

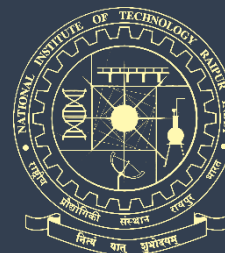


NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

Mirror

VOLUME 3 ISSUE 4

Reflecting the True Spirit of NIT Raipur.



1 January 2021

Director's Message for the New Year 2021



Dear Colleagues and Well-wishers,
At the outset, I extend my heartfelt greetings to everyone for a very happy, healthy, peaceful and prosperous New Year. I wish for your well-being and hope that you welcomed the year 2021 in good spirits with your family and friends.

The advent of the New Year is the best time to rejoice our accomplishments of

the bygone year and to determine the direction in which we want to move ahead for creating a better tomorrow. The year 2020 was an unprecedented year due to the COVID-19 pandemic and we missed the delightful physical presence of our dear students in the campus throughout most of the year. Despite the testing times, the institute administration has remained committed to keep the momentum going on all the fronts while adhering to the safety precautions under the Jan Andolan Campaign. The classes are being engaged online in the New Normal and Digital examinations were conducted for the students. The faculty and students of NIT Raipur also came forward and contributed their expertise in developing various innovative products to track, control and prevent COVID-19.

Looking on the bright side, the year 2020 saw a consistent improvement in our institute's NIRF ranking as NIT Raipur secured the 67th NIRF rank in the Engineering Institutions category. Furthermore, in the ARIIA Ranking 2020 NIT Raipur secured a rank in Band 'A' between 11-25, and also received a 4-Star Performance rating for the second consecutive year for undertaking various activities prescribed by Ministry of Education's Innovation Cell to promote Innovation and Start-up. For the first time, NIT Raipur acted as the Coordinating Institute for the NIT MCA Common Entrance Test (NIMCET) 2020 which was successfully conducted nationwide in online mode by following all the Government's directives and protocols for COVID-19. Working towards achieving our Vision 2020, we

updated the academic scheme and curriculum from session 2019-20 onwards by implementing Choice Based Credit System and Relative Grading Scheme. In order to outline a future roadmap aligned with the aspirational goals of 21st century education, we have already initiated formulation of the Vision 2030 for NIT Raipur in line with the New National Education Policy 2020 by incorporating all relevant aspects and inputs from the concerned stakeholders. Several MoUs were executed in 2020 with Institutions and Industries to strengthen our ties and research collaborations. The student friendly renovated canteen, refurbished estate office and the extended bank premises were inaugurated in the campus. We initiated the practice of organizing HeAL sessions i.e., Health Awareness Lesson sessions in order to ensure the physical and mental well-being of the institute fraternity. NIT Raipur has operationalized the process of recruitment to various vacant faculty and non-faculty positions advertised. Many teaching and non-teaching staff have also been promoted. Not only our students, but our faculty and staff have brought many laurels to the Institute in the fields of innovation, yoga and sports. I take this opportunity to congratulate them for bringing laurels to the Institute and hope that this will continue in the years to come.

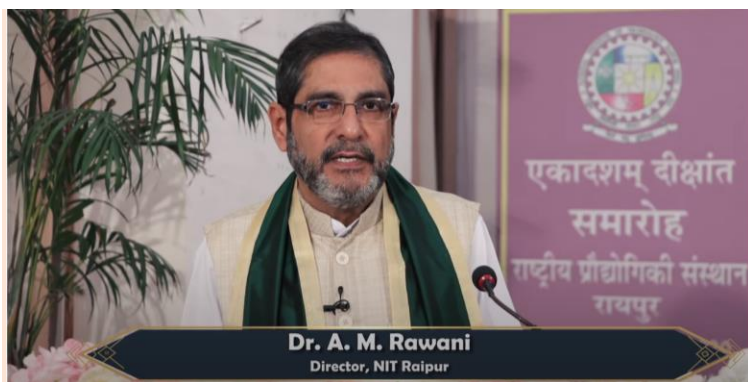
We should not rest on what has been accomplished so far since there are still greater heights to be attained. As we are all set to embrace the New Year, I urge my NIT Raipur family to set common goals and work together with determination to converge all our expertise and make optimum use of the power of technologies for the sustainable development of the Institute and Society at large. The year ahead may bring new challenges but I am confident that we will continue to excel in this journey with your continued support and unified efforts. With the hope to see my dear students back in the campus soon, I once again wish you all happiness, health and success in the New Year 2021.

Institute News

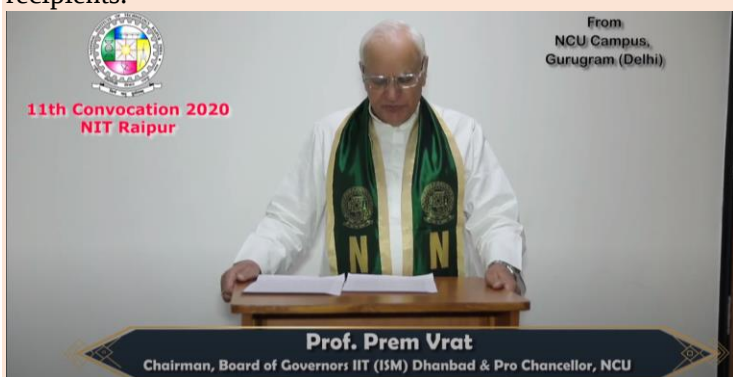
Eleventh Convocation of the Institute

The 11th Convocation of NIT Raipur was held in online mode on 1st Dec., 2020 conferring degrees to all the graduating and post-graduating students. **Professor Prem Vrat**, *Chairman of the Board of Governor, IIT Dhanbad* marked the occasion as the **Chief Guest** of the ceremony. An outstanding academician, **Prof. P. Vrat** has an extensive experience of more than 52 years in teaching, research, management development and consultancy. He is the Pro-Chancellor; Professor of Eminence

and Chief Mentor at The NorthCap University, Gurugram. In the convocation address, **Chief Guest Prof. P. Vrat** complimented the Director of NIT Raipur as well as the esteemed faculty members for transforming the young minds into vibrant engineers, scientists and managers. He addressed the engineers as problem solvers and shared his notion on global employability and the universal values of sincerity, hard work, time management, integrity and teamwork. It was followed by the award of degrees to a total of **1040 students** including **804**



