



NEWSLETTER

BY  Media & Branding Cell

Volume 3 | Issue 1

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PROF. RAJIV SHEKHAR
DIRECTOR, IIT(ISM) DHANBAD

FROM THE DIRECTOR'S DESK

Tough times have passed, and I assure you that IIT (ISM) Dhanbad has stood the test of time and come out triumphant. We were at the forefront of fighting the pandemic at all levels. My colleagues, officers, staff, and alumni all contributed significantly to the zeal with which we battled COVID-19's second wave. They deserve a 'big' thanks. The Institute welcomed our research scholars and final year M.Tech students on Sept 1, while our final year undergraduate students returned on Sept 20, 2021. We successfully hosted the Student Gymkhana elections electronically, a commendable feat indeed. I am optimistic that the Institute will be fully operational shortly, albeit in phases, since that the students have received their vaccine shots.

I am pleased to report that IIT (ISM) ranked 11th in the Engineering, narrowly missing out on 10th place, while we stood 26th in the Overall Rankings and 30th in the Management Category. The Institute's performance in the NIRF Rankings 2021 was the result of our collective efforts and aspiration to take it to new heights and I'd want to take the opportunity to congratulate all the stakeholders for it. We have placed a strong emphasis on developing new products and processes in R&D, which is a critical requirement. This strategy has yielded positive results in a number of initiatives. This issue of our Newsletter has captured some of the research stories. In a recent survey conducted by Stanford University and published by Elsevier, 28 of our academics have been ranked among the top 2% of scientists. Next, the initiatives taken by NVCTI & TexMin are commendable, soon it will fructify. I congratulate NVCTI for successfully conducting the AVISHKAR: Jharkhand School Innovation Challenge 2021.

Our students have performed admirably in international competitions. The Newsletter contains further information about numerous competitions and student accomplishments and also features the academic and research practices of the Dept. of Electronics Engineering and covers a startup story of one of our cherished graduates.

The Institute lost Mr. P. K. Lahiri, former Chairperson, Executive Board of ISM, Prof. S. N. Mukherjee, former Director of ISM, and our alumni, Dr. Ramashish Rai (1983 - M.Tech), Mr. Naresh Prasad Singh (1970 - AGPH), and Mr. Jitendra Bahadur Singh (1962-P.Tech); IIT(ISM) condoles with their families for these irreparable losses. May their spirits find eternal rest!!

The progress of IIT(ISM) Dhanbad on all fronts has been impressive in the past year despite the unforeseen difficulties faced due to the current pandemic. I want to acknowledge the devoted efforts of the faculty, students, and administration of the Institute towards these goals. Tough times call for tough measures - Destitutus ventis, remos adhibe!

FROM THE EDITOR'S DESK

Dear Readers:

We are pleased to present the latest issue of IIT(ISM)'s Quarterly Newsletter. This issue includes all that's new at IIT(ISM), from research to awards and accolades of our students, professors, and alumni. We appreciate the contributions of our faculty members and alumni to this issue of the Newsletter, and look forward to your continued support in future issues. For the most up-to-date information, visit our website, Facebook, LinkedIn, Instagram, and Twitter profiles. Stay Safe & Take Care!!

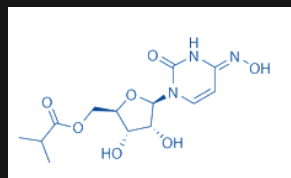
Research Stories



NEW PROCESS FOR ANTI COVID-19 DRUG MOLNUPIRAVIR

The research team led by **Prof. Somnath Yadav**, Dept. of Chemistry has developed a short synthesis of the drug Molnupiravir that relies on several innovations related to IP generation and a more robust bulk drug synthetic process.

These involve techniques like one-pot reactions and novel sulphur derived intermediate that can be made at a substantially lower cost than the previous routes. Also, the whole process from raw materials to the final active pharmaceutical ingredient (API) can be completed in a shorter time, ensuring faster drug production. This route provides the drug an overall 62% yield and >99% purity. It uses low-cost and readily available bulk chemicals, thereby providing an affordable drug synthesis for cheaper and wider global accessibility.



MOLNUPIRAVIR

Molnupiravir (EIDD-2801/MK-4482) is an investigational, orally bioavailable form of a potent ribonucleoside analog for treating patients with COVID-19.

RESEARCH TEAM



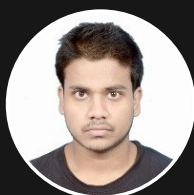
Prof. Somnath Yadav
P. I.



Prof. Partha Sarathi Das
Co-P. I.



Dr. Raghunath Dey
Post Doc Fellow



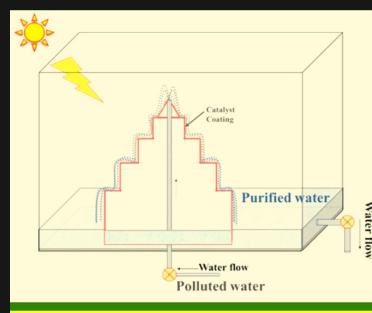
Mr. Sourav Nayak
PhD Scholar

28 Professors from IIT (ISM) made it into the top 2% of scientists in a recent survey conducted by Stanford University and published by Elsevier (Elsevier's Database, 2021).

[Click Here](#)



SOLAR-POWERED WATER FILTRATION SYSTEM THROUGH NANOTECHNOLOGY



RESEARCH TEAM



Prof. Saravanan P



Mr. A. Kaila



Prof. D. Bahnemann



Prof. C. Wang

The Environmental Nanotechnology Research team at the Dept. of Environmental Science & Engineering, IIT (ISM) led by Prof. Saravanan P is involved in developing advanced and emerging nano-materials for solar powered water filtration process. The team is working on an IMPRINT project funded by SERB that intends to provide a cheap solar-powered water filtration system to people in urban and rural areas. The research team has developed advanced nanomaterials that can gather solar energy and purify water effectively.

A unique hybridised nanomaterial containing silver vanadate (AgVO_3) and bismuth oxy chloride (BiOCl), as well as a silver nanoparticle, has been developed and tested for solar water purification. These pollutants are classified as Endocrine Disturbors, which are substances that disrupt the human hormone system.

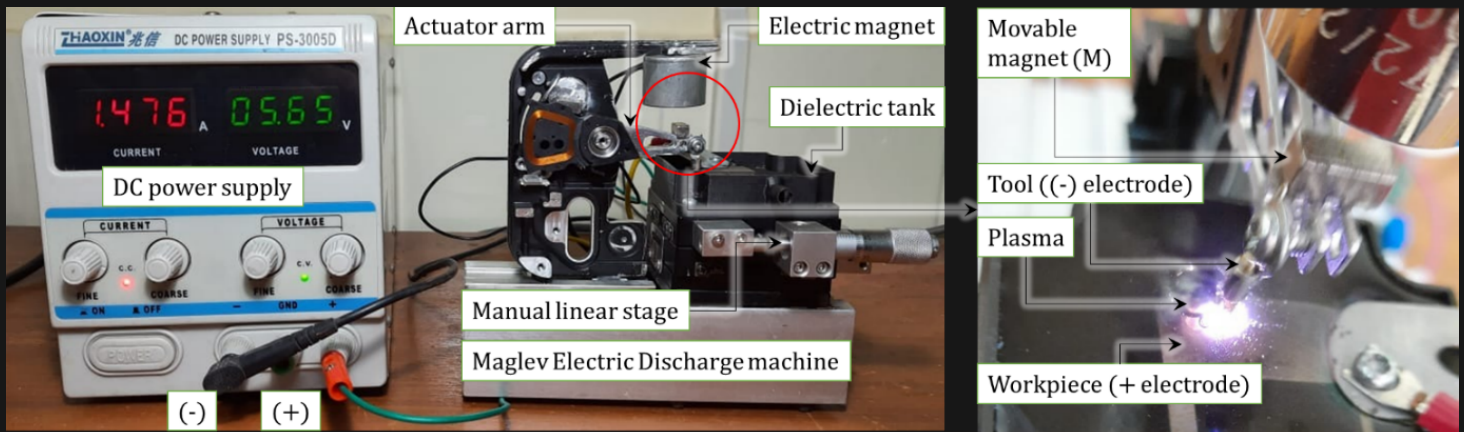
COLLABORATORS



The developed hybrid material readily removes complex Bisphenol A generated as waste during the manufacture of plastic bottles that we use in day to day life.



MAGLEV ELECTRIC DISCHARGE MACHINE



Machining or making a product out of hard metals requires a tool material that must be harder than the workpiece material in conventional machining. The solution to this problem lies in non-conventional machining methods like Electric discharge machining. The Electric Discharge machines commercially available in India import two key components: the power supply and the gap control mechanism.

