



# **Institute News**

# 76<sup>th</sup> Independence Day Celebration

**NIT Raipur** celebrated the **76<sup>th</sup> Independence Day** in the Institute on 15<sup>th</sup> Aug., 2022 with passionate, dedicated, and patriotic fervour. **Dr. A. M. Rawani,** *Director, NIT Raipur* unfurled the tricolour followed by the National Anthem. In his Independence Day speech, He recalled the various programs organized by NIT Raipur on the auspicious occasion of *Azadi Ka Amrit Mahotsav* such as India freedom run 2.0, Surya namaskar program, and online workshop by the department of Architecture. He explained the five pillars of 'Azadi ka Amrit Mahotsav'. He informed the gathering that Institute has been recognized as the **Green Champion** of Raipur district by the **Mahatma Gandhi National Council of Rural Education** and was also awarded with **Shiksha Samman** by the **Governor of Chhattisgarh**. Director told to all the stakeholders about the



Taskforce which has been constituted for speedy and smooth implementation of the New Education Policy 2020 in the institute. Highlighting the growth in the overall score of the Institute in the National Institutional Ranking Framework Ranking (NIRF) Ranking. He mentioned the 65<sup>th</sup> NIRF Rank of the Institute in the Engineering Category He also deliberated the overall score of the Institute from 210 in 2021 to 215.22 in 2022, which is conferred by the NIRF. He also talked about the Research Scholar Conclave organized by NIT Raipur, in which 225 students participated. He appreciated the social-cultural contributions of the Aashirvad Club, which was formed by the group of women, NIT Raipur. He urged all the members of NIT Raipur to unite and work on a single-point agenda to promote the developmental activities of the Institute. A cultural program was organized by Sanskriti - the Cultural Committee of NIT Raipur. Students from various clubs and committees, like Nritvam - the Dance Club and Raaga - the Music Club, as well as individual performers showcased their cultural skills. The entire event was live-streamed on the Institute's official Social media platforms - YouTube Channel, Facebook Page and Instagram account.

NIRF 2022: 65<sup>th</sup> Rank (Engineering Category)

**NIT Raipur** has secured **65<sup>th</sup>rank** in the Engineering Category in **NIRF 2022** released by the **Ministry of Education**, **Government of India** on 15<sup>th</sup> Jul., 2022. NIT Raipur also stands **15<sup>th</sup>** among the **31 NITs** in India. NIT Raipur has been constantly improving its score in the Engineering category by achieving 37.38 in 2018, 39.09 in 2019, 41.58 in 2020, 44.83 in 2021, and 45.71 in 2022 for NIRF Ranking. NIT Raipur continues to soar under the adept guidance of **Dr. A. M. Rawani**, *Director*, *NIT Raipur*. Faculty members, students, staff, and alumni of the Institute have been working persistently to enhance and achieve the vision and mission of the Institute at the national level.

## **NIT Raipur organizes Prabhat Pheries**

NIT Raipur celebrated Azadi ka Amrit Mahotsav and Har Ghar Tiranga by organizing *Prabhat Pheries*, which consisted of a series of events to spread awareness about 75 years of India's Independence, between 11<sup>th</sup> to 15<sup>th</sup> Aug., 2022. Students of various clubs and committees participated in the event under the guidance of **Dr. P. Y. Dhekne**, *Dean (Student Welfare) and* **Dr N. Jain**, *Associate Dean (Student Welfare)*. The event was coordinated by **Dr. G. Bhat**, *Professor Incharge NSS*, **Dr. R. Doria**, *Professor In-charge*, Sports and **Dr. S. Penta**, *Professor In-charge*, *NCC*. Abhinay- The Dramatics Club performed a street play under the guidance of **Dr. G. Bhatt**, *Professor In-charge*, *Abhinay*.



**Commencement of Master of Science (M.Sc.) NIT Raipur** has commenced the offering of a two-year postgraduate program, **Master of Science (M.Sc.)** in the **Department of Physics, Department of Chemistry and Department of Mathematics** from the academic session 2022-23. Students from various parts of the country have joined the esteemed program this year. The academic activities of the M. Sc. programs began from 18<sup>th</sup> Aug., 2022.

# MoU

## **NIT Raipur and AIIMS Raipur**

**NIT Raipur** and **AIIMS Raipur** signed an MoU on 09<sup>th</sup> Sep., 2022, for the advancement of healthcare, science & engineering by conducting joint research programs, joint certification courses and short/long-term training programs for students, faculty, and industry professionals. **Dr. A. M. Rawani**, *Director*, *NIT Raipur* and **Dr. N. M. Nagarkar**, *Director & C.E.O. AIIMS Raipur* signed the documents. **Dr. P. Diwan**, *Dean* (*R&C*), **Dr. B. K. Singh**, *Head*, *Biomedical Engineering* and **Mr. P. Kataria**, *Assistant Registrar* from NIT Raipur and Dean Academics, Dean Examination, Registrar and DDA from AIIMS Raipur were present on this gracious occasion.



#### Akhil Bhartiya Shiksha Samagam 2022

The Education Summit "Akhil Bhartiya Shiksha Samagam" was organized by the Ministry of Education in association with the University Grants Commission (UGC) and Banaras Hindu University (BHU) from 07<sup>th</sup> to 09<sup>th</sup> Jul., 2022. The event was streamed online at NIT Raipur with active participation from students and faculty members.

# **Event on Contribution of Tribal Communities in the Freedom Struggle**



NIT Raipur organized an event under the aegis of the National Commission for Scheduled Tribes (NCST) on 9<sup>th</sup> Sep., 2022 to honour the unsung heroes of the tribal community, as a part of our country's Azadi Ka Amrit Mahotsav celebrations. Dr. A. M. Rawani, Director, NIT Raipur was the president of this event. The Chief Guest was Mr. B. S. L. Thakur, IAS and Former Chairman, Chhattisgarh Public Service Commission. Keynote speakers were Shri L. R. S. Markam, Deputy Secretary, Chief Minister's Office, Government of Madhya Pradesh and Shri R. **Shankar**, *Speaker*, *NCST*. The event was coordinated by **Dr**. **M. Murmu**, *Assistant Professor*, *Civil Engineering*. To commemorate the event, an exhibition of the unsung heroes of the tribal community was also installed in the Institute.