Graduates, 194 Postgraduates and 42 PhDs. A sum of **47 medals** including **24 Gold** and **23 Silver** medals were presented to the meritorious students. The coveted **Institute Gold Medal** for the student with the **highest marks across all Undergraduate** programs was awarded to **Abhishek Dutta**, *Department of Computer Science and Engineering*. The **Acting Chairman** and the **Board of Governors** signed the scrolls of degrees and the **Chairperson Senate**, **Dr. A. M. Rawani**, *Director, NIT Raipur* administered the oath to the degree recipients.



Foundation Day of the Institute

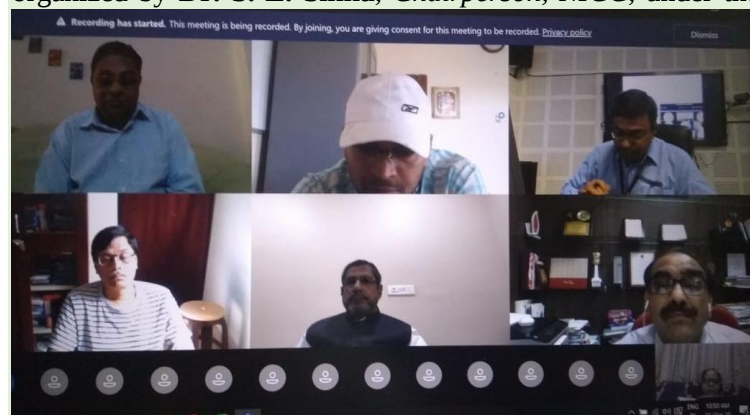
NIT Raipur celebrated its **15th Foundation Day** on 1st Dec., 2020 in Virtual Mode. The event commenced with the welcome of Guests and Dignitaries followed by Virtual Lamp Lighting. The occasion was marked by the presence of Mr. **Harsh Gautam**, *Managing Director, Chhattisgarh State Power Distribution Co. Ltd.* as the **Guest of Honour** and **Dr. Abhay Jere**, *Chief Innovation Officer, Ministry of Education, Govt. of India* as the **Chief Guest**. **Dr. A. M. Rawani**, *Director, NIT Raipur* graced the event and enlighten the audience with his inspirational speech. The esteemed guest **Dr. A. Jere** delivered a memorable motivational speech by emphasizing on how **inspiring NIT Raipur is to other institutes of the country**. This was followed by the Institute award distribution ceremony. The students were bestowed with Prestigious awards The **Best Department Award** was conferred to the **Department of**



Electrical Engineering. The **Best Faculty Award** of the Institute was presented to **Dr. S. Ghosh**, *Associate Professor, Department of Electrical Engineering*. This was followed by a series of cultural events that included the screening of a film Documentary about NIT Raipur, Dance and the concert of Music and Song by Raaga, the Musical Club of NIT Raipur. The event was concluded by a vote of thanks by **Dr. M. Atulkar**, *Registrar, NIT Raipur*.

Industry Institute Conclave (IIC-2020)

A two-day virtual **Industry Institute Conclave (IIC-2020)** was organized by the **National and Industrial Collaboration Cell (NICC)** of the Institute from 31st Oct., to 1st Nov., 2020. The main aim of this conclave was to bridge a gap between the academic Institutions and Industries, and thereby making students industry ready for the future. The conclave was organized by **Dr. S. L. Sinha**, *Chairperson, NICC*, under the



guidance of **Dr. A. M. Rawani**, *Director, NIT Raipur*. Reports were presented on Industry Institute Interaction carried out by all the Departments. Valedictory function was graced by **Dr. R. Moona**, *Director, IIT Bhilai*. In his address, he insisted on how to build startups for the growth of the country.

IIC Ratings

NIT Raipur was awarded a **4-Star Rating** by the **Ministry of Education, MoE's Innovation Cell and Institution's Innovation Council (IIC)**. This rating reflects the efforts undertaken by Innovation Cell of the Institute for various activities prescribed by *Innovation Cell, MoE, Govt. of India* to promote *Innovation and Entrepreneurship* in the campus during the academic year 2019-20.

Perennial Assistance Award

NIT Raipur, Regional Coordinating Institute of UBA was conferred with the highest prestigious-accolade - the **Perennial Assistance Award** and a special **Perennial Fund of Rs.1,75,000** by **Unnat Bharat Abhiyan (UBA) National Coordinating Institute- IIT Delhi**. This award recognizes various efforts undertaken by the Institute for effective delivery of UBA mandate at the National level competitions organized amongst all the participating Institutions of UBA.

Constitution Day

The **Constitution Day** was celebrated on 26th Nov., 2020 at NIT Raipur as per the instructions of the Ministry of Education (MoE), Govt. of India. **Dr. M. Atulkar**, *Registrar, NIT Raipur* read the Preamble of the Constitution to everyone, which was repeated by all the faculty and staff members of the Institute.

National Unity Day

NIT Raipur organized a pledge ceremony to commemorate the "Rashtriya Ekta Diwas (National Unity Day)" for all the faculty and staff members of the Institute on 31st Oct., 2020 through online platforms. **Dr. A. M. Rawani**, Director, NIT Raipur administered the Pledge. The day is celebrated across the nation to mark the birth anniversary of Sardar Vallabhai Patel, Indian freedom fighter and independent India's first deputy prime minister and home minister, who was instrumental in making a united India.