A research team led by Prof Vivek Bajpai at Mechanical Engineering Department, IIT(ISM) Dhanbad, has developed the gap control mechanism that can use a conventional DC power supply or even a direct AC line with a stepdown transformer.

The proposed technology is technically very simple and uses local components; therefore, it will reduce the cost of the machine and hence the cost of the product and contribute to the Make-in-India mission by cutting out the import. A true-scale working prototype has been fabricated based on this technology and deployed to machine metals. Soft metallic tools, e.g., Copper and Brass have been used to machine hard metals like Ti and Ni alloys and different hard steels.

★ MEMORANDUM OF UNDERSTANDING

- IIT(ISM) Dhanbad signed MoU with Tata Steel Limited on 01.09.2021.
- IIT(ISM) Dhanbad signed MoU with Capgemini Technology Services India Limited on 19.08.2021.
- IIT(ISM) Dhanbad signed MoU with Hindustan Aeronautics Limited on 20.07.2021
- IIT(ISM) Dhanbad signed MoU with M/s OXIVE AIR LLP on 06.07.2021

★ CENTRAL RESEARCH FACILITY

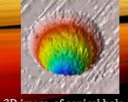
New equipment installed in CRF:

- E-Beam Lithography Lab
- Universal Testing Machine
- Laser Particle Size Analyser
- Solid Particle Zeta Meter

HIGH-END R&D PROJECTS

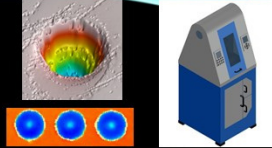
- **Microbial simulation and augmentation of gas content of coal seam**, Prof. Keka Ojha (PI) & Prof. A.K. Mandal, (Co-PI), Department of Petroleum Engineering, Rs. 18,54,252 funded by Essar Oil and Gas Exploration and Production Limited.
- **Cow dung derived hybrid adsorbent for heavy metal removal and its subsequent utilization as cheaper electrodes for energy storage devices**, Prof. B.K. Mishra (PI), Department of Environmental Science & Engineering & Prof. G.C. Nayak, Department of Chemistry, (Co-PI), Rs. 36,16,859 funded by Department of Science & Technology (Science for Equity, Empowerment & Development).
- **Preparation of Nalla diversion with Surface Run-off management study pertaining to Guali Iron Ore Mines of M/s OMC Ltd. in Keonjhar district of Odisha**, Prof. S.R. Samadder (PI), & Prof. S.K. Gupta (Co-PI), Department of Environmental Science & Engineering, Rs. 27,00,000 funded by the Department of Science & Technology (Science for Equity, Empowerment & Development).

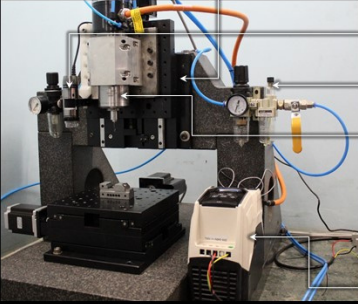
MICROMACHINING CENTRE WITH ULTRA-HIGH SPEEDS



3D image of conical hole size 100 micron and depth 25 micron

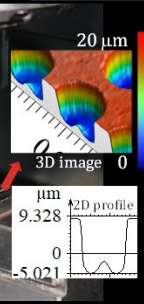
HIGH SPEED MICRO MACHINING CENTER,
VARNICA PRECISION PVT. LTD., DHANBAD (JH)
A COMPANY UNDER FACULTY ENTREPRENEURSHIP POLICY OF
INDIAN INSTITUTE OF TECHNOLOGY (ISM) DHANBAD







(Magnified view of work area)



20 μm
 μm 9.328
 0
 -5.021

Granite structure

Microscope

Pneumatic tool changer

Spindle

End milling tool (50 μm to 3 mm)

Workpiece (Ti6Al4V)

Spindle controller

Key features (model V60):

1. Vibration proof granite structure
2. Accuracy: $\pm 2.5 \mu\text{m}$
3. Resolution: 100 nm
4. Travel: XYZ- 150 mm each
5. Axial load capacity 350 N each axes
6. Max spindle speed: 60,000 rpm@0.24Nm
7. Pneumatic tool change, liquid cooled spindle

Applications:

1. Micro/macro milling
2. Micro drilling
3. Microscope 220X magnification
4. Micro turning

Contact:

Dr. Vivek Bajpai Assistant Professor Dept. of Mech. Engg. IIT (ISM) Dhanbad (INDIA) Email: vivek@iitism.ac.in Phone: +91-326-223-5075 Home page: https://www.iitism.ac.in/~vivek/	Mrs. Veenus Bajpai Director Varnica Precision Pvt. Ltd. Dhanbad (JH) India, 826004
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The business model is 100% scalable.

TECHNOLOGICAL FEATURES

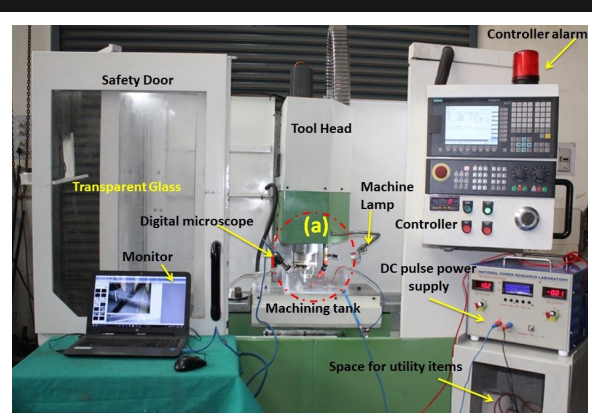
- Ultra high speed (10000 rpm to 170,000 rpm)
- High precision (Few microns to sub microns)
- Vibration-free
 - 10 nm vibration on granite frame at few frequencies
 - Frameless machining
- Wide variety of tool path control
- Inbuilt microscope (220X and 5 MPa) may be improved or removed based on the customization
- MQL
- Cryogenic cooling
- Vacuum chip removal mechanism
- Vacuum operated workpiece holder

Machining at a sub-millimeter is a challenging job. It isn't easy to control the tool movement, minimize vibration, and finally, provide dimensional accuracy. All these factors accumulate and increase the cost of the product tremendously. A research team led by Prof Vivek Bajpai at the Mechanical Engineering Department has developed an Ultra High-Speed Micromachining Center. This Micromachining Centre with ultra-high speeds is built in-house, based on the existing technologies. DST provided funding for the project.

A patent application has been filed and it is currently being reviewed. At the moment, a new firm called "Micro Mach," which was incubated at IIT Bombay, is producing commercial machines. "Micro Mach" produces on a granite frame, but the IIT(ISM) product is unique in that it pioneers vibrationless machining, which is a relatively new technology.

Importing this type of device, or comparable instruments, for research purposes is quite expensive. As a result, the majority of IITs and other research institutes will benefit from our solution. The business model is completely scalable and capable of meeting market demand.

MICRO-ELECTROCHEMICAL SPARK MACHINING SYSTEM



A setup based on this technology has been delivered by IIT(ISM) to Defence Research & Development Laboratory (DRDL), Hyderabad, under a project scheme.

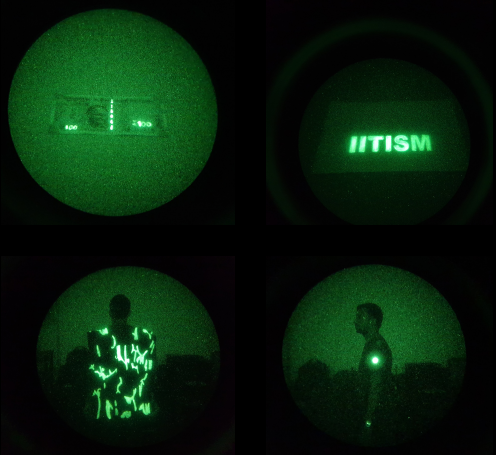
It is deployed for micromachining of hard-to-machine alloys/superalloys and ceramics used in aerospace industries.

The Department of Mechanical Engineering at IIT (ISM) Dhanbad has begun to establish itself in advanced industrial automation by utilising a range of new technologies. For industrial companies, Industry 4.0 is the way to go. Adopting a coherent framework, a research team led by Prof. Alok Kumar Das including DRDO Scientists, Mr. Niladri Mandal, Mr. Kiran P, and Mr. B Hari Prasad have developed a professional unconventional hybrid machine tool. This research was carried out under the CARS project scheme funded by DRDL, a DRDO laboratory in Hyderabad.