## Har Ghar Tiranga Campaign

**NIT Raipur** celebrated a campaign **Har Ghar Tiranga** under the aegis of **Azadi Ka Amrit Mahotsav** launched by the Government of India and encouraged the faculty, staff, and students to hoist the National Flag of India in their homes from 13<sup>th</sup> to 15<sup>th</sup> Aug., 2022, as an effort to encourage the sense of patriotism and commemorate the tireless contributions of our nation builders and freedom fighters.

#### Yoga Camp

**Department of Humanities and Social Science (DHSS)** organized a *yoga camp* for NIT faculties, staff, and their family members under the guidance of **Dr. P. Y. Dhekne**, *Dean Student's Welfare* on 17<sup>th</sup> Aug., 2022. **Dr. M. Shukla**, *Faculty of Yoga*, *DHSS* coordinated the event.

# **Cleanliness and Sustainability Promotion Concludes at NIT Raipur**

The Promotion of Cleanliness and Sustainability drive was jointly organised by Mahatma Gandhi National Council of Rural Education (MGNCRE) and the Department of Higher Education, Ministry of Education, Government of India. The drive ended at NIT Raipur on 29th Jul., 2022. The works that were being done in cleanliness-related activities like greenery, plantation, solar energy, sanitation, drainage system, rainwater harvesting, water recycling and treatment, and land waste management were shared during the event. Dr. A. Khan, Registrar, NIT Raipur, Dr. D. C. Jhariya, Assistant Professor, Department of Applied Geology (DAG), Dr. M. K. Verma, Assistant Professor, Civil Engineering (CE), Dr. M. Sahu, Assistant Professor, Information Technology (IT), Dr. **K. Siddiqui,** Assistant Professor, Department of Chemistry (DOC) and several other professors and students were also present during the event.



#### **Study Materials Distribution drive**

Aashirwaad- the Ladies' Club, NIT Raipur distributed study materials to the talented students at the Government Higher Secondary School, Lalpur, Raipur on 6<sup>th</sup> Aug., 2022. Mrs. Mumtaz Rawani (Wife of Dr. A. M. Rawani, *Director*, *NIT Raipur*), Mrs. Jaishree Dhekne (Wife of Dr. P. Y. Dhekne, *Dean, Student Welfare*), Mrs. Vineeta Ramtekkar(Wife of Dr. G. Ramtekkar, *Professor*, *CE*), Mrs. Ritu Jain (Wife of Dr. N. K. Jain, *Associate Professor*, *ME*, Dr. D. C. Jhariya, Assistant Professor, DAG, Dr. M. Singh, Assistant Professor, DHSS, and N. K. Sahu, Software Engineer, were conducted and coordinated the drive.



# Seminar on Rights of Women with Disabilities: Challenges, Opportunities and Way Forward

**Department of Humanities and Social Sciences** and the **Department of Information Technology, NIT Raipur**, organized a two-day seminar on **Rights of Women with Disabilities: Challenges, Opportunities and Way Forward on 17<sup>th</sup> and 18<sup>th</sup> Sep., 2022.** The seminar was sponsored by the **National Commission for Women (NCW), New Delhi. Dr. A. M. Rawani,** *Director, NIT Raipur* was the Chief Patron for the event. **Hon'ble Smt. Anila Bhendia,** *Cabinet Minister, Women & Child Development, and Social Welfare Department,* Government of Chhattisgarh graced the event as the Chief Guest. **Ms. S. Dhand,** *National Award Winner:* **Academic Activities** 

# STTP/Conference/Workshop conducted National Conference on Urban Invention



**Department of Architecture (DOA)** organized a two-day National Conference on Urban Invention: Environmental, Social and Economic, on 2<sup>nd</sup> Aug., 2022 in virtual mode. **Dr. A. M. Rawani**, Director, NIT Raipur was the chief patron of the event. **Dr. P. Diwan**, Dean (Research and Consultancy) and **Dr. S. Sthapak**, Head, DOA were the co-patrons of this event while the chairman was **Dr. A. Bandyopadhyay**, Professor, DOA. Secretaries for the event were **Dr. V. Agrawal** and **Mrs. K. B. Sharma**, Assistant Professors, DOA. Keynote speakers were **Dr. S. K. Paul**, Associate Professor, Department of Architecture and Regional Planning, IIT Kharagpur and **Prof. Dr. S. Valson**, Former Principal, Datta Meghe College, Nagpur.

Empowerment of Persons with Disabilities, was the Inaugural Chief Guest. Shri C. Sahu, the Former National Basketball Player, was present as the Valedictory Chief Guest. The Guests of Honour were Mrs. M. Rawani, Social Worker, Mrs. Gopa Sanyal, Social Worker, Ms. P. Sharma, Social Worker, Mr. R. Tiwari, Deputy Secretary, Department of Social Welfare (C.G.), and Dr. R. Choudhary, Professor, PRSU Raipur. The Speakers were Dr. L. K. Singh, Doctor, AIIMS Raipur, Mr. P. Verma, Joint Director, Department of Social Welfare, Govt of Chhattisgarh, Dr. D. K. Shrivastava, Associate Professor, HNLU Raipur, and Mrs. Girija, Social Worker. Dr. M. Sahu, Assistant Professor, IT, and Dr. M. Singh, Assistant Professor, DHSS were the coordinators of the event. Dr. U. K. Dewangan, Head, DHSS and Dr. R. Tripathi, Head, IT were the convenors of the event.