MoUs

MoU with Taylormade Renewables



NIT Raipur signed a **Memorandum of Understanding (MoU)** with **Taylormade Renewables Limited**, Ahmedabad on 1st Nov., 2020. This aims to establish interdisciplinary research and promotion of EC-ULTRA systems, which can be used to develop the wastewater treatment-technologies for effective use of wastewater and the recycling of water for domestic purpose.

MoU with NHAI

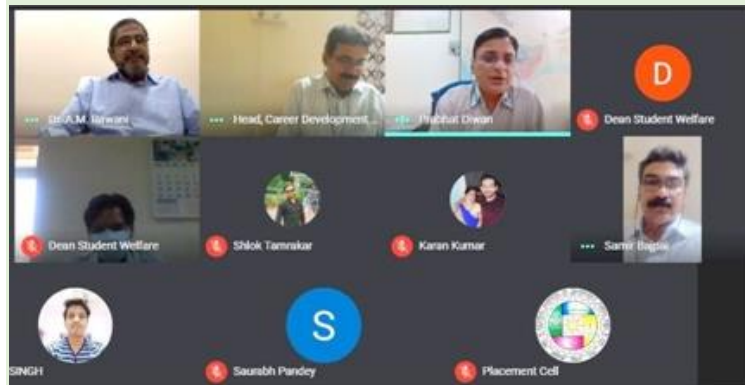
NIT Raipur signed a **Memorandum of Understanding (MoU)** with **National Highway Authority of India (NHAI)** on 1st Nov., 2020. The main objective of MoU is to voluntarily adopt the nearby stretches of National Highways to use them as a field of study for researchers and students through internships to familiarize them with the latest trends of transportation in India. This will also help the Institute to congregate the experience for the advancement of the highway infrastructure. Subsequently, the research outputs that will be obtained by faculty members

and scholars could be implemented and practiced by NHAI, Govt. of India.



FIRE (Free and Informal Right Expression)

Eighth session of FIRE was held online on 8th Oct., 2020 with the agenda 'Academics (Classes, Examination, Placement etc.)'. Various issues related to online class, examination and placement were discussed. Ways to re-opening of the Institute whenever the Government permits and uninterrupted campus placements process, training and internships were also discussed.



Health Awareness Lesson

Under the **HeAL** program of the Institute, a one-day webinar on **Mental Health Issues in Covid 19 Pandemic** was organized on 18th Nov., 2020 under the guidance of **Dr. A. M. Rawani**, Director, NIT Raipur. The session was addressed by **Dr. S. Parial**, MBBS, MD (Psychiatry). 77 students participated in the session. **Dr. A. M. Rawani**, Director, NIT Raipur and **Dr. P. Diwan**, Dean (SW) also discussed about various issues faced by the students and their management.

Academic Activities

STTP/Conference/Workshop conducted

Certificate Training Program

The **Continuing Education Cell (CEC)**, NIT Raipur organized a Ten-day Virtual (Online) Certificate Training Program on AutoCAD for UG and PG students, and other Professionals from 24th Nov., to 3rd Dec., 2020. Many professionals from the Water Resources Department, Govt. of Chhattisgarh have attended the training program. This online 40-hour training course was coordinated by **Dr. I. Ahmad**, Course Coordinator and Facilitator. The certificates of the participants were handed over to **Mr. S.**

P. Mishra, Assistant Nodal Officer, Raipur Training Centre (RTC) which were later on distributed to participants in the presence of **Shri C. P. Jain**, Superintendent Engineer and **Shri P. Pal**, Executive Engineer at RTC, Raipur. The course was completed under the guidance of **Dr. S. Ghosh**, Chairman, CEC, NIT Raipur and **Dr. G. D. Ramtekkar**, Head, Department of Civil Engineering (CE), NIT Raipur.

FDP on Green Technology and Sustainability Engineering

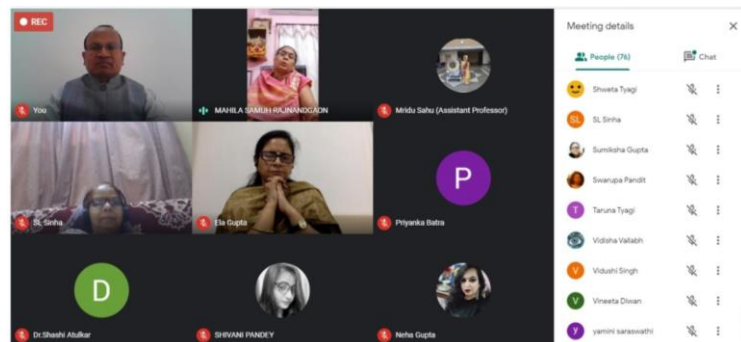


Department of Mechanical Engineering (ME) organized a Faculty Development Program (FDP) on **Green Technology and Sustainability Engineering** from 8th Dec., to 12th Dec., 2020, which was sponsored by The AICTE Training and Learning (ATAL) Academy, New Delhi. It was convened by **Dr. R. Salhotra**, Head, ME and coordinated by **Dr. N. Netam**, and **Dr. V. K. Gaba**, Assistant Professors, ME.

Webinar on Mental Health & Quality of Life of Married Working Women in India

Department of Information Technology (IT) in collaboration with the Department of Humanities and Social Sciences (HSS) organised a one-day webinar on **Mental Health & Quality of Life of Married Working Women in India** on 5th Dec., 2020 via online platforms. The event, which was sponsored by **National Commission of Women, India**, was graced by **Padma Shree P. Yadav**. The list of speakers included: **Mrs. G. Sanyal**, Sub-Editor and News Reader, Doordarshan Chhattisgarh and All India Radio, **Dr. G. R. Sinha**, Professor, MIIT Myanmar, **Ms. N. Y. Mishra**, Civil Judge, Rajnandgaon, **Dr. S. Atulkar**, Deputy Director, Employment, Govt. of Chhattisgarh, **Dr. S. L. Sinha**, Professor, Department of Mechanical Engineering, NIT Raipur, **Dr. I. Gupta**, Professional Psychologist from Raipur, and **Dr. M.**

Sahu, Assistant Professor, IT, NIT Raipur. The event was coordinated by **Dr. M. Sahu** and **Dr. M. Singh**, Assistant Professors, HSS, NIT Raipur. The Chairmen of the webinar were: **Dr. S. P. Sahu**, Head, IT and **Dr. S. Pandey**, Associate Professor, IT. **Ms. S. Mohdiwale**, **Mr. V. Dilliwar** and **Ms P. Batra** were the student coordinators of the Institute.