This professional unconventional hybrid machine tool can generate micro features on different electrically conductive and non-conductive materials by creating series of tiny electrical sparks in the narrow gap between the shaped tooltip and the workpiece surface in a suitable dilute chemical medium. This machine can fabricate cylindrical micro tools less than 50-micron diameter, and the same tool can be utilized to fabricate micro features. One can monitor the fabrication process through an online vision-based monitoring system.

The developed technology has been patented by IIT(ISM) Dhanbad & DRDO.

NEAR INFRARED LONG PERSISTENT PHOSPHOR FOR NIGHT VISION SURVEILLANCE AND ANTI-COUNTERFEIT APPLICATIONS



A research group consisting of Prof J Manam, Prof S K Sharma and Dr. Sourav Das (Research Associate) of Department of Physics, IIT (ISM) Dhanbad has developed advanced luminescent materials for defence and security applications.

Long persistence luminescence is a phenomenon in which material exhibits light for a long time after the excitation source is removed. Long persistent phosphor material is developed which gives emission in the near infrared (NIR) region. The material can be excited by solar radiation in day time and NIR emission is observed by Night Vision Monocular for 24 hours. As the material emits NIR persistent light, it is used as a secret light source for night vision devices and cannot be tracked by the naked human eye. The developed material is used for tagging, tracking and locating purposes for defence applications. The acrylic based paint is prepared to develop long persistent near infrared (NIR) paint, which can be coated on combat vehicle, ship, weapon, helmet, cloth, tent, rock for defence applications. The NIR security ink is prepared and demonstrated for anti-counterfeit applications.



Prof. Jairam Manam
Project Supervisor



Prof. S K Sharma
Co-Supervisor



Dr. Sourav Das
Research Associate

**Project Funded by
(SERB) (DST), GoI.**



PATENT FILED

S. No.	Application No.	Title	Inventor	Filing Date
1.	202131037215	A substrate integrated wave guide filter based multiple-input-multiple-output antenna system for interweave and underlay cognitive radio operation	Prof. R.K. Chaudhary Dept. of ECE	17.08.2021

PATENTS PUBLISHED

S. No.	Application No.	Title	Inventor	Filing Date
1.	202031005648	Composite material for brake pads	Mr. Santosh Kumar, Prof. Subrata K Ghosh Dept. of Mech Engg.	13.08.2021
2.	201931054793	Method for real-time monitoring of liquid level for wireless transmission system	Mr. Sayyed Faizan Ali, Prof. Nirupama Mandal Dept. of ECE	02.07.2021

PATENT GRANTED

S. No.	Application No.	Title	Inventor	Filing Date
1.	373169	Apparatus for rapid treatment of solid organic waste	Prof. S.K. Gupta Dept. of ESE	29.07.2021

Featured : Department of Electronics Engineering



ABOUT THE DEPARTMENT

In 1976, the Department of Electronics and Instrumentation was created as a support department. However, it became a full-fledged department in 1998 and was renamed Department of Electronics Engineering in 2010. The department runs B.Tech, M.Tech and Ph.D programs in Electronics and Communication Engineering.

The department's key strength is its highly qualified faculty, whose research and teaching abilities are on par with those of the world's greatest institutes/universities.

Fiber Optics and Laser Instrumentation, Communication and Signal Processing, Nanoelectronics, VLSI, Microwave & Antenna, and Embedded Systems are among the department's ten cutting-edge laboratories.

The department also engages in R&D and consulting projects in addition to its usual academic operations.

To keep up with current events, the department hosts a variety of short-term courses, workshops, guest lectures, & national/ international seminars and conferences.

FUTURISTIC COURSES

The Department offers several elective courses that are projected to be in high demand in future technologies. These are some of the courses offered:

1. Machine Learning
2. Internet of Things
3. Quantum Computing
4. Nanoelectronics
5. Nanophotonics
6. Photonic Integrated Circuits
7. Silicon Photonics
8. Smart Antennas

ALUMNI



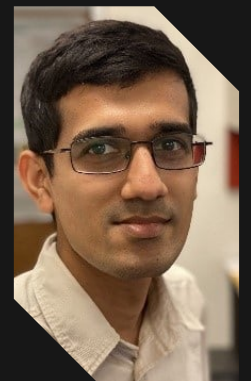
Fiddling with oscilloscopes, op-amps and breadboards gave us hands on experience with electronics.

- Dr. Sriram Muralidharan , Batch of 2009
RFIC Design engineer at Analog Devices Inc.



The labs allowed us to get hands on experience and also collaborate with classmates.

- Dr. Ganapati Bhat
Assistant Professor, School of Electrical
Engineering and Computer Science,
Washington State University



Being a member of the ISM family for four years was a fantastic and fulfilling experience. Those were the formative years of my life.

- Dr. Manohar Kumar graduated, Batch of 2004
Academy of Finland Fellow, Dept. of Applied
Physics, Aalto University

RESEARCH STORIES FROM THE DEPARTMENT

Prof. Himanshu Bhusan Mishra & Prof. Samrat Mukhopadhyay are working on Development of Novel Signal Processing Algorithms for 6G Wireless Communication Systems. They proposed a novel algorithm for retrieval of generalized block sparse unknown signal from a very small number of its linear measurements.

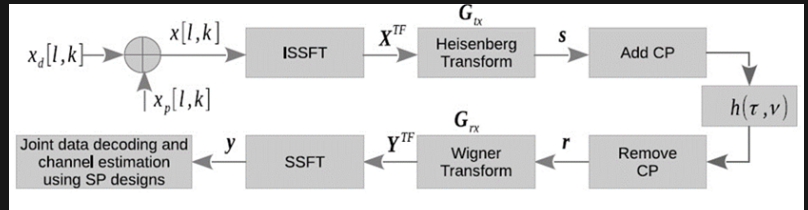
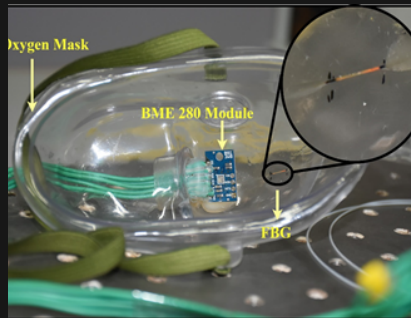


Fig: OTFS system model with proposed scheme



Prof. Amitesh Kumar has developed FBG based Respiration Rate Measurement system. The optical sensors can be used inside the oxygen mask for respiration rate measurement. It can also identify sneezing and coughing of the patient which is not possible with other electronic devices. The optical sensing data is interrogated using an edge filter interrogation technique that makes the system a cost-effective approach. The maximum repeatability error in breath per minute (bpm) measurement is calculated to be 1.53%. This low cost setup provides resolution of 0.005 OC with sensitivity of 1.77 dB/OC (also, 26.22 dB/nm in terms of wavelength). Its immunity towards electromagnetic interference makes it a reliable system in MRI conditions.

Fig: FBG and BME280 module mounted inside the oxygen mask.

Prof. Sanjeev Kumar Raghuwanshi has developed Field Deployable Fiber optics Surface Plasmon Resonance assisted by Fiber Bragg Grating Based Sensor for monitoring of Hazardous Toxic Chemicals and Gases in underground mines. Chemical sensing has been carried out with industrial chemicals such as glycerin, common chemicals like petrol, ethanol and simple saline solutions as well.

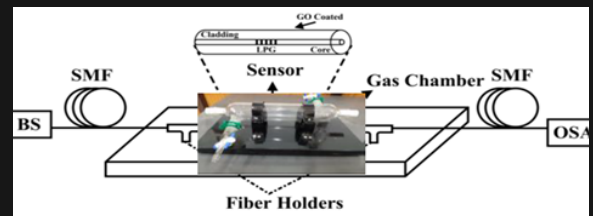


Fig. : Gas chamber based experimental setup



Fig. : MIMO Dielectric Resonator Antennas

Prof. Ravi Kumar Gangwar has designed and developed the MIMO Antennas for Wireless Communication Applications. The main objective of the research is to develop novel techniques for improving the performance of MIMO antenna systems. The research is focused on the development of dielectric resonator based MIMO antenna systems for a variety of wireless communication applications such as WLAN, WiMAX, satellite communication, WiFi, 4G LTE, 5G mm-wave, and so on.

Prof. Devendra Chack is currently engaged in the development of Silicon photonic (SiPh) technology. He has designed and demonstrated cascaded MMI based mode converter and demultiplexer using tapered waveguide as a phase-shifter to minimize the insertion loss and enhance the bandwidth. The proposed mode converter and demultiplexer can be promising elements for mode division multiplexing. The proposed two-mode demultiplexer using cascaded MMI (1×3 and 3×3 MMI) with one input port and three output ports is shown in the figure.