# FDP on Geo-environment and Geotransportation Engineering

Department of Civil Engineering (CE) in association with the Indian Geotechnical Society (IGS) Raipur Chapter and Shri Shankaracharya Institute of Professional Management and Technology, Raipur organized a five-day online Faculty Development Program (FDP) on Geo-Environment and Geo-transportation Engineering from 27th Jun. to 1<sup>st</sup> Jul., 2022. The FDP was mainly for Engineers, Faculty members, Ph.D./ M. Tech Scholars, and B. Tech Students. Dr. A. M. Rawani, Director, NIT Raipur was the Chief Patron. Dr. P. Diwan, Dean (Research & Consultancy), and Dr. S. Bajpai, Chairman, IGS Raipur Chapter were the Patrons. Prof. D Choudhary, Head, Civil Engineering, IIT Bombay was the Chief Guest of the event. Prof. N. K. Samadhiya, IGS President and Professor (HAG), Civil Engineering, IIT Roorkee and Prof. (Retd.) D. G. Tamaskar, Immediate Past Chairman, IGS Raipur Chapter were the Guests of Honour of the event. Dr. G. Ramtekkar, Head, CE and Dr. M. Pradhan, Professor, Department of Mining Engineering (DME) were the convenors of the FDP. Dr. L. Yadu, Honorary Secretary, IGS Raipur Chapter and Dr. T. Rajak, Head, CE, SSIPMT Raipur were the co-coordinators of the program.

## **FDP on Blockchain in Smart Cities**

**Department of Computer Science and Engineering (CSE)** in collaboration with the **Department of Information Technology (IT)** conducted a Faculty Development Program on *Blockchain in Smart City: Emerging Technologies for the Next Decade and Beyond* sponsored by **AICTE Training and Learning (ATAL) Academy, New Delhi** from 19<sup>th</sup> to 30<sup>th</sup> Sep., 2022 in hybrid mode. **Dr. A. M. Rawani**, *Director, NIT Raipur* was the Chief Patron for the event while **Dr. P. Diwan**, *Dean (Research & Consultancy) NIT Raipur* served as the Patron. **Dr. R. Tripathi**, *Head, IT* and **Dr. D. S. Sisodia**, *Head, CSE* were the convenors. The program was coordinated by **Dr. S. Pandey**, *Associate Professor, IT* and **Dr. P. Chandrakar**, *Assistant Professor, CSE*.



#### STTP on Aesthetics of Scientific Writing

**Department of Computer Science and Engineering (CSE)** organized a Short Term Training Program (STTP) on *Aesthetics of Scientific Writing using LaTeX* in virtual mode from 4<sup>th</sup> to 8<sup>th</sup> Jul., 2022 under the guidance of **Dr. J. K. Rout**, and **Dr. A. Sharaff**, *Assistant Professors, CSE*. **Dr. A. M. Rawani**, *Director*, *NIT Raipur* acted as the Patron. **Dr. S. Ghosh**, *Chairman, Continuing Education Cell (CEC)*, *NIT Raipur* served as the Chief Guest while **Dr. N. K. Nagwani**, *Associate Dean (Academics)*, and **Dr. D. S. Sisodia**, *Head*, *CSE* served as the Guests of Honour.

## **Tech4SevaWorkshop**

NIT Raipur conducted a one-day workshop, Tech4Seva under the flag-ship program Unnat Bharat Abhiyan Initiative (UBA) of the Government of India on 22<sup>nd</sup> Jul., 2022 in a hybrid mode. This event was sponsored by National Coordinating Institute (NCI) IIT Delhi. The Chief Patron for the event was Dr. A. M. Rawani, Director, NIT Raipur. Dr. S. Bhowmik, Assistant Professor, ME, NIT Silchar. Dr. S. Pandey, RCI Coordinator, UBA, Dr. M. K. Verma, Program Coordinator, Dr. Jagadish, and Dr. V. Agrawal, Organizing Secretaries were the organiser of the event.

# Certificate Course on Communicative English for Engineering/ Science Graduates

**Continuing Education Cell (CEC), NIT Raipur** offered a certificate course on *Communicative English for Engineering/* Science Graduates as a part of its Finishing School initiative from 19<sup>th</sup> Sep. to 9<sup>th</sup> Nov., 2022. The course coordinators of the program are **Dr. S. Singh,** Assistant Professor, DHSS and **Dr. S. Ghosh,** Chairman, CEC, NIT Raipur.

## Session on Higher education in the US

**Career Development Center (CDC), NIT Raipur** organized a session on **Higher Studies in the U.S.** on 3<sup>rd</sup> Aug., 2022. The keynote speaker was **Dr. D. Rosario**, *Education USA Advisor*, *USIEF Mumbai*. The event was organized under the guidance of **Dr. S. Bajpai**, *Head*, *CDC* and **Dr. M. Chopkar**, *Professor In-chagre*, *Training and Placement Office (TPO)*.

# Training Program on Energy Simulation for Energy Conservation Building Code



**NIT Raipur** organized a two-day Training Program on *Energy Simulation for Energy Conservation Building Code (ECBC)*, in collaboration with **ECBC Cell CREDA, Raipur** from 9<sup>th</sup> to 10<sup>th</sup> Sep., 2022. The event was coordinated by **Mr. M. Tenguriya**, *Nodal Officer, ECBC & ENS NIT Raipur*. The objective of the training program was to bring awareness of energy conservation in building sectors and to perform simulations for building energy.

# Workshop on Carbon Footprint and its Reduction

**Department of Electrical Engineering (EE), NIT Raipur** in association with **R10 IEEE Industry Academia Engagement, IRC Chapter of IEEE Madhya Pradesh Section** and **Medicaps University,** Indore organized a workshop on *Carbon Footprint and its Reduction* on 20<sup>th</sup> Aug., 2022. **Dr. M. Biswal,** *Assistant Professor, EE* was the coordinator of this event.

#### **Expert Lecture on Water Management**

**Department of Architecture (DOA)** organized the expert Lecture on the topic *Water Management with Special Reference to Rainwater Harvesting* on 24<sup>th</sup> Aug., 2022. The distinguished speaker for the session was **Dr. R. P. Dewangan,** *Technical Head, Water Resources Management Cell, Govt. of Chhattisgarh.* The event was organized by **Dr. S. Sthapak,** *Head, DOA.* 



# **Expert Lectures Delivered by Director, NIT Raipur**

- •Dr. A. M. Rawani, Director, NIT Raipur delivered an invited talk as a Speaker on the topic Building Sustainability through Education at the 11<sup>th</sup> World Education Congress and Global Awards Ceremony held on 7<sup>th</sup> Jul., 2022 at Mumbai.
- •Dr. A. M. Rawani, Director, NIT Raipur participated as a Panellist in Panel discussion on the topic Industry-Academia Collaboration: Identifying the next milestone at the 4th Global Education & Skill Conclave organized by APAC News Network on 15th Jul., 2022 at New Delhi.
- Dr. A. M. Rawani, Director, NIT Raipur participated as a Panellist in Panel discussion on the topic Imagining Higher Education enabled by Technology at the 2<sup>nd</sup> Higher Education Innovation and Technology Summit held on 27<sup>th</sup> Aug., 2022 at New Delhi.