STTP on Sustainable Energy Systems Design for Remote Villages in India

Department of Electrical Engineering (EE) organised a TEQIP- III Sponsored Online Short-Term Training Program on **Sustainable Energy Systems Design for Remote Villages in India** from 14th Sep., to 18th Sep., 2020 under the Twinning Activity of TEQIP-III between NIT Raipur and VEC Lakhanpur. The STTP was convened by **Dr. R. N. Patel**, Associate Professor, EE and **Dr. N. D. Londhe**, Head, EE. The event was coordinated by **Dr. B. N. Bag**, Assistant Professor, EE and **Prof. S. S. Verma**, VEC Lakhanpur. Lectures were delivered by the eminent speakers from Academia and Industries: **Mr. S. Jain**, Chief Engineer, CREDA Raipur; **Prof. C. S. Solanki**, IIT Bombay; **Mr. P. Singh**, Co-founder & COO, Cygni Energy; **Dr. K. R. Aharwal**, MANIT Bhopal; **Dr. V. Warudkar**, MANIT Bhopal; **Dr. R. Sonkar**, NIT Hamirpur; **Mr. A. Sharma**, CREDA Raipur; **Dr. R. Keshri**, VNIT Nagpur, and **Dr. A. H. Chander**, GVPCEW, Visakhapatnam.

Expert Lectures Delivered by Director, NIT Raipur

- **Dr. A. M. Rawani**, Director, NIT Raipur delivered an invited talk as a Panelist on the topic *Innovation and Entrepreneurship for fostering growth in Higher Education* on 30th Nov., 2020 in the **17th World Education Summit** organized virtually by **Elets Technomedia Pvt. Ltd.**

Expert Lectures Delivered by Institute Faculty/Staff

- **Dr. I. Ahmad**, Assistant Professor, CE delivered an expert lecture on the topic *Basics of Geographic Information System (GIS)* during a national seminar Design & Construction of Small Bridges & Culverts at the Rural Connectivity Training and Research Centre (RCTRC), Atal Nagar, Raipur on 18th Sept., 2020.
- **Dr. R. N. Patel**, Associate professor, EE delivered an expert talk on *Overview of MATLAB*, which was organized by **Govt. Engineering College Raipur** on 20th Sept., 2020.
- **Dr. R. N. Patel**, Associate professor, EE delivered a guest lecture on *National Innovation and Startup Policy 2019 for Students and Faculty members* at **Indian Institute of Information Technology (IIIT) Pune** on 2nd Oct., 2020.
- **Dr. S. Ghosh**, Associate professor, EE delivered an expert lecture during an Online FDP on *Cyber Security in Smart Grid and Data Attack in Smart Grid-Modelling and Simulation* at **CSIT Durg** from 5th to 6th Oct., 2020.
- **Dr. N. V. S. Naidu**, Associate Professor, ME delivered an expert lecture during an AICTE and ATAL sponsored Faculty Development Program on the topic *JIT & Kanban System* at **Christian College of Engineering and Technology, Bhilai, (C.G.)** on 9th Oct., 2020.
- **Dr. L. K. Sahu**, Assistant Professor, EE delivered an expert lecture during Short Term Course on *MIC for Electric Vehicle* at **MANIT Bhopal** from 12th to 16th Oct., 2020.
- **Dr. K. J. Naik**, Assistant Professor, Department of Computer Science and Engineering (CSE) delivered an expert lecture on *Storage Area Networks for Cloud Data Centre* on 17th Oct., 2020 at **GH Raison Institute of Engineering & Technology, Nagpur**.
- **Dr. M. Sahu**, Assistant Professor, IT delivered an expert lecture on *The Role of Deep Learning in Healthcare Applications* at **Rajalakshmi Institute of Technology, Chennai, Tamil Nadu** on 17th Oct., 2020.
- **Dr. S. Ghosh**, Associate professor, EE delivered an expert lecture during one-week AICTE Sponsored STTP on