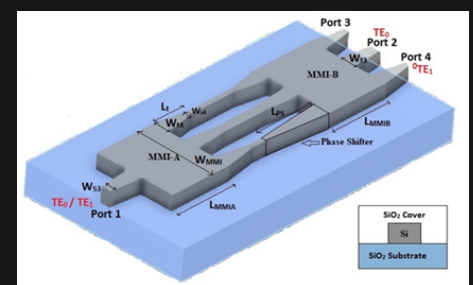
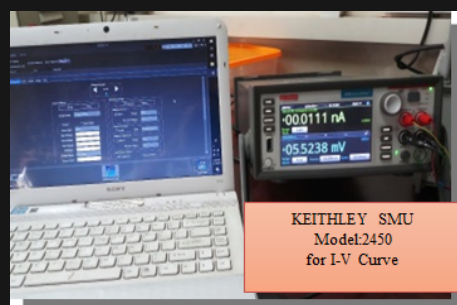
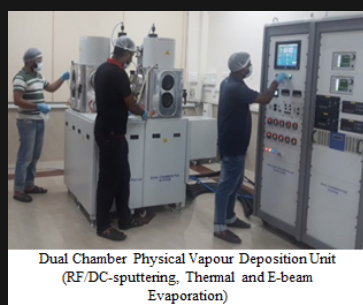


Fig.: Proposed mode demultiplexer based on cascaded MMI.



Prof. Mukul Kumar Das is working on the design and development of Metal-Oxide thin film based flexible Electronic and Optoelectronic Devices. The research group has recently grown SnOx thin film with substantially elevated mobility of approx. 9.31 cm²/Vs in the laboratory of Thin Film Growth by PVD. Also, the group successfully developed p-doped SnOx thin film with carrier concentration, 10¹⁶-10¹⁸ cm⁻³, tunable optical band gap, 1.6-1.8 eV and improved light management property.

Prof. Subindu Kumar is currently investigating the Impact of Dot Size Variability on the Spectral Response of As-Grown and Annealed Semiconductor Quantum Dot Ensembles and its application to Solar Cells. In this work, for the first time, the effects of dot size variability and interdiffusion on the optical spectra of quantum dots (QD) systems were analyzed in the same platform.

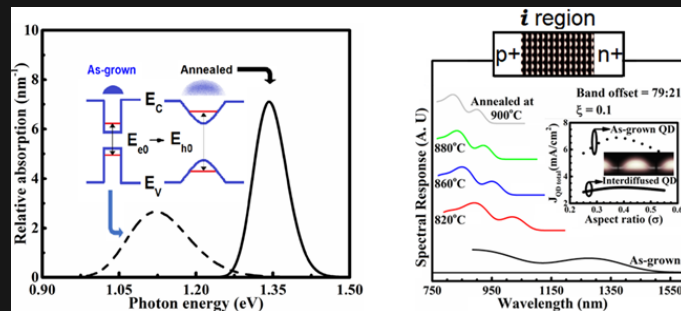


Fig. : Prototype Installation at KrishiVigyan Kendra, Dhanbad & Fig. : Memristor Emulator Layout with IO Rings

Prof. Rajeev Kumar Ranjan has developed an IoT Based Auto Irrigation and Soil Monitoring System for Disaster Migrants (for COVID-19 affected). A novel, smart IoT-based Soil Monitoring, Auto-Irrigation, Optimal Crop & Crop failure risk prediction system is designed which contains various sensors to detect soil and environment information of agriculture area and application for monitoring.

Prof. Jaisingh T. & Prof. Amitesh Kumar along with his research team have developed All Optical Static Weighbridge. This is the first of its kind work which has six optical load cell based weighbridge prototype. This prototype is made for weight measurement upto 35 Kg. It can accurately measure values with resolution of 100g and error of less than 2% with temperature compensation. It has also shown high degree of repeatability. The proposed concept could be a game changer in heavy vehicle load measurement. The potential applications are in the field of agriculture, mining, and different transportation industries.

Fig.: Weighbridge prototype developed in Photonics R&D Lab



Prof. Nirupama Mandal with her research team is working on On-board Battery less Measurement Systems using Surface Acoustic Wave (SAW) Sensor. The proposed transmission system is wireless and is capable of transmitting the information to remote locations wirelessly which is very much suitable and recommended for hazardous and inflammable industries.

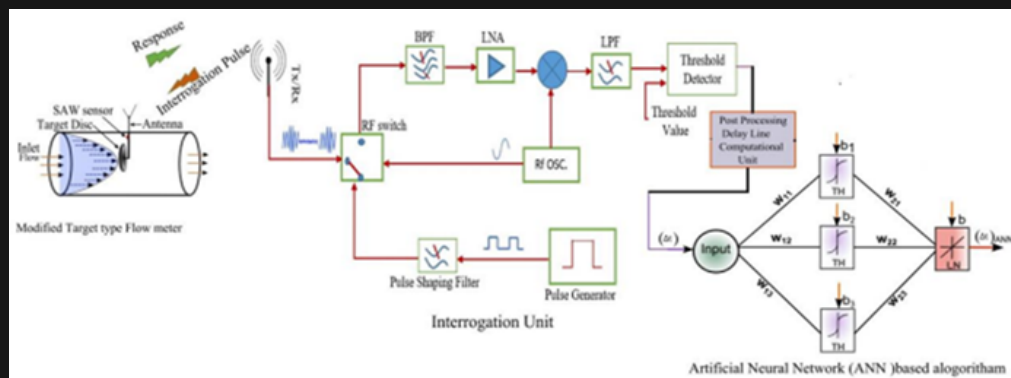


Fig. : Functional diagram of the modified target type flow meter with SAW interrogation unit and Artificial Neural Network block

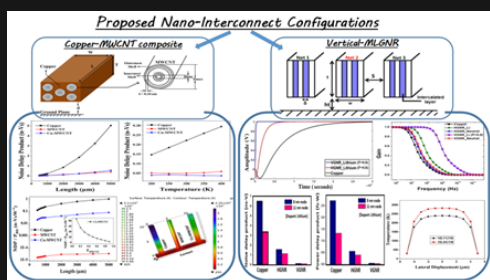


Fig.: Proposed Emerging Nano-interconnects

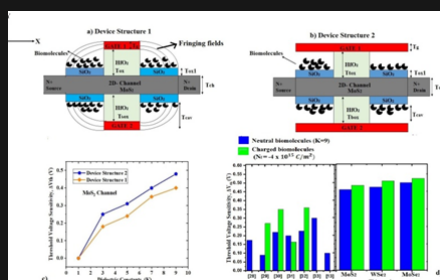


Fig.: TCAD Simulation of 2-D FET based Biosensors

Prof. Manodipan Sahoo is working on emerging nano-interconnects and nano-devices for VLSI applications. The team has developed electrical models of several nano-interconnect configurations like Vertical Multilayer Graphene Nanoribbon interconnects, Copper-MWCNT composite interconnects and Copper-Carbon hybrid interconnects. The team is also involved in the development of analytical models for understanding the electronic properties of 2-D material based devices (i.e. Silicene, Transition metal dichalcogenide (TMD) etc.) for FET based applications.

Awards & Accolades



Prof. Prem Vrat, Chairman, Board of Governors, IIT(ISM) Dhanbad, has been felicitated with the "**The Great Indian Teacher's Award GITA 2021.**" He was honored for his lifetime contribution to higher education and leadership at the LEAD GLOBAL CONCLAVE 2021.



Prof. Tarkeshwar Kumar, Dept. of Petroleum Engg. has been bestowed with the prestigious **SPE Distinguished Membership** for his pioneering contributions in the Petroleum Engineering domain.



Prof. Ram Madhav Bhattacharjee, Dept. of Mining Engineering, has been appointed as a member of the committee in the Ministry of Coal under the Government of India to review the **Jharia Master Plan.**



Prof. Gajendra K. Vishwakarma, Dept. of Mathematics & Computing, has been selected as a Member of the **National Academy of Sciences, India.**



Prof. Rajeev Kumar Ranjan, Dept. of Electronics Engineering, has been offered mentorship to Project teams under (**IEEE-HAC**) Interest Group on Humanitarian Technology) by IEEE-USA.



Prof. Shalivahan, Deputy Director, IIT (ISM) has been honored with the prestigious Indian National Science Academy (INSA) Teachers Award, 2021.