# **Expert Lectures Delivered by Institute Faculty/Staff**

• Dr. P. Chandrakar, Assistant Professor, • Dr. M. Sahu, Assistant Professor, IT CSE delivered an expert lecture on Information Management & Data Security in Cloud during a one-week Short-Term Training Program on Recent Trends in Cloud Computing and its Security organized by the **Department of** • **Dr. S. Agrawal**, *Professor*, *DP* delivered **Computer Engineering, RamraoAdik** Institute of Technology (RAIT), Navi Mumbai on 4<sup>th</sup> Jul., 2022.

- delivered a Guest Talk on the topic Career Guidance: Artificial Intelligence the Tarunotsav Programme in conducted by the Kendriya Vidyalaya No-2, Raipur on 12<sup>th</sup> Jul., 2022.
- expert lecture on *Electrical* an Conduction & Behaviour of Apatites during the International Conference on

**Physics and its Applications** organized by the United Scientific Group, San Francisco, California on 18th Jul., 2022.

• Dr. L. K. Sahu, Assistant Professor, EE delivered an expert lecture on Recent Trends and Advancements in EV and Charging Station organized by NIRM University, Ahmedabad on 8th Sep., 2022.

# **Research Frontier**

# Awards Received by the Director, NIT Raipur

- Dr. A. M. Rawani, Director, NIT Raipur was conferred with the Education Leadership Award at the 11<sup>th</sup> World Education Congress and Global Awards Ceremony held on 7th Jul., 2022 at Mumbai.
- Dr. A. M. Rawani, Director, NIT Raipur was conferred with the Exemplary Leadership Award by APAC News Network at the 4<sup>th</sup> Global Education & Skill Conclave held on 14<sup>th</sup> Jul., 2022 at New Delhi.
- Dr. A. M. Rawani, Director, NIT Raipur was conferred with the Director of the Year 2022 Award by Universal Mentors Association at the 2<sup>nd</sup> Higher Education Innovation and Technology Summit held on 27<sup>th</sup> Aug., 2022 at New Delhi.
- Dr. A. M. Rawani, Director, NIT Raipur was conferred with the Shiksha Ratna Award 2022 by Reverie Language Technologies under the aegis of Higher Education Conclave held on 27<sup>th</sup> Aug., 2022 at New Delhi.

## Awards, Recognition, and Fellowships

- Dr. M. Sahu, Assistant Professor, IT has been awarded the Best Researcher Award in the International Eminent Awards on Engineering, Science and Medicine INSO 2022.
- Dr. L. K. Sahu, Assistant Professor, EE has received International Travel Grant from Science and Engineering Research Board, New Delhi to attend the 48<sup>th</sup> IEEE Conference of Industrial Electronics Society (IECON) 2022 which will be held in Brussels, Belgium from 17<sup>th</sup> to 20<sup>th</sup> Oct., 2022.
- Dr. M. Sahu, Assistant Professor, IT was invited by Bhilai Institute of Technology, Durgas an Expert/Judge/Jury Member to mentor and evaluate the projects developed by the teams for 5 major domains under the AICTE - Ministry of Education's Innovation Cell (Student Innovation Category) during Smart India Hackathon 2022 (Hardware Edition).
- Dr. L. K. Sahu, Assistant Professor, EE has acted as Mentor and Jury for the Finale of Smart India Hackathon Hardware Edition organized by Innovation Cell, Ministry of Education, Government of India.
- Dr. L. K. Sahu, Assistant Professor, EE acted as Coordinator, Technical Programming Committee (TPC) and Session Chairs for the IEEE Region 10 Symposium 2022 (TENSYMP 2022) organized at IIT Bombay during 1st to 3rd Jul., 2022.
- Dr. A. Khare, Associate Professor, DOP, chaired the technical session of the Virtual National Seminar on Advanced Materials and Characterizations (NSAMC-2022) organised by Government Nagarjuna Post Graduate College of Science, **Raipur** from 26<sup>th</sup> to 27<sup>th</sup> Aug., 2022.

#### **Patents**

- Dr. L. K. Sahu, Assistant Professor, EE, NIT Raipur, and Dr. H. C. Allamsetty, Assistant Professor, EE, NIT Puducherry filed a patent titled Modular Multiple Input Multiple Output DC-DC Converter on 7th Jun., 2022, which was granted by IPO, New Delhi.
- Dr. L. K. Sahu, Assistant Professor, EE, NIT Raipur, and Dr. H. C. Allamsetty, Assistant Professor, EE, NIT Puducherry filed a patent titled Multiple Input Hybrid Converter for AC/DC Fed Smart Home on 13th Jun., 2022, which was granted by the Indian Patent Office (IPO), New Delhi.

## **Research Projects**

- The project titled *Development of Functionally Graded Nano Composite Foam for Armor Application* by **Dr. N. Gupta**, *Assistant Professor, MME* has been sanctioned by the **Science & Engineering Research Board (SERB)**, **Department of Science and Technology, Government of India** Rs. 23,32,000/-.
- The project titled *Development of CoCrFeNiMn High Entropy Alloys by Additive Manufacturing Assisted Metal Injection Molding* by **Dr. N. Gupta**, *Assistant Professor, MME* has been sanctioned by the **Institution of Engineers, Government of India** Rs. 32,000/-. The project has been awarded to **Saurabh Pandey**, 7<sup>th</sup>Sem.,MME under the supervision of **Dr. N. Gupta**, *Assistant Professor, MME*.
- The project titled *Development of Redox Nanomaterials Based Point-of-Care Nanofibrous Device for Infectious Mucormycosis Black Fungus Rapid Detection and Capturing* by **Dr. C. Mahapatra**, *Assistant Professor*, *Department of Biotechnology (DBT)* has been sanctioned by the **Science and Engineering Research Board (SERB)**, **Department of Science and Technology**, **Government of India** Rs. 30,00,712 for a period of 24 months.