- Fractional Calculus in System Modelling and Control* at **Vardhaman College of Engineering, Hyderabad** on 27th Oct., 2020.
- **Dr. A. Yadav**, Associate Professor, EE delivered an expert lecture during AICTE sponsored one-week STTP on *Fault Detection and Classification Schemes for Smart Grid System* at **Department of Electrical & Electronics Engineering, Knowledge Institute of Technology, Salem** on 28th Oct., 2020
 - **Dr. N. D. Londhe**, Associate professor, EE delivered an expert lecture during one-week STTP on *Fault Classification in Power System Distribution Network Integrated with Distributed Generators Using CNN* at **LNCT Bhopal** on 2nd Nov., 2020.
 - **Dr. D. Pal**, Assistant Professor, Department of Chemical Engineering (DCE), delivered an expert lecture on *Separation Of Carboxylic Acids Using Reactive Extraction* at **Pondicherry Engineering College, Puducherry** on 3rd Nov., 2020.
 - **Dr. S. Ghosh**, Associate Professor, EE delivered an expert lecture during One Week FDP on *Wide Area Monitoring and Control in Smart Grid* at **Bhilai Institute of Technology, Durg** on 3rd Nov., 2020.
 - **Dr. L. K. Sahu**, Assistant Professor, EE delivered an expert lecture on *Role of Power Electronic for EVs and HEVs* at **Vasireddy Venkatadri Institute of Technology Guntur, Andhra Pradesh** from 2nd to 14th Nov., 2020.
 - **Dr. I. Ahmad**, Assistant Professor, CE delivered an expert lecture titled *GPS, Google Earth Pro uses, Bhuvan portal uses, Remote Sensing and GIS* at **Rural Connectivity Training and Research Centre (RCTRC), Atal Nagar, Raipur** on 18th Nov., 2020.
 - **Dr. L. K. Sahu**, Assistant Professor, EE delivered an expert lecture during an ATAL FDP on *Charging Station Infrastructure and Its Impact on Distribution Grid* at **Aditya Institute of Technology And Management, Andhra Pradesh** from 16th to 20th Nov., 2020.
 - **Dr. I. Ahmad**, Assistant Professor, CE delivered an expert lecture during a national seminar *GIS, GPS, Geo-Tagging, Remote Sensing on GPS, Google Earth Pro Uses, Bhuvan Portal Uses, Remote Sensing and GIS* at the Rural Connectivity Training and Research Centre (RCTRC), Atal Nagar, Raipur on 18th Nov., 2020.
 - **Dr. R. N. Patel**, Associate professor, EE delivered an expert lecture during an Online Short Term course (e-STC) on *DC Microgrid for Remote Electrification in India* at **National Institute of Technology, Hamirpur (H.P.)** on 19th Nov., 2020.
 - **Dr. A. Yadav**, Associate Professor, EE delivered a keynote speech in the National Conference-BITCON 2020 on *FAI-based Fault Diagnosis and Fault Classification in Smart Grid System* at **Department of Electrical and Electronics Engineering, Bhilai Institute of Technology, Durg** on 20th Nov., 2020
 - **Dr. A. Sharaff**, Assistant Professor, CSE delivered an expert lecture at BITCON 2020 on *Information Retrieval* at, **Bhilai Institute of Technology, Durg** on 20th Nov., 2020.
 - **Dr. Y. V. Babu**, Assistant Professor, HSS delivered an invited talk on *The Role of Professional Ethics in Science and Technology Education- An Overview* at **BITCON-2020**, which was organized by the Department of Humanities, Bhilai Institute of Technology, Durg on 20th Nov., 2020.
 - **Dr. N. Gupta**, Assistant Professor, Department of Metallurgy and Materials Engineering delivered an expert lecture in the Research Motivation Workshop/Lecture Series on *Foams and Metal lattices*, which was organized by **IIT BHU** on 22nd Nov., 2020.
 - **Dr. N. D. Londhe**, Associate professor, EE delivered an expert lecture during an STTP on *Medical Image Segmentation and Classification Using Deep Learning* at **G B Pant Institute of Engineering & Technology** on 23rd Nov., 2020.
 - **Dr. M. Sahu**, Assistant Professor, IT delivered an expert lecture on *Implications of Design and Analysis of Algorithms* at **BIT, Raipur** on 23rd Nov., and 25th Nov., 2020.
 - **Dr. L. K. Sahu**, Assistant Professor, EE delivered an expert lecture during AICTE sponsored online STTP on *Power Electronics Converter and Its Control for Electric Vehicle* at **SSBT's College of Engineering and Technology, Jalgaon, Maharashtra** from 23rd to 28th Nov., 2020.
 - **Dr. A. Yadav**, Associate Professor, EE delivered a keynote speech during International Conference on *Sustainability and Equity: Digital Society on Artificial Intelligence Applications in Sustainable Development* at **KIIT University, Bhubaneswar** on 24th Nov., 2020.
 - **Dr. S. L. Sinha**, Professor, ME delivered an expert lecture on *Alternative Fuels in I C Engines* at **Rajeev Gandhi Memorial College of Engineering and Technology, Nandyal, Kurnool, Andhra Pradesh** on 24th Nov., 2020.
 - **Dr. L. K. Sahu**, Assistant Professor, EE delivered an expert lecture during an ATAL FDP on *Mathematical Modeling and Simulation Using Simulink* using MATLAB at **GEC Bilaspur** from 24th to 28th Nov., 2020.
 - **Dr. A. Yadav**, Associate Professor, EE delivered an expert lecture on *Fault Detection and Classification Schemes for Smart Grid System* at **Department of Electrical & Electronics Engineering, Knowledge Institute of Technology, Salem** on 25th Nov., 2020.
 - **Dr. R. N. Patel**, Associate professor, EE delivered an expert lecture during SICTE Training and ATAL FDP on *Fundamentals of MATLAB and Programming in MATLAB* at **Guru Ghasidas Vishwavidyalaya, Bilaspur** on 24th to 26th Nov., 2020.
 - **Dr. A. Yadav**, Associate Professor, EE delivered an expert lecture in the National Conference on Electrical, Electronics, and Computer Engineering (UPCON-2020) on *Application of Wavelet Transform and Its Variants in Protection of Smart Grid* at **Electrical Engineering Department, MNNIT Allahabad, Prayagraj** on 29th Nov., 2020.
 - **Dr. A. Yadav**, Associate Professor, EE delivered an expert lecture during AICTE sponsored STTP on *Application of Artificial Intelligence in Fault Diagnosis of Micro-Grid* at **Electrical & Electronics Department, LNCT GROUP, Bhopal** on 2nd Dec., 2020.
 - **Dr. A. Yadav**, Associate Professor, EE delivered a webinar on *Application of Wavelet Transform & It's Variants in Protection of Transmission Lines* at **Department of Electrical and Electronics Engineering, Govt engineering college Raipur** on 5th Dec., 2020

