoC Heat 5.0 BarCamp, February 2, 2021
- Hack.Me, March 13-14, 2021
- Workshop on System Design, May 15-16, 2021



## ● Literary Circle

- MUN Workshop, January 19, 2021
- NITMUN, January 30-31, 2021
- Zodiac, February 5, 2021
- Open Mic, February 19, 2021
- Literati, March 30, 2021
- Convincio, April 3, 2021
- Star Talk, April 8-10, 2021
- Anarchades (Wild Card Event), April 9, 2021
- Déjà vu
- Darkest White

## ● Maths N' Tech Club

- Eventually 3.0, January 13, 2021
- Techorbis 2.0, May 30, 2021





## ● Prakriti Club

- Safarnama, March 14, 2021
- SnapSplash 2.0, March 28, 2021- April 3, 2021



## ● QuizInc

- Erudite, January 23, 2021
- Gone Viral Quiz, February 15-16, 2021
- The Screencast Quiz, March 14, 2021
- Quizzitch Cup '21, March 15, 2021
  - Biztech Quiz, April 9, 2021
  - Chakravyuh, April 9, 2021
  - Nostalgia Quiz, April 9, 2021
  - Sports Quiz, April 10, 2021
  - Mela Quiz, April 10, 2021
- 2IIM – The MBA journey and How to prepare for CAT, April 3, 2021
- Qonversation, April 9-11, 2021
- Financial Planning for Young Professionals, April 17, 2021
- AMUL Tropical Quiz, June 13, 2021
- LA MINIMA, June 20, 2021
- Google Doodle Quiz, June 27, 2021
- The Retro, July 4, 2021



## ● Radio Nitroz

- KHOL-E-DIL, January 9, 2021
- VOICE IT OUT, February 3, 2021
- College KeTashanbaaz Season-6
- RN Podcast, April 1, 2021
- Terribly NITroz Tales



## ● RECursorion

- C++ classes, January 13 – April 10, 2021
- RECode, February 1 – March 22, 2021
- RECap, April 9, 2021
- Ask Me Anything, May 8, 2021
- Alohomora, June 11, 2021



## • Strokes

- Snapshade, March 27 – April 6, 2021
- Kalakriti, April 17-18, 2021
- Lensemble 2.0 April 30, - May 2, 2021
- Chitrakala, June 20-28, 2021



# राष्ट्रीय प्रौद्योगिकी संस्थान दुर्गापुर NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR

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