#### **PhD Thesis Defended**

- Ms. Sharda Gupta defended her Ph.D. thesis titled *In-vitro and In-vivo Study of Tussar Silk Based Engineered 3D Scaffold for Tissue Engineering Applications* on 20<sup>th</sup> May, 2022 under the supervision of **Dr. A. Bit**, *Assistant Professor, BME*.
- Mr. M. Gobinath defended his Ph.D. thesis titled Groundwater Modelling Studies for Sustainable Development and Management of Groundwater Resources in and Around Bemetara Block, Chhattisgarh, India on 16<sup>th</sup> Jun., 2022 under the supervision of Dr. D. C. Jhariya, Assistant Professor, DAG and Dr. P. Ram, Senior Scientist, Science and Engineering Research Board, GOI.
- Ms. Abhilasha Chaudhuri defended her Ph.D. thesis titled Towards the Design and Development of Meta-heuristic Feature Selection Techniques for Classification of High Dimensional Data on 20<sup>th</sup> Jun., 2022 under the supervision of **Dr. T. P. Sahu**, Assistant Professor, IT.
- Mr. Vaibhav Shekhar defended his Ph.D. thesis titled On Convergence Theory of Iterative MetHeads Based on Matrix Splittings and Generalized Inverses on 22<sup>nd</sup> Jun., 2022 under the supervision of Dr. D. Mishra, Assistant Professor, DOM
- Ms. Barsa Priyadarsini Sarangi defended her Ph.D. thesis titled Mathematical Perspective of Ecological Systems: Analysis and Application on 24<sup>th</sup> Jun., 2022 under the supervision of Dr. S. N. Raw, Assistant Professor, DOM.
- Mr. Nishant Joshi defended his Ph.D. thesis titled *Recovery of Phenolic Acids Using Reactive Extraction* on 8<sup>th</sup> Jul., 2022 under the supervision of Dr. A. Keshav, *Assistant Professor, Department of Chemical Engineering (DCE)* and Dr. A. K. Poonia, *Associate Professor, DCE.*
- Mr. Prateek Modi defended his Ph.D. thesis titled *Innovation* Management in SMEs: A Study in Context of Chhattisgarh State on 20<sup>th</sup> Jul., 2022 under the supervision of Dr. A. M. Rawani, Director, NIT Raipur.
- Ms. Poonam Sahu defended her Ph.D. thesis titled *Parametric* Analysis and Formulation of Statistical Model for Sinkhole Subsidence in Underground Coal Mining on 22<sup>nd</sup> Jul., 2022 under the supervision of **Dr. M. Pradhan**, *Professor*, *Mining Engineering*.
- Mr. Radhakrushna Sahoo defended his Ph.D. thesis titled *Wavelet* Aspects of Algebraic Structures on 25<sup>th</sup> Jul., 2022 under the supervision of Dr. A. K. Sinha, Associate Professor, DOM.
- Ms. Nupur Kesharwani defended her Ph.D. thesis titled A Study on Anaerobic Digestion of Food Waste on 29<sup>th</sup> Jul., 2022 under the supervision of Dr. S. Bajpai, Professor, CE.

- Mr. Srikumar Panda defended his Ph.D. thesis titled On Some Generalized Integral Transforms and Its Applications on 29<sup>th</sup> Jul., 2022 under the supervision of Dr. A. K. Sinha, Associate Professor, DOM.
- Mr. Sunil Pandey defended his Ph.D. thesis titled Parallel and Scalable Deep Learning Algorithms for High Performance Computing Architectures on 5<sup>th</sup> Aug., 2022 under the supervision of Dr. N. K. Nagwani, Associate Professor, CSE and Dr. S. Verma, Professor, ECE.
- Mr. Vinayak defended his Ph.D. thesis titled Synthesis and Characterization of Carbon Nanoparticles and their Interaction with Biomolecules and Toxicants on 11<sup>th</sup> Aug., 2022 under the supervision of **Dr. Mrs. F. Khan,** Professor, DOC.
- Mr. Pradeep Kumar Dewangan defended his Ph.D. thesis titled Synthesis and Functionalization of Graphene Quantum Dots for Determination of Heavy Metals and Biomolecules on 12<sup>th</sup> Aug., 2022 under the supervision of Dr. F. Khan, Professor, DOC, and Dr. K. K. Shrivas, Associate Professor, DOC, Pt. Ravishankar Shukla University, Raipur.
- Mr. Ankush Kerketta defended his Ph.D. thesis titled Synthesis of Biomolecular-Clay Nanocomposites for Biomedical Applications on 13<sup>th</sup> Aug., 2022 under the supervision of Dr. D. Vasanth, Assistant Professor, DBT.
- Mr. Deepak Patel defended his Ph.D. thesis titled *Designing and* Manufacturing of Mechanical Force Convection Direct Chill (MFC-DC) Caster for the Synthesis of Self-Lubricating Al-Sn Bearing Alloy on 18<sup>th</sup> Aug., 2022 under the supervision of Dr. S. Das, Assistant Professor, MME.
- Mr. Tej Bahadur Chandra defended his Ph.D. thesis titled Computer-Aided Disease Detection Techniques in Chest-Radiograph Images Using Machine Learning Paradigms on 23<sup>rd</sup> Aug., 2022 under the supervision of Dr. B. K. Singh, Assistant Professor, BME.
- Mr. Nirmal Chandra Rout defended his Ph.D. thesis titled Numerical Radius Inequalities of Operators and Tensors on 26<sup>th</sup> Aug., 2022 under the supervision of Dr. D. Mishra, Assistant Professor, DOM.
- Mr. Pravin Kumar defended his Ph.D. thesis titled Aspect Based Sentiment Analysis and its Extension to Code-Mixed Language and Hindi Language on 26<sup>th</sup> Aug., 2022 under the supervision of Dr. M. Vardhan, Assistant Professor, CSE.
- Mr. Raj Kumar Sahu defended his Ph.D. thesis titled Forecasting of Solar Power Generation Using Optimally Tuned Extreme

Learning Machine on 30<sup>th</sup> Aug., 2022 under the supervision of **Dr.** B. Shaw, Assistant Professor, EE.