PROF. TARUN KUMAR NAIYA

Prof. Tarun Kumar Naiya, Dept. of Petroleum Engineering received the **2021 Distinguished Achievement Award** for Petroleum Engineering for South Asia & The Pacific Region from the Society of Petroleum Engineers for his outstanding contribution in this area at the regional level.



PROF. PANKAJ KUMAR JAIN

Under the Faculty Entrepreneurship Scheme of IIT(ISM), **Prof. Pankaj Kumar Jain**, Dept. of Fuel, Minerals and Metallurgical Engineering has developed an **innovative pencil sharpener** that not only increases the life of pencil but also helps to save the metal used in making the blade.

Prof. Prem Vrat, Chairman, Board of Governors, IIT(ISM), received the "**Distinguished Educator Award**" by the Industrial Engineering and Operations Management (**IEOM**) Society International. The IEOM Society has acknowledged his exceptional accomplishments and contribution to Industrial Engineering and Operations Management domain.





MR. P.K. PADHY
MSc, Batch of 1979, Applied
Geology

The research paper of **Mr. P.K. Padhy** examines the probable generation of oil and gas on Mars 3.5 billion years ago. The research work has drawn the attention of the world community.

MR. ASHIS DASH
B. Tech, Batch of 2009,
Mining Engineering



Mining Engineers' Association of India (MEAI) has recognized our alumnus, Mr. Ashis Dash as "**Young Mining Engineer of the Year 2020**" and conferred the "**Abheraj Baldota Gold Medal Award**".



MR. NEELESH KUMAR SAH
B. Tech, Batch of 1994,
Mining Engineering

Shri Neelesh Kumar Sah has been promoted as the **Director-General** in the office of the Comptroller and Auditor General of India, New Delhi. He is looking after the Direct Tax charge, responsible for audits of the Income Tax Department in India.

MR. DEBOJYOTI RAY CHAUDHURY
M.Sc, Batch of 2021, Physics



The International Book of Records has recognized our alumnus Debojyoti Ray Chaudhury with a world record of 670 E-Certificates within 290 days. He also has a national record registered to his name for receiving nine internships offers within 42 days during his M.Sc.



MR. ANURAG SEHGAL
B.Tech, Batch of 2006,
Mining Engineering

The book titled "**Future of Coal in India: Smooth Transition or Bumpy Road Ahead?**" edited by Anurag Sehgal has been included by Book Authority among the best new books to read on coal energy policy for 2021. It is also a part of their shortlist of 100 Best Energy Policy eBooks of all time. Anurag Sehgal is currently working as Principal (Research) with Noble Resources in Singapore.

Awards and Nominations Received by the book:

- 100 Best Energy Policy eBooks of All Time – Book Authority
- 6 Best New Coal Energy eBooks To Read In 2021 – Book Authority

PROF. KALACHAND SAIN
M.Sc Tech, Batch of 1988,
Applied Geophysics



Prof. Kalachand Sain, presently Director, Wadia Institute of Himalayan Geology, has been conferred with the **National Award for Geoscience & Technology 2021, J.C. Bose Fellowship (2021)** by SERB-DST, GoI, Fellowship by Indian National Science Academy, New Delhi (2021), and Fellowship by Indian Academy of Sciences, Bangalore (2021).

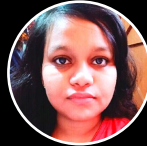
Lieutenant Manu Garg

(B.Tech, 2018, Civil Engg.) received the prestigious Silver Grenade honour on 15 Sept, 2021 at the College of Military Engineering, Pune.



#WomenofMettle.

STUDENTS IN-NEWS



Mr. Madhav Singhal, Mr. Amara Venkata Sai Srujan, Ms. Battula Sreeshma, Ms. Anjali Atreyi, and Ms. Nimmagadda Sravani from the Dept. of Mining Engineering under the mentorship of **Prof. R K Sinha**, Dept. of Mining Engineering secured the **THIRD** spot in the "**American Rock Mechanics Association (ARMA) Student Design Competition 2021**".



Mr. Sanjeet Kumar, a final year student of Dept. of Computer Science & Engineering developed an app "**Urban Reach**" to serve the needy farmers.



Ms. Khushboo Kuntal Dept. of Mining Engineering secured the second runner-up position in **Women of Mettle Season 5** conducted by **Tata Steel**. #WomenofMettle.



Mr. Abhinav Gautam, Research Scholar, Dept. of ECE (Guide: Prof. Amitesh Kumar) has been selected for the prestigious **SRISTI Gandhian Young Technological Innovation (GYTI) APPRECIATION AWARD 2021** for his research work on "**Psychophysiological Monitoring of a Subject using Optical Respiration Rate Measurement System**".



Mr. Aman Kumar, Mr. Aman Harsh, Mr. Gyanendra Das, Dept. of Mathematics and Computing, and **Ms. Aastha Sinha**, Dept. of Electrical Engineering emerged as the National Winners of the **Tata Crucible Hackathon**. The Team emerged as the North zone winner on 14th June 2021 with a cash prize of Rs. 70,000. Later, on 25th June 2021, the Team won the Nationals with a cash prize of Rs. 1,50,000.



Mr. Ishan Kumar, Mr. Akash Das, Dept. of Mechanical Engineering, and **Ms. Shefali Verma, Mr. Harshit Kumar**, Dept. of Electrical Engineering were nominated for the best presentation in Artificial Intelligence in Mobility (AIM) Online Design Challenge. The Team received the "**Best Coding Award**" with a Cash Prize of INR 10000 for their development and demonstration skills for the ideas pitched and algorithms implemented in the final round.

Mr. Anurag Jain, Mr. Shashank Shekhar, Mr. Shubham Doblial, Mr. Raj Kumar Singh, and Mr. Raj Kumar from the Dept. of Petroleum Engineering landed 4th among the 32 participating teams in Asia Pacific Regional Qualifiers and qualified for the **PetroBowl Global Championship 2021!**

VICTORY IN AMAZON ML CHALLENGE 2021



Mr. Taneesh Gupta, Mr. Rishabh Tiwari, Dept. of Physics, Mr. Arnav Chavan, Dept. of Mathematics and Computing, and Mr. Pawan Kumar Sahu, Dept. of Petroleum Engineering won the **Amazon ML Challenge 2021**. The winners received prize money of Rs. 1,00,000.



Mr. Udbhav Bamba, Mr. Deepanshu Pandey, Mr. Naman Khetan, and Mr. GK Tejus, Dept. of Mathematics and Computing emerged as the 2nd runner-up of the **Amazon ML Challenge 2021** and received a prize money of Rs. 50,000.



Ms. **Shivani Rakesh**, Dept of ME and a member of IIT(ISM) Quiz Club, has made us proud by winning the Super Cup in ProQuizzin League. She was the only female quizzier as the captain who led the Team "Kolkata Wizard" whose Grand Finale was held on 7th Aug, 2021.



Mr. Gobind Mandal, a research scholar at the Nano Composite Materials Lab (NCML), Dept. of Physics, received the prestigious **Prime Minister Research Fellowship for December 2020 PMRF Cycle**.



Ms. Mousumi Deb, Mr. Ashif Iqbal, Ms. Kanchan Negi, Mr. Sawant Omkar Deepak have provisionally been selected for the prestigious **Prime Minister's Research Fellowship (PMRF) May 2021 Cycle**.

NVCTI

Naresh Vashisht Centre for Tinkering and Innovation



AVISHKAR: Jharkhand School Innovation Challenge 2021

NVCTI organized AVISHKAR: Jharkhand School Innovation Challenge 2021 in phases and conducted the Grand Finale on 14th August 2021 via Zoom. The Award Function was held on 23rd Oct 2021. Dr. Mohit Gambhir, Innovation Director, MoE's Innovation Cell, GoI was the Chief Guest of the event.

Following ideas/teams were declared winners in various categories:

State Champion: Mr. Shubham Kumar Sharma, Middle School, Dhaiya (Idea: Search Bot)

1st Runner Up: Mr. Ankit Kumar & Mr. Souvik Nath, Atomic Energy Central School.1, Jadugoda, East Singhbhum (Idea: DAIS)

2nd Runner Up: Mr. Mayank Kumar & Anshul Raj, DAV Public School, Koyla Nagar, Dhanbad (Idea: Self Assistant Wheelchair)



BEINGARTIFEX SKILLATHON '21

BeingArtifex - an IIT(ISM) Student Startup - in association with NVCTI organized BeingArtifex Skillathon'21 wherein around 1000 students, 20 NGOs, and about 150 schools participated. It started on 25th April 2021 with a month-long registration period.