- **Dr. M. Dasgupta**, Assistant Professor, Department of Computer Applications delivered an expert lecture during an AICTE-ATAL Sponsored Online Faculty Development Program (FDP) on *Attribute-Based Encryption and Its Application in Healthcare Sector* at **NIT, Sikkim** on 5th Dec., 2020.
- **Dr. S. L. Sinha**, Professor, ME delivered an expert lecture during an AICTE Sponsored (Phase III) Online STTP on *Alternative Fuels in I C Engines* at **Rajeev Gandhi Memorial College of Engineering and Technology, Nandyal, Kurnool, AP.** on 7th Dec., 2020.
- **Dr. L. K. Sahu**, Assistant Professor, EE delivered an expert lecture during an ATAL FDP on *Charging Station Infrastructure* at **BIT Durg** from 7th to 11th Dec., 2020.
- **Dr. N. V. S. Naidu**, Associate Professor, ME. delivered an expert lecture during a 2-Week AICTE sponsored STTP on the topic *Nanocomposite materials for Aerospace Applications* in **Marri Laxman Reddy Group of Institutions, Hyderabad** on 9th Dec., 2020.
- **Dr. N. D. Londhe**, Associate professor, EE delivered a series of expert lectures during an ATAL STTP on the topics: *Computer-Aided Psoriasis Disease Classification and Severity Detection, Psoriasis Image Segmentation and Classification Using Deep Learning Approach Using Python, Devanagari Script Input Based P300 Speller System for Brain-Computer Interface and EEG Signal Classification Using Deep Learning Architectures in MATLAB/Python.* The training program was organized by **SSGMCE Shegaon** from 9th to 10th Dec., 2020.
- **Dr. M. Dasgupta**, Assistant Professor, Department of Computer Applications delivered an expert lecture during an AICTE-ATAL FDP on *Attribute-Based Encryption and Its Used case in IoT* at **NIT, Arunachal Pradesh** on 10th Dec., 2020.
- **Dr. M. Biswal**, Assistant Professor, EE delivered an expert lecture during a **GUJCOST Sponsored and DTE/ISTE** approved online STTP on *Power Electronics Application on Distributed Power Generation System* on the topic *Fault Analysis in Renewable Integrated Distribution Network* at **Government Engineering College Bharuch, Gujarat** on 11th Dec., 2020.
- **Dr. S. L. Sinha**, Professor, ME delivered an expert lecture on *Energy Conservation: A New Frontiers* at Expert for Industry & Academia Conclave at **Punjab College of Engineering, Chandigarh** on 12th Dec., 2020.
- **Dr. N. D. Londhe**, Associate professor, EE delivered an expert lecture on *Computer-Aided Psoriasis Disease Classification and Severity Detection* in ATAL FDP on Artificial Intelligence and Its applications in Biomedical Engineering at **RSCOE Pune** on 12th Dec., 2020.
- **Dr. S. L. Sinha**, Professor, ME delivered an expert lecture at the five-day TEQIP Workshop on *Transformation to Online Education* at **IIT Roorkee** on 14th Dec., 2020.

Research Frontier

Awards, Recognition, and Fellowships

- **Dr. A. Kumar**, Assistant Professor, Department of Biotechnology is featured in the prestigious list of **Top 2% Scientists of the World** according to **Stanford University, USA** report published in the international peer-reviewed top-notch journal **PLOS Biology** on 16th Oct., 2020
- **Dr. H. Govil**, Department of Applied Geology, NIT Raipur along with **Dr. P. K. C. Ray, IIRS (ISRO)** and **Dr. S. Kumar, IIRS (ISRO)** have been appointed as **Guest Editors** for a Special Issue (15th Dec., 2020 to 31st May 2020) of **Taylor and Francis journal Geospatial Information Science (ESCI, Open access)**. The title of the Issue is *Advancement in Geospatial Science in Earth Science*.
- **Dr. S. Jain**, Associate professor, EE has been recognized as the **Top 2% of the Indian scientist** declared by World-renowned **Stanford University**.

PhD Thesis Defended

- **Ms. D. Iilhare** defended her PhD thesis titled *(Cd_x-Zn_{1-x})S/CdTe Films for Solar Cell Applications* on 28th Dec., 2020. She worked under the supervision of **Dr. A. Khare**, Associate Professor, Department of Physics.
- **Mr. A. Shukla** defended his PhD thesis titled *Energy Efficient Clustering and Secure Routing Schemes for WSN-Assisted IoT* on 29th Sep., 2020. He worked under the supervision of **Dr. S. Tripathi**, CSE.
- **Mr. A. K. Bharati** defended his PhD thesis titled *Crystal Engineering Approach Towards Design And Synthesis of Coordination Polymers with Metal Ions And Orotic Acid/Multidentate Functionality Ligands: Photo-luminescence, Magnetic Study And Thermogravimetric Analysis* on 5th Oct., 2020. He worked under the supervision of **Dr. K. A. Siddiqui**, Assistant Professor, Department of Chemistry.
- **Mr. P. Bajaj** defended his PhD thesis titled *Study on Vertical Pile, Batter Pile and Pile Groups Subjected to Lateral, Uplift and Combined Loading in Non-cohesive Soil* on 27th Oct., 2020. He worked under the supervision of **Dr. L. Yadu**, Associate Professor, CE and **Dr. S. Chouksey**, Assistant Professor, CE.
- **Ms. P. Nautiyal** defended her PhD thesis titled *Design and Analysis of Improved Superjunction Power MOSFETs with Optimized Parameters* on 28th Oct., 2020. She worked under the supervision of **Dr. S. Verma**, Professor, Department of Electronics & Communication and **Dr. A. Naugarhiya**, Assistant Professor, Department of Electronics & Communication.
- **Ms. V. Verma** defended her PhD thesis titled *Catalytic Treatment of Coke Oven Effluent* on 9th Nov., 2020. She worked under the supervision of **Dr. P. K. Chaudhari**, Associate Professor, DCE.
- **Mr. D. M. Shyamkant** defended his PhD thesis titled *Application of Single Minute Exchange of Die in Service Sector - A Case of Ambulance Response Time* on 18th Nov., 2020. He worked under the supervision of **Dr. A. M. Rawani**, Professor ME and Director, NIT Raipur.
- **Mr. S. R. Ambati** defended his PhD thesis titled *Design and synthesis of novel phenylisothiazoles, coumarinyl- pyrido[2,3-d] pyrimidine-2,4-diones, coumarinyl-pyrazolo[3,4-b]-pyridine-3-carboxylates, pyrazolyl-1,3,4-thiadiazines,*

pyrazolyl-thiazoles and their biological evaluation on 19th Nov., 2020. He worked under the supervision of Dr. S. Penta, Assistant Professor, Department of Chemistry.