- Mr. Saurabh Agrawal defended his Ph.D. thesis titled Predicting Continuously Evolving Unknown Protein Functions Using Sequence Induced Features and Automated Learning Techniques on 2<sup>nd</sup> Sep., 2022 under the supervision of Dr. S. Sisodia, Assistant Professor, CSE and Dr. N. K. Nagwani, Associate Professor, CSE.
- Ms. Anjali Devi Athanerey defended her Ph.D. thesis titled Role of Adult Autologous Mesenchymal Stem Cell in Chronic Non-Healing

# Students' Corner

- Jayashri Mahapatro, Ph.D. Scholar, Department of Physics (DOP) was awarded the Best Paper Award for her Research Paper titled Electrical and Dielectric Properties of Rare Earth Activated M-Type Barium Hexaferrite Prepared by Solution Combustion MetHead under the guidance of Dr. S. Agrawal, Professor, DOP at the National Seminar on Advanced Materials and Characterizations 2022 (NSAMC) on 27th Aug., 2022. Moreover, she also secured third position in Oral Presentation of her Research Paper.
- •Sahil Silare, 7<sup>th</sup> Sem., CSE, Product Developer Intern at Adobe, got a chance to interact with Mr. Shantanu Narayen, CEO, Adobe on 11th Jul., 2022. Sahil was one of 8 students who got selected out of more than 200 interns who had applied for the interview.

Ulcer on 9<sup>th</sup> Sep., 2022 under the supervision of Dr. A. Kumar, Assistant Professor, DBT and Dr. P. K. Patra, Professor, Medical College, Durg.

- Mr. Saurabh Kumar Gupta defended his Ph.D. thesis titled Fluorometric and Spectrophotometric Determination of Surfactants and Toxicants in Environmental and Biological Samples on 5th Aug., 2022 under the supervision of Dr. K. Tapadia, Assistant Professor, DOC.
- Akhil Soni, 7th Sem., CSE, Yash Bansal, 7th Sem., CSE and Ayushman Satpathy, 7<sup>th</sup> Sem., IT got selected as ET Campus Stars, 2022, which is India's biggest hunt for bright engineering students.
- •Team Iconic from NIT Raipur consisting of Rashmi Sahu, 7<sup>th</sup> Sem., ME, **Priyanshu Agarwal,** 7<sup>th</sup> Sem., ME, AshwinSudhir Umale, 7th Sem., ME, and Aman Sukhdev, 7th Sem., MEhavefinished as runners-up at the NEI Idea Factory Season 7 organized by NBC Bearings. The topic of Team Iconic was Graphene as an additive in lubricant and set up its supply chain business. The team will be awarded Rs. 1,00,000, some exciting goodies and pre-placement interview opportunities.

# Club/Committee Activities

#### Swachhata Pakhwada 2022

Ek Bharat Shreshtha Bharat (EBSB) Cell, NIT Raipur organized various competitions and lectures on the occasion of Swachhata Pakhwada 2022 between 1<sup>st</sup> and 15<sup>th</sup> Sep., 2022. The aim of the event was to spread awareness about the importance of cleanliness and waste management. Various events were conducted including a lecture on Solid Waste Management by Mr. M. Tenguriya, Assistant Professor, DOA, and essay writing, slogan and poster-making competition



were organised in the program. Dr. A. M. Rawani, Director, NIT Raipur, Dr. A. Khan, Registrar, Dr. S. Verma, Dean, Academics, Dr. P. Y. Dhekne, Dean, Student Welfare, Dr. N. Jain, Associate Dean, Student Welfare, and Dr. S. Agrawal, Nodal Officer, EBSB, NIT Raipur delighted the event with their presence. These events were coordinated by Dr. S. Agrawal, Nodal Officer, Ek Bharat Shreshtha Bharat, NIT Raipur, Dr. M. Singh, Dr. D. Sharma, and Mr. M. Tenguriya, Faculties In-charges, EBSB Cell.

#### **Cybercrime Awareness Program**

Team NSS, and Abhinay – The Dramatics Club, collaborated with Chhattisgarh Police, Telibandha Police Station for a cybercrime awareness programSuno Raipur from 15<sup>th</sup> to 21<sup>st</sup> Aug., 2022. The event was organized under the guidance of Dr. G. Bhatt, Faculty In-charge, Abhinay and NSS. The campaign aimed at organizing awareness drives at Indira Gandhi Krishi Vishwavidyalaya,Indira Gandhi Dugdha Vishwavidyalaya, Swami Pranavnand School VIP Road, Energy Park VIP Road, Marine Drive Telibandha, Magneto Mall and 36-Mall.



Workshop on Entrepreneurship Innovation



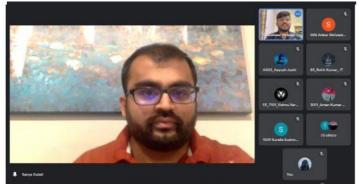


E-Cell organized a workshop on Entrepreneurship and

Innovation as Career Opportunity on 27<sup>th</sup> Jun., 2022 under the guidance of **Dr. C. Thakur**, *Professor In-charge, E-Cell*. The speakers for the event were **Mr. S. Thaker**, *Tech Consultant*, *ALPACA*, *Co-Founder*, *Zenithec Techware* and **Mr. V. Pathak**, *SDE-2*, *Disney+ Hotstar*, *SIH 2019 Winner*, *Co-founder*, and CTO ZenithecTechware.

## I-Talk on 'Career in Data Science'

**Innovation Cell (I-Cell)** in collaboration with **Entrepreneurship Cell (E-Cell)** organized an I -Talk session on **Innovative start-ups with data analysis and AI** on 11<sup>th</sup> Jul., 2022 in a hybrid mode. The event was organised and guided by **Dr. S. Gupta**, *Professor In-charge*, *I-Cell*. The orator of the event was **Mr. Ankit Sinmoraya**, *ML* 



*Engineering Manager, Amazon.* The session was about a career in data science and brought the research fraternity together in the field of Innovative Startups to share their recent investigations and discuss the advances and future directions of these evolving areas.