BeingArtifex and NVCTI aptly used this period to engage the students and let them know more about this grand event. The pre-event included 'Speak Up' and 'Skill Up' sessions to serve as ice-breakers to encourage them to share their pre-reckoning views on the technical field.

The team then conducted a BFX IQ Test of 3 consecutive mental aptitude tests and an Idea Pitch to explore the raw, innovative ideas among the ardent participants.

Renowned companies like Codingal, MU Gamma Consultancy, Engineering Parcel sponsored the event. All the founders of the sponsoring companies were present at the inauguration of the grand event. The inaugural program included three individual webinars where we had Sagar Dodeja (ex-IES), Arvind Arora (Motivational YouTuber), Tushar Kansal (clustered from Harvard Business) as our Chief Guests.

BEINGARTIFEX SKILLATHON '21 CONSISTED OF THREE PHASES

Learning Phase: Throughout this one-month Learning phase, mentors guided the participants about Web Development, App Development, Graphic Designing, Computer Programming, and Robotics. Along with the training sessions, the team provided multiple weekly assignments, conducted several internal meets, and kept an eye on the attendance. The team also took regular class improvement feedback from the participants.

Quiz Phase: The team conducted two quizzes of both moderate and difficult levels to test the participants' expertise.

Project Phase(Grand Finale): The final phase required the implementation of all the technical knowledge gained during the past month by the participants. In this phase, students actively implemented their absorbed learning through projects on themes like Covid-19, Indian Culture, Small Business, Corruption, Smart Home Automation, Yoga, Farmers, NGOs, School/ Hospital Management, and Delivery System.

BFX Talks provided knowledge of the various technical fields and their scope to all the participants during the three phases. The team paid special attention and provided regular guidance to the students from the NGOs.

The closing ceremony of the Skillathon was organized on 4th July 2021, where the Chief Guest was **Dr. Gabe Gabrielle**, Engineer, NASA. **Prof. H. C. Verma** graced the event with his presence in the awards ceremony of BeingArtifex Skillathon'21.

The team distributed prizes worth 3.75 Lakhs and other exciting prizes to the top performers.

APP-IT-UP 2021

NVCTI in collaboration with CyberLabs and CodeNicely organized APP-IT-UP, a digital app development challenge exclusively for IIT(ISM) students. Participants had to create a fully functional and deployable app to provide a platform where every student can post their grievances to authorities, bringing out efficient solutions by their actions. After a rigorous selection process, the panel selected the following teams in this event:

Winner - Team App Crew

1st Runner Up - Team The Problem Solvers

2nd Runner Up - Team Untangle

Webinar 'Samsung Innovation Awards 2021: Silver Jubilee Edition

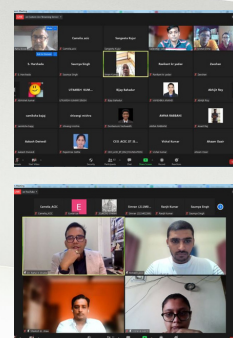
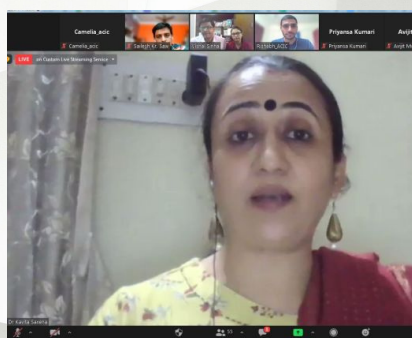
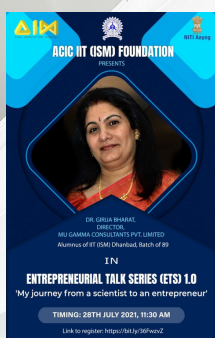
NVCTI organized an informative online session primarily to resolve students' issues in participating in the 'Samsung Innovation Awards 2021: Silver Jubilee Edition. Mr. Ajit Bopardikar, Sr. Chief Engineer, Samsung R&D Institute, Bangalore, cleared the air on 21st August 2021.

ACIC IIT(ISM) Foundation



Atal Community Innovation Centre (ACIC), IIT(ISM) Foundation organized the first edition of the Entrepreneurial Talk Series (ETS) themed on 'My journey from a scientist to an entrepreneur.' The webinar speaker was Dr. Girija Bharat, Director, Mu Gamma Consultants Pvt Ltd., India, and a proud alumnus of IIT(ISM) Dhanbad from the batch of 1989. The webinar was organized on 28th July 2021.

Atal Community Innovation Centre (ACIC) IIT(ISM) organized the second edition of Entrepreneurial Talk Series (ETS), themed on 'Inventive career in Entrepreneurship - Challenges and Opportunities: For Beginners.' Mr. Sanjit Kumar Behera, Director, Practical Action Foundation, India, led the session on 11th August 2021.





EXMiN

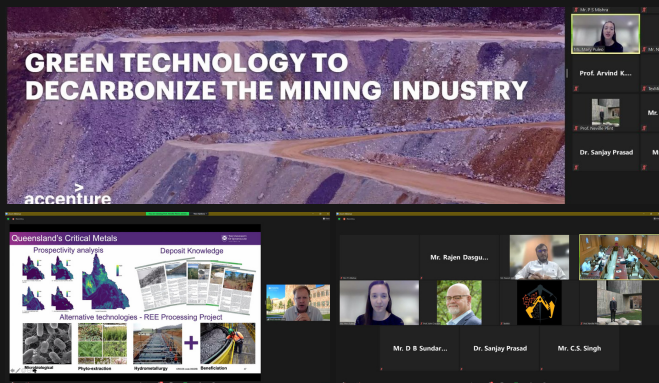
Technology Innovation Hub of IIT (ISM) Dhanbad

TEXMIN

Project Proposals for Faculty

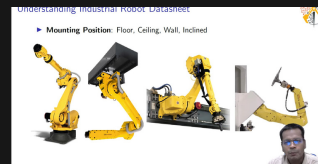
TEXMIN selected the following **nine** ideas for Seed Grant of 10 Lakhs:

1. Design of Predictive Maintenance System for Mobile Assets in UG Metal Mines by Prof. Amogh Tarachand.
2. Smart wearable devices for the safety of working personnel in underground mines by Prof. Manodipan Sahoo.
3. Development and field trial of a versatile pixel categorization and selection approach for improving MT-InSAR applications for in-depth monitoring of land surface deformation in the Mining Environment by Prof. Soyeb Alam.
4. Wireless Communication in Mines by Prof. Raghvendra Chaudhary.
5. Optimizing Exploration Drill Location with Existing Data using Artificial Intelligence by Prof. Saumen Maiti.
6. To develop an AI-based tool for performance improvement of grinding circuits in copper processing plants by Prof. Pankaj Jain.
7. The Unmanned Vehicle for Mine Safety Inspection by Prof. L. Behera and Prof. Siddhartha Agarwal.
8. Development of predictive maintenance solutions for modern dragline system of Coal India Limited by Prof. S.S. Rai.
9. Design & Development of FRP-Based Instrumental Rock Bolt for underground coal mines gallery support by Prof. K.K. Singh.



Events under TexMin Hub

- TexMin Hub organized a three-month Online Course on Artificial Intelligence and Machine Learning where more than 150 students participated.
- TexMin Hub organized a three-month Online Course on Industrial Robotics and Automation by Prof. Arun Dayal Udai & Prof. Zafar Alam, where more than 200 students participated.



- An MoU was signed with CDAC Kolkata to develop CPS Based Technologies for Mining and Exportation in collaboration with TexMin hub.
- An MoU was signed with Coal India to set up the CIL Innovation Center for Innovation and Startups in Mining Technologies in collaboration with TexMin hub with a budget of 10 crores.
- The International Virtual Conference on Technology Vision for Sustainable Mining was organized on 21st August 2021 by the Dept of Mining Engineering in collaboration with TexMin, CIL(Coal India Limited), and Innovation and Incubation Centre.

Special Programs:

- TexMin Hub selected more than 21 UG Students for Chanakya Undergraduate Fellowship Program.
- TexMin Hub has announced the **Entrepreneurs-in-Residence Program** for Nurturing Budding Entrepreneurs, where recipients can get a maximum stipend of Rs.30,000/- per month for 12 months.

Alumni Speak



AMRESH KUMAR MISHRA



Year of Graduation:
2003
Branch:
Petroleum Engineering
Current Org. :
Indian Police Service
Current Position:
Deputy Inspector General

Why do you still love your alma mater?