- **Mr. S. Gondudey** defended his PhD thesis titled *Biological, Electro chemical and Chemical Treatment of Sugar Industry Wastewater* on 20th Nov., 2020. He worked under the supervision of **Dr. P. K. Chaudhari**, Associate Professor, DCE.
- **Mr. J. Meena** defended his PhD thesis titled *Effective Workflow Scheduling Algorithm for cloud Environment under Qos Constraints* on 20th Nov., 2020. He worked under the supervision of **Dr. M. Vardhan**, Assistant Professor, CSE.
- **Ms. A. Mourya** defended her PhD thesis titled *Chemical sensor for the detection of heavy metal ion in aqueous solution* on 8th Dec., 2020. She worked under the supervision of **Dr. B. Mazumdar**, Associate Professor, DCE and **Dr. S. K. Sinha**, Assistant Professor, Department of Metallurgical and Material Engineering.
- **Ms. A. Paraye** defended her PhD thesis titled *Synthesis of CZTS nanoparticles and films using sonochemical method and*

Funded Projects

- Project titled: **Fight against the corona-virus pandemic using mathematical modelling under bioinformatics and surveillance** by **Dr. A. K. Sinha**, Associate Professor, Department of Mathematics has been sponsored by Chhattisgarh Council of Science and Technology (CCOST) amounting Rs. 1,25,000/-

Students' Corner

- **Ritesh Kumar, Ansh Srivastava, and Shantanu Shukla**, 5th Sem., Department of Mining Engineering won 1st position in **Ideate and Paper presentation at Khanan, IIT (ISM) Dhanbad** from 2nd to 4th Oct., 2020.
- **Abhishek Upadhyay, Ayush Kumar Pandey, and Vivek Kumar Singh**, 5th Sem., Department of Mining Engineering won 3rd position in **Ideate and Paper presentation at Khanan, IIT (ISM) Dhanbad** from 2nd to 4th Oct., 2020.
- **Priyanka Lodhi, Ritesh Kumar, and Shantanu Shukla**, 5th Sem., Department of Mining Engineering won 1st position in **Minnova & Make a solution on burning statement at Khanan, IIT (ISM) Dhanbad** from 2nd to 4th Oct., 2020.
- **Enjam Yasank**, 5th Sem., Department of Mining Engineering won 3rd position in the **Minnova & Make a Solution on Burning Statement at Khanan, IIT (ISM) Dhanbad** from 2nd to 4th Oct., 2020.
- **Priyanka Lodhi, Ritesh Kumar, and Shantanu Shukla**, 5th Sem., Department of Mining Engineering won 3rd position in **Nirvana & Case Study on Underwater Blasting** from 2nd to 4th Oct., 2020.
- **Sakshi Nayak**, 5th Sem., ME secured the 2nd Runner-up position in **Women of Mettle, S4** which was organized by Tata

electrochemical deposition on 11th Dec., 2020. She worked under the supervision of **Dr. S. N. Victoria**, Assistant Professor, DCE.

- **Mr. K. Sowjanya** defended his PhD thesis titled *Issues and Solutions on Data Security and its Applications in Healthcare in the Context of Internet of Things* on 12th Dec., 2020. He worked under the supervision of **Dr. M. Dasgupta**, Assistant Professor, Department of Computer Applications.
- **Mr. T. K. Rajak** defended his PhD thesis titled *A Parametric Study on Stability of Coal Mine Overburden Dump Material Mixed with Industrial by-Products* on 15th Dec., 2020. He worked under the supervision of **Dr. L. K. Yadu**, Associate Professor, CE and **Dr. S. Chouksey**, Assistant Professor, CE.
- **Ms. S. Kumari** defended her PhD thesis titled *Energy-efficient and reliable data gathering Protocol for cloud-based underwater wireless sensor networks* on 17th Dec., 2020. She worked under the supervision of **Dr. P. K. Mishra**, Assistant Professor, IT and **Dr. V. Anand**, Assistant Professor, CSE.

Steel. She was also conferred with a PPO, a scholarship worth Rs. 2 lacs, an Amazon echo dot and women of mettle trophy.

- **Priyanshi Sharma**, 5th Sem., CSE along with **Aditya Chatterjee**, Technical Author and **Dr. Benjamin QoChuk**, CSE, Peking University authored the book title *Problems with AI*, an insightful book focusing on the concept of AI.
- **Aakash Bhatt**, 5th Sem., DCE, **Shashank Sharma**, 5th Sem., EE and **Rashmi Sahu**, 3rd Sem., ME bagged the prestigious OPJEMS 2020 scholarship. The students will receive a medal, a certificate and prize money of Rs. 80,000 for getting selected as one of the scholars for OPJEMS 2020.
- **O. Pramila**, 5th Sem., Department of Mining Engineering won 2nd position in **Technical Presentation at NIT Surathkal** on 1st Nov., 2020.
- **Mr. Rayudu Rahul**, 8th Sem., ME, secured 1st position in the **Innovative Student Projects Award – 2020** which was organised by the **Indian National Academy of Engineering (INAE)** on 22nd Dec., 2020. This award identifies the innovative and creative research projects undertaken by the students in the engineering institutions and thus, provides an early recognition and incentives to them.