## **Session on Backend Web Technologies**

**E-Cell, NIT Raipur** in collaboration with **Google Developer Group (GDG) Raipur** organized an event with hands-on sessions, teaching various backend technology stacks such as Node.js, Firebase, and Django on 14<sup>th</sup> Aug., 2022. **Dr. A. M. Rawani**, *Director*, *NIT Raipur* was the chief guest for the event. The event was organized under the guidance of **Dr. C. Thakur**, *Professor In-charge*, *E-Cell*. The speakers for the event were tech professionals working in various start-ups and MNCs worldwide.

#### **Interactive Session on Figma and Lottie**



Entrepreneurship Cell (E-Cell) in collaboration with Lottie and Figma, Raipur organized an event with hands-on sessions, teaching various technology stacks on 21<sup>st</sup> Aug., 2022. The event was organized under the guidance of Dr. C. Thakur, *Professor In-charge*, *E-Cell*. The speakers were Miss. Soumya Choubey, *Independent Product Designer*, Mr. **Vedankur Gupta**, *Community Manager*, *Lottie files* and **Mr. Vaibhav Agrawal**, *Facilitator*.

# Motivational Session by Successful Entrepreneur



Entrepreneurship Cell (E-Cell), NIT Raipur in collaboration with Institution's Innovation Council, an initiative of Ministry of Education (MoE) conducted a motivational session under their event series called *My Story* on 10<sup>th</sup> Sep., 2022. The event was organized under the guidance of Dr. C. Thakur, *Professor In-charge, E-Cell.* Mr. Harsh Agrawal, *Founder, PrintMine* was the Guest of Honour and keynote speaker for the event.

# Infant Care and Maternal Health Awareness Competition



Unnat Bharat Abhiyan (UBA), NIT Raipur in collaboration with Sahyog- The Mentorship Club organized an Infant Care and Maternal Health Awareness Competition from 20<sup>th</sup> to 21<sup>st</sup> Aug., 2022. The event was organized under the guidance of Dr. M. Sahu, Assistant Professor, IT, Dr. S. Pandey, Regional Coordinator, UBA and Dr. R. K. Jade, Professor In-charge, Sahyog.

## **Perennial Fund Activities by UBA**

Unnat Bharat Abhiyan (UBA), NIT Raipur organized various events under its Perennial Fund Activities. Educational Toy Distribution Campaign for Anganwadi children at Nardaha village and Pacheda village, Raipur on 27<sup>th</sup> Aug., 2022. The Campaign was coordinated by Dr. R. Jade, Associate Professor, DME and Dr. A. K. Tiwari, Assistant Professor, DHSS. The event Medicinal Plant Cultivation Processing Training and Seeds Distribution on 27<sup>th</sup> Aug., 2022 at Nardaha village and Pacheda village, Raipur. Dr. V. Agrawal, Member RCI organized this activity. Dr. S. Pandey, Regional Coordinator, UBA, Mr. H. Bikrol, Coordinator, UBA Cell NIT Raipur, Ms. S. S. Nagdeve,

Assistant Professor, DOA, Mr. K. Maurya, Faculty, DOA and Mr. S. Kotwani, Project Assistant, UBA were also present.



A Free Medical Health Campaign on 3<sup>rd</sup>Sep., 2022 at Nardaha village was organised by UBA, NIT Raipur, Raipur. Dr. S. Sonkar, *Medical Officer*, *NIT Raipur* and Dr. S. Gajbhiye, *Medical Officer*, *Indian Railways* were invited to provide their medical expertise to villagers and spread awareness. The event was coordinated by Dr. Jagadish, *Member RCI*.



Plastic Waste Awareness Campaign and Fabric Bag Distribution at Nardaha on 3<sup>rd</sup> Sep., 2022. This event was coordinated by Dr. M. K. Verma, *Member RCI*. Dr. S. Pandey, *Regional Coordinator*, UBA, Mr. H. Bikrol, *Coordinator*, UBA Cell NIT Raipur, and Mr. S. Kotwani, *Project Assistant, UBA* were also present on the day.

# Awareness Campaign on Infant Care Activities



Sahyog- The Mentorship Club, NIT Raipur in collaboration withUnnat Bharat Abhiyan (UBA) organised an awareness campaign on Infant Care Activities on 23<sup>rd</sup> Aug., 2022 in Nardaha village, Raipur. Dr. M. Sahu, Assistant Professor, IT acted as the Event Coordinator. Dr. S. Pandey, Regional Coordinator, UBA, Dr. R. Jade, Associate Professor, DME, Dr. D. C. Jhariya, Assistant Professor, DAG, Mr. H. Bikrol, Coordinator, UBA Cell, NIT Raipur, Ms. P. Verma, *Community Health Officer, Nardaha* and **Mr. N. Verma**, *Sarpanch, Nardaha* actively participated in the campaign. **Aviation Club Inauguration** 



**NIT Raipur** inaugurated the **Aviation Club** on 7<sup>th</sup> Sep., 2022 to develop a group of aero designers who can contribute to the Indian aerospace industry. **Dr. Y. D. Dwivedi**, *Associate Professor, Institute of Aeronautical Engineering, Hyderabad,* **Mr. V. S. Adithya,** *SAE Int'l Participant,* **Dr. S. Bajpai,** *Head, CDC,* **Dr. S. Sanyal,** *Head, ME,* **Dr. S. Bhowmick,** *Associate Professor, ME* and **Dr. N. V. S. Naidu,** *Faculty Incharge* were present as chief guests.

# **Go Green** Plantation Drive Conducted



Go Green Club in collaboration with the Horticulture Committee conducted a plantation drive as a part of Azadi Ka Amrit Mahotsav from 15<sup>th</sup> to 22<sup>nd</sup> Aug., 2022. Dr. A. M. Rawani, Director, NIT Raipur inaugurated the drive. The plantation drive was organized under the guidance of Dr. D. C. Jhariya, Professor In-charge, Go Green Club. Dr. P. Y. Dhekne, Dean, Student Welfare, Dr. S. Sanyal, Professor, ME, Dr. G. Ramtekkar, Professor, CE, Dr. M. Atulkar, Associate Professor, Computer Applications (MCA), Dr. N. K. Jain, Associate Professor, ME, Dr. B. K. Singh, Assistant Professor, BME, Dr. M. Sahu, Assistant Professor, IT and Dr. S. Penta, Assistant Professor, DOC, also participated in the drive.