I love the unique and diverse relationships formed at ISM and continue to grow from strength to strength. As students, we were the center of all the activities at ISM, and as alumni, we are equally welcome and integral to its thinking/ future planning. The contributions and prominence of ISM and its footprints in academics, research, and industry are a matter of pride for us.

How do you remember your alma mater?

I remember the spring, the greenery, the Basant festival, and RD ki chai.



Community work started by our batch as our "Kartavya " has given dreams and hopes to many children in the neighborhood of ISM.

Your Alma Mater is listening: Your Message:

I wish that ISM provides a nurturing environment for budding entrepreneurs in all fields, besides upscaling its research activities in areas such as the intersection of technology and governance and strategic domains like energy security and climate change.

DIPAK SARKAR



Year of Graduation:
1967
Branch:
Petroleum Engineering
Current Org. :
ARCO
Current Position:
President of ISMAANA
Current Location:
Riverside CA, USA

Why do you still love your alma mater?

My alma mater gave me a solid technical education at a reasonably low cost. Being from a large family, I had limited means to finance my education. Low fees at ISM plus a Gol scholarship helped me to follow my dreams. Education and skills obtained at ISM allowed me to pursue higher education, including a Masters in Petroleum Engineering and MBA from

US Universities and a long professional career in the USA. All this was made possible by ISM education.

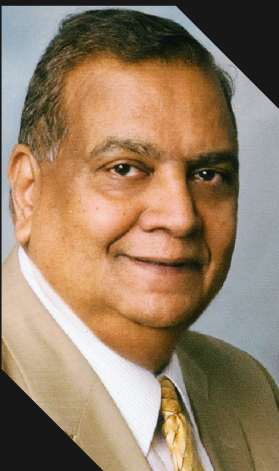
How do you remember your alma mater?

Back then, ISM was a small institute with a total enrollment of 600 students. We personally knew our teachers and formed lifelong friendships with batchmates, junior and senior students. It fostered a family-like environment conducive to learning and fellowship. **Overall, I hold fond memories of my days at the institute.**

Your Alma Mater is listening: Your Message:

IIT(ISM) has made tremendous strides in the last few decades. It has evolved from a four-year technical institute to a premier technological institution imparting postgraduate education and state-of-the-art research. Our fondest hope is that it will grow into a top-ranking engineering institute in India. IIT(ISM) alumni have a tremendous amount of goodwill for our alma mater. At ISMAANA, we have attempted to help needy meritorious students at IIT(ISM) via scholarships and supported our alma mater by establishing Naresh Vashisht Innovation Center, by providing financial aid for smart classrooms, and smart studios, and by instituting several innovation awards. It's a small contribution to our alma mater for all the benefits we have received. In the future, we shall continue our efforts to be of use to our alma mater through whatever financial and technological assistance we can provide.

PRAMOD C THAKUR



Year of Graduation:
1961

Branch:
Mining Engineering

Current Org. :
ESMS LLC

Current Position:
President

Current Location:
Morgantown, USA.

Why do you still love your alma mater?

Even though ISM has become an IIT, it remains India's "Energy Institute." It can play a significant role in making India energy-independent. This requires that India develops all four energy sources: coal, gas, solar, and hydropower. This was the basis of my talk to ISM for the DN Prasad Lecture in 2001. It is still valid.

My love for the Alma Mater is partly natural and partly goal-oriented, as mentioned above.

I like to see IIT(ISM) develop on the lines of MIT in the US.

It will need top-class faculty, motivated students, and a lot of goal-oriented funding. My love for ISM extends to my love for India. I like to see India as the 3rd largest economy with a GDP of \$15 T(PPP basis) and a reduced population of 500 million or less. Cheers.

How do you remember your alma mater?

I have attended three universities in my career: Patna University, ISM, and Penn State University. I visited the last two universities regularly after graduation. I gave talks and offered seminars in my areas of expertise frequently. I established scholarships at these universities for undergrad students. I made donations to convert an old classroom at ISM to a Smart Classroom.

Your Alma Mater is listening: Your Message:

I have only two aspirations for IIT (ISM):

- Continue to upgrade and remain in the top 10 institutes in India.
- Make India energy-independent.

Obituary

In Memoriam: In our hearts forever!



Prof. Sib Nath Mukherjee
(Former Director of ISM)

Prof. Sib Nath Mukherjee left for his heavenly abode on 8th September 2021 at his home in Kolkata. Prof Mukherjee joined the Indian School of Mines on 13th June 1985 as Professor, Centre for Longwall Mine Mechanization, took charge of Head of the Centre on 24th July 1990, and later served the Institute as the Director from 1st January 2004 to 9th August 2005.



Mr. Prateep Kumar Lahiri
(Former Chairman,
Executive Board of ISM)

Mr. Prateep Kumar Lahiri, former Chairman, Executive Board of ISM Dhanbad left for his heavenly abode on 9th October 2021 at Delhi.

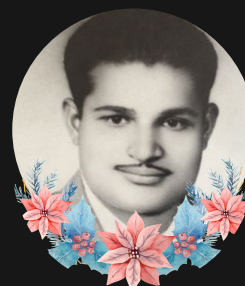
He served the institute as Chairman, Executive Board from 1998 to 2003 and 2005 to 2015.



Dr. Ramashish Rai
(Ex-Executive Director at ONGC)

Dr. Ramashish Rai, Ex-Executive Director at ONGC left for his heavenly abode on 5th August 2021.

He was a prominent figure in gas and oil sector and had graduated from IIT(ISM) Dhanbad with an M.Tech degree in 1983 and a Ph.D. in 1991.



Mr. J. B. Singh
Petroleum Engineering,
1962

Shri. J. B. Singh left for his heavenly abode on 24th October 2021.

He had graduated from IIT(ISM) in the year 1962 with a degree in Petroleum Technology.

Mr. Neresh Prasad Singh (Batch of 1970, Dept. of Applied Geophysics) left for his heavenly abode on 22nd Oct, 2021. He took keen interest in ISMAA KC affairs and was a regular at our MINI BASANT celebrations.

Centre for Societal Mission

WE RISE BY LIFTING OTHERS

A HELPING HAND



A landmark initiative of CSM has been to care for women's health and hygiene. The team led by Mrs. Babita Ghosh conducted a drive for distribution and sales of sanitary pads in Lahbani Basti, 18th August 2021. Apropos to this, the group encouraged the women living in slums to use sanitary napkins.

PLANTATION DRIVE



Plantation Drive on World Environment Day (05th June 2021) in the neighborhood of IIT(ISM) Dhanbad.



Distribution of mattress & ration to the needy



CSM carried out a hand-made paper bag training programme in the adopted villages. Apart from skilling the villagers, the objective was to encourage them to use eco-friendly products and ban the use of plastic bags in the village.

INDEPENDENCE DAY

Team CSM celebrated Independence Day in Malhar Basti to spread the message of unity and brotherhood.



THE CHANGESSETTERS: Prof. M. L. Chandravanshi, Prof. Devendra Chak, Prof. Patitapaban Sahoo, Mrs. Babita Ghosh, CSM staff, Mr. Kailash Prasad Mahto, Ms. Shalini (Karma- Jyoti), Mr. Amrit (Karma- Jyoti), Mr. Ratnesh (Karma- Jyoti)

Creative Corner



माँ

वो मेरी खुशी में रो देती है
वो मेरे ग़मों में रो देती है
माँ जिस दिन माँ बनती है
बीती ज़िंदगी खो देती है

अब झाँकती नहीं वो खयालों की दीवार से
नए शौक़ों के पीछे वही पुरानी रफ़्तार से
अक्सर जाया करती है बाज़ार एक-आध साड़ी की ताक में
माँ चार ले आती है शर्ट बेटे के प्यार में

दाने-दाने पर सुना है नाम किसी का होता है
निवालों पर पहला हक़ बस माँ का ही होता है
वो खाती है एक मगर दीदी को दो खिलाती है
माँ भोली होती है:

बच्चे बड़े हो जाएँ तो डाँटने में सकुचाती है

हज़ार लग गए भगवान बस एक माँ बनाने में
हज़ार चुक गए अरमान बस दो संतान बनाने में
हज़ार दफ़े आवाज़ उठाई मैंने उसपर बचकाने में
हज़ार बार थी रोयी वो भलाई थी जब हाथ उठाने में
वो नींद में भी जगती है

सपनों में भी खयाल लौटा देती है

माँ जिस दिन माँ बनती है

बीती ज़िंदगी गंवा देती है

अब झाँकती नहीं वो खयालों की दीवार से
मेरे शौक, मेरे ख़्वाब वो अपने बना लेती है
माँ जिस दिन माँ बनती है



APOURV PANDEY
BATCH OF 2018
AGL

उम्र से चेहरा बदलता है, रिश्ता नहीं...