Club/Committee Activities

Environmental Awareness

Go Green Club, NIT Raipur took a great initiative to create environmental awareness in the society with the help of fun and interactive events. All the events were conducted under the supervision of **Dr. D. C. Jhariya**, Professor In-charge, Go Green Club. On 22nd Oct., 2020, a fun event titled under **Meme-making Competition** was conducted to spread the powerful message of environment conservation in the form of trendy memes. Another event called **Lockdown Story** was organized on 23rd Oct., 2020, where people shared their experience as well

as their contribution towards nature in the quarantine days. To encourage people to maintain a stress-free and healthy life, an event named **Immunity Fit Treat** was held on 24th Oct., 2020, in which people shared their video clips while performing yoga asanas. On 25th Oct., 2020, an **Online Treasure Hunt** took place in which clues related to eco-friendly surrounding was put forward for all the stakeholders.

iTalk

Innovation and Entrepreneurship Cell resumed the iTalk series of webinars in virtual mode. The first guest was **Mr. Z.**

Kesarani, Founder, SVA Robotics who spoke on the topic *Innovation and Renovation through IoT and Automation* on 27th Sep., 2020. **Mr. C. K. Chaitanya**, Head, M.I.C.E Labs Mumbai an experienced Mentor with a demonstrated history of working in the education management industry, discussed *prototyping and its principles, types and potential* on 11th Oct., 2020. **Mr. S. Thaker**, Founder and CEO Zenith Techware and an alumnus of NIT Raipur, discussed the challenges faced in setting of students startup and how to overcome them.

NSS

Program on Rural Development

Team NSS, NITRR organized a five-day virtual training program on **Rural Development** as directed by Govt. of India from 2nd Dec., to 6th Dec., 2020. The chief guest of the event was **Prof. P. M. Tripathi**, Vice-chancellor, IGNTU and was hosted by **Dr. P. Diwan**, Dean Student Welfare, NIT Raipur, **Dr. G. Bhatt**, Professor In-charge, NSS and **Prof. H. Bikrol**, Professor In-charge, UBA. Various other prominent speakers in the session were **Dr. A. M. Rawani**, Director, NIT Raipur, **Prof. S. S. Pattnaik**, Director NITRR, Chandigarh, **Prof. B. Bhaskar**, Director, IIM Raipur, **S. Tripathi**, Chairman, Lokneeti, **Prof. S. Prasar**, Professor, IIM Raipur, **Mr. A. Singh**, UNICEF, Chhatisgarh, **Shri. V. Das**, Akshay Patra Foundation and **Ms. M. Dubey**, Phd. student NIT Raipur.

Essay Writing and Extempore Competition

On the occasion of Gandhi Jayanti, team NSS conducted **Essay writing** and **Extempore competitions** on 4th Oct., 2020 on the topic “**New Education Policy**”. The event was organised under the guidance of **Dr. G. Bhatt**, Professor In-charge, NSS with **T. R. Behera** and **R. Kabhiraj** as coordinators. **Mr. N. Agrawal** and **Ms. M. Tripathi** were the winners of Essay Writing and Extempore Competition respectively.

Nrityam-The Dance Club

Dance Diaries

Nrityam-The Dance Club, NIT Raipur organized an online event named **Dance Diaries- Flipping through memories** that included 5 live Instagram-talk sessions from 26th Sep., to 10th Oct., 2020. The event was organized by **Dr. M. Singh**, Professor In-charge, Nrityam. In this event, one-to-one conversation with five talented dance performers and distinguished dance shows’ contestants were organized in a duration of 2 weeks.

Alumni Achievement

- The patent of **Mr. M. Verma** (2003: Mechanical engineering) was abundantly accepted by the **US patent office** for his work on “*System and Methods for Identifying and Mitigating Outlier Network Activities*”. His patent system was developed on a graph database with a suite of AI algorithms running in a parallel

Contribution to the Institution

Donate online in "NIT Raipur Donation Fund" (<https://www.eduqfix.com/OnlineForms/nitrdfform/add>). Donations are exempted under 80G of IT Act.

Get Set Garba

Get Set Garba was organized by **Nrityam-The Dance Club** to mark the celebration of Navratri from 14th Oct., to 25th Oct., 2020 under the guidance of **Dr. M. Singh**, Professor-in-charge, Nrityam. The event aimed at engrossing the audience with their Garba fusion moves. The participants were required to recreate a pre-choreographed song, upload and send their video to the club. Awards were given under the categories: *Best Performer*, *Best Dressed Performer* and *Most Energetic Performer*. Winners were **Ms. Yashee Srivastava** for Best dancer, **Ms. Archana Singh** for Most energetic and **Ms Charvy koshta** for Best dress.

Nrityasangam- the Dance Competition

Nrityam, NIT Raipur organised a **classical and semi-classical online-dance competition** under the guidance of **Dr. M. Singh**, Professor-in-charge, Nrityam. The awards were bestowed under 2 categories: the ‘Best Dancer’ and the ‘Most Popular Dancer’ judged by **Mr. A. Tandi**, Choreographer and the renowned classical dancer, on 21st Nov., 2020. **Ms. Ojashvita Rayal** and **Ms. Divya Pothuraju** were the winners of Best Dancer and Most Popular Category respectively.

Fit India Campaign

Fit India Cyclothon-2020

Fit India Cyclothon-2020 was organized under Fit India December Campaign 2020 on 23rd – 24th Dec., 2020. More than 20 participants took part in the event. The event was organized under the guidance of **Dr. P. Diwan**, Dean (SW) and **Mr. S. Pramanik**, Professor Incharge Sports.



Online Yoga Classes

Online Yoga Classes were organised from 18th Nov., 2020 to 24th Dec., 2020 under Fit India Campaign,. More than 25 participants joined the classes regularly. This was to address physical and mental health of the students during the unusual situations of the Pandemic



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