# **Idol-Making Competition Organized**

Go Green Club, NIT Raipur organized Green Ganesha, an eco-friendly idol-making competition as a part of the Ganesh Chaturthi celebrations on 11<sup>th</sup> Sep., 2022. The event was organized under the guidance of Dr. D. C. Jhariya, *Professor In-Charge, Go Green.* Yogendra Kumar Sahu secured 1<sup>st</sup> position, Ranjit Singh Bhatiand Kashish Dewani secured 2<sup>nd</sup>position and Divya Prakash secured 3<sup>rd</sup> position respectively in the College Category. Kailash and Priyanshu Dewan (Group) secured 1<sup>st</sup> position, Nikita Sahani and Sadhana Sahu secured 2<sup>nd</sup>position, and Anshika Dewangan secured 3<sup>rd</sup> position respectively in the school category.



## Hindi Pakhwada 2022

**Rajbhasha Samiti, NIT Raipur** organized **Awahan**, a series of events on the occasion of **Hindi Pakhwada** from 8<sup>th</sup> to 14<sup>th</sup> Sep., 2022. It was conducted under the guidance of **Dr. S. M. Saini**, *Professor In-charge, Rajbhasha Samiti*,. The objective of the event was to spread awareness about the Hindi language. Various enlivening events such as **Nukkad Natak**, **Kavita Lekhan**, **Shruti Lekhan**, **Pitthul** and **Musical chair** were conducted, which drew many participations in the student category. The winners received exciting prizes. The event was a great success and a fun learning experience for the students to improve their command over the Hindi language.

## **National Sports Day**



Shaurya - the Sports Committee of NIT Raipur celebrated National Sports Day to commemorate the birth anniversary of Major Dhyan Chand on 29<sup>th</sup> Aug., 2022. A keynote speech session was organised to highlight the importance of sports in daily life and how it helps in fitness and rejuvenation. Dr. P. Y. Dhekne, *Dean (Student Welfare)* addressed everyone emphasizing the importance of sports. Dr. S. Verma, *Dean* (*Academics*) was present as chief guest of the programme. The event was organised under the guidance of Dr. R. Doriya, *Faculty In-charge, Shaurya and Nodal Officer, Fit India Movement*.

#### **Interact Club**

**Interact- The Quiz Club of NIT Raipur** hosted the **"Engineer's Day Quiz"** on 14<sup>th</sup> and 15<sup>th</sup> Sep., 2022 to celebrate **Engineer's Day**. The event was organised under the guidance of **Dr. A. Khare**, *Professor In-charge, Interact Club*. The quiz's primary goal was to encourage competitive quizzing culture among students and to celebrate Engineer's Day with

amusement, trivia, and recollections of legendary engineers. More than 100 students participated in the preliminary round held on 14<sup>th</sup> Sep., 2022 out of which only the top 6 teams made it into the finale held on 15<sup>th</sup> Sep., 2022.



## **Engineer's Day Celebration**

**Electrical Engineering Association (EEA)**, *Department of Electrical Engineering (EE)* organized **Engineer's Day** celebration on 15<sup>th</sup> Sep., 2022 under the guidance of **Dr. N. D. Londhe**, *Head*, *EE*, **Dr. V. Sonti** and **Dr. H. Priya**, *Faculty Coordinators, EEA*. A formal inaugural of EEA Magazine **E-SPARK** was done in the event.

## **Plantation Drive Conducted by NSS**



National Service Scheme (NSS) conducted a plantation drive on 17<sup>th</sup> Sep., 2022 at Dr. A. P. J. Abdul Kalam Hall, NIT Raipur under the guidance of Dr. G. Bhatt, *Professor In-Charge*, NSS. The main theme of the program was *Plant A Tree*, Save Million Breaths. The chief guest of the event was Dr. V. K. Pandey, *Chairman*, *Institution of Engineers India* (*IEI*), Dean, Agriculture University. Dr. P. Y. Dhekne, Dean (Student Welfare), NIT Raipur and Mr. P. Upadhyay, Head, Engineer's Association served as the guests of honour.

# **Teacher's Day Celebration**

**Electrical Engineering Association (EEA)**, *Department of Electrical Engineering* organised **Teachers' Day** celebration on 5<sup>th</sup> Sep., 2022 under the guidance of **Dr. N. D. Londhe**, *Head, EE*, **Dr. V. Sonti** and **Dr. H. Priya**, *Faculty Coordinators, EEA*. The students showcased their creativity through various modes of activities like singing, dance, and instrumental music and expressed their token of respect for the faculties.

Association of Students of Architecture of Raipur (ASAR), Department of Architecture organised Teachers' Day celebration on 5<sup>th</sup> Sep., 2022 under the guidance of Dr. S. Sthapak, *Head*, *DOA* and Ms. K. B. Sharma, *Professor Incharge ASAR*.

**Department of Physics** celebrated Teacher's Day on 5<sup>th</sup> Sep., 2022 to express their gratitude towards their faculty. The celebration was led by the Ph.D. scholars of the department. In

the same event, the newly joined M.Sc. (Physics) students were also welcomed and given a brief orientation about the department. The event was organised under the guidance of **Dr. S. Agrawal**, *Head*, *DOP*.

# Alumni Achievement

•Dr. Shailendra Gade, (Mech/1985) has been appointed as Director General, Armament & Combat Engineering System (DG ACE), at Defence Research & Development Organization (DRDO).

# Contribution to the Institution

## Appeal

Ever since its establishment in 1956, the institute has been serving and maintaining steady progress to achieve a unique feat in the highly competitive area of engineering and technology. To focus on cutting-edge multidisciplinary and frontier areas of engineering and technology as well as innovation-based research, a strong and continuous financial support from alumni, faculty members, students and all well-wishers is the need of the hour. All the stakeholders of the Institute have a major role in building a corpus fund to support various teaching and research infrastructures, and other allied facilities for the welfare of students. NIT Raipur appeals to all alumni, faculty members, students and well-wishers for their contribution to the NIT Raipur Donation Fund. **The financial donation is exempted under section 80G (5) (vi) of the Income Tax, 1961 Vide IT Order Number ITBA/EXM/S/80G/2019-20/1015830613(1) dated 29/04/2019.** 

## How to Contribute:

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