दूसरों को खुशियाँ बाँट, भूल जाते जीवन में,
छोटी खुशियों को, संभाल कर रखते भी कोई,
शादी का बधाई कार्ड दिखा पुराने फ़ाईल में,
अचानक बरसों बाद, दोस्त दिखा बचपन का,
एक पुरानी चिट्ठी मिली, किताबों के बीच पड़ी,
खोई बचपन की तस्वीर मिली, माँ के साथ की।

वैसा ही अनुभव अपने वरिष्ठ दम्पति के साथ,
सुनाया उन्हें, सुखद याद, हमारे परिणय का दिन,
उनके द्वारा भेजा शादी का बधाई कार्ड, अकेला,
सुखद अपवाद था, बहुतेरे टेलीग्राम मेसेज से,
उन्हें भी याद आया, खुश हुए सुन कर हमसे।

दोस्त मिलता एयर पोर्ट पर, बीस साल बाद
सामने खड़ा, नाम लेता हूँ उसका बचपन वाला
सकपका गया, कोई जानता नहीं यह नाम अब
उसी नाम से बातें करते, याद किया बचपन को
खुशी छोटी नहीं, बहुत बड़ी मिली उस वक्त।

सालों बाद कान्फ़्रेंस स्टेज से, देखा वरिष्ठ बॉस को
याद दिलाया, उनके पुराने लव लेटर (मेमो) का,
बताया सबको, महत्व और सीख, उस लेटर की,
वह थे उस वक्त, तभी हम यहाँ तक पहुँचे आज,
पुरानी यादें ताज़ी हुई, खुश थे प्रगति देख हमारी।

पुराना ब्लैक और व्हाइट, लुप्त फ़ोटो मिला
धुंधली बचपन की तस्वीर, माँ के साथ वाली
दो साल का खुद, कैसे पहचानें अपने को?
माँ के चेहरे को याद कर ही पहचाना खुद को
उम्र से चेहरा बदलता है, रिश्ता नहीं.....
छोटी बड़ी खुशियाँ बिखरी हैं, बटोरना है हमें..



PREM KUMAR VERMA
BATCH OF 1974
PE

Startup Stories

Creativity is intelligence having fun.



MR. NITYANAND

Co-Founder of Tech Monks Engineering Solutions LLP

Mr. Nityanand, the co-founder of **Tech Monks Engineering Solutions LLP**, has devised a **Digital Punch Card** that, if used along with the conventional weaving machine, can help the weaving industry flourish in manufacturing world-famous Banarasi sarees.



A Digital Punch Card is an innovative tool that can change the information it contains. One can fetch the data from memory and upload it on the digital punch card. Once the conventional weaving machine uses the data, it changes the data of the digital punch card for the next weft, and thus the weaving continues without changing the card.

Once installed, one can change the design every minute. The weavers can reuse these designs at any time at just Rs. 1500/- which is the designer's charge for one design.

"I thank IIT(ISM) Dhanbad for all the skills and knowledge that it has imparted to me. I am indebted to the constant support and affection I got from my professors and seniors, without which this dream wouldn't have been accomplished" says Nityanand.

To provide opportunities for young entrepreneurs and to be a part of Digital India, a website is being designed where weavers, consumers, and designers from various schools and colleges shall come together and fulfill their dream of starting their own company.

ALUMNI PODCAST SERIES



We are pleased to inform you that we have expanded our mainstream social media presence by registering on a popular social sound platform -



Indulging in the culture of connectivity, SoundCloud will bring to you: The Alumni Podcast Series: Featuring Graduates, Friends, and New Connections.

We have successfully uploaded Podcast Episode #1: Humble Beginnings with Mr. Ashish Gupta. (B. Tech, Batch of 2007, Mining Engineering), the Founder and CEO of MyPetrolPump Inc., shares his fascinating story & tells us how he got his start through MyPetrolPump after studying at IIT(ISM).

Events



PROF. JAGDEO SINGH MEMORIAL LECTURE SERIES-2021

The Department of Applied Geophysics, IIT(ISM) organized Prof. Jagdeo Singh Memorial Lecture Series-2021 on 4th September 2021 to honor Prof. Jagdeo Singh, Founder Head of the Department of Applied Geophysics.



BEYOND 2020-21 STRUCTURAL ENGINEERING

ASCE Student Chapter, IIT(ISM) organized a webinar on "Beyond 2020-21 Structural Engineering - Future Scenario" on 4th September 2021. Mr. Pratip Bhattacharya, AVP and HOD, MMBU, Tata Consulting Engineers Limited, delivered the talk.



HOW TO CRACK CONSULTING JOB INTERVIEWS

Crossing Hurdles conducted a free masterclass on 'How to Crack Consulting Job Interviews.' Sankalp Chhabra, DTU (former DCE), IIFT alumnus, led the session on 18th July.



JOINT CERTIFICATION PROGRAM

The Dept. of Management Studies, IIT(ISM) and NSE Academy organized a "JOINT CERTIFICATION PROGRAM" on "Certification on Fundamental Analysis" and "Advance Certification on Financial Time Series Analysis." It was an excellent opportunity for individuals to learn about market research, portfolio selection, and investments.



★ FIT INDIA MOVEMENT



AWARD CEREMONY

Being Artifex, in collaboration with NVCTI, IIT(ISM) organized the award ceremony of Skillathon'21 on 15th July 2021. Prof. H.C. Verma, IIT Kanpur, was the Chief Guest.

OTHER WEBINAR EVENTS

- Clean Energy Technologies
- Propulsion Systems for Electric and Hybrid Vehicles
- Antiferromagnetic spintronics: The future of electronics.
- Blockchain Technology
- Emerging Trends in Microfluidics and its Applications
- On Combining Computational and Experimental Methods in Structural Dynamics
- Industrialization and Innovation
- Concepts of Tall Buildings
- How to Crack Consulting Job Interviews
- Triggered Seismicity and Permeability Evolution in Faulted and Fractured Reservoir

ORBITAL MECHANICS AND SPACE FLIGHT

Prof. Eric Butcher, Department of Aerospace & Mechanical Engineering, The University of Arizona, delivered two expert lectures on "**Orbital Mechanics and Space Flight**" on 3rd and 10th September 2021.

QUANTUM COMPUTING

Department of Mathematics & Computing, IIT(ISM) organized a 2-day webinar on "Quantum Computing" on 12th July and 14th July 2021.

EVOLUTION OF A WELLS CAREER IN THE E&P BUSINESS

Webinar on "EVOLUTION OF A WELLS CAREER IN THE E&P BUSINESS" ISMAA UK, in collaboration with SAIRC, conducted the first episode of a series of alumni-student interaction webinars on 14th Aug 2021. Our alumnus Mr. Manish Kumar (Batch of 2000), Petroleum Engineering, led the session.

MINING 4.0: ROADMAP FOR THE FUTURE

IIT(ISM) completed a very enriching discussion on "MINING 4.0: ROADMAP FOR THE FUTURE" on August 7, 2021. Prof. Rajiv Shekhar, Director, IIT(ISM) briefed the session on implementing Mining 4.0 using a cyber-physical system in core non-core activities of mining, exploration, and extraction of minerals.

TECHNOLOGY VISION FOR SUSTAINABLE MINING

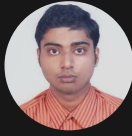
Department of Mining Engineering, IIT(ISM) in collaboration with TexMin Hub, IIT(ISM), organized an International Virtual Conference on 'Technology Vision for Sustainable Mining' on August 21, 2021. The program aimed to sensitize the mining industry leaders for safe, smart, and sustainable mining (3S mining), leading to Mining 4.0.

ON CAMPUS: NEW FACULTY



**DR. RAJ KUMAR
DISHWAR**

Current Position: Asstt. Prof.
Department: FMME
PhD, IIT (BHU)



DR. ANTARIP PODDAR

Current Position: Asstt. Prof.
Department: Mechanical
Engg.
PhD, IIT Kharagpur



DR. PRANESH ROY

Current Position: Asstt. Prof.
Department: Civil Engg.
PhD, IISc Bangalore



DR. SOUMYAJIT SEN GUPTA

Current Position: Asstt. Prof.
Department: Chemical Engg.
PhD, IIT Bombay



DR. UDITA BANSAL

Current Position: Asstt. Prof.
Department: AGL
PhD, IIT Bombay



DR. MADHULIKA GUPTA

Current Position: Asstt. Prof.
Department: Chemistry
PhD, IIT Delhi



DR. SAURABH SRIVASTAVA

Current Position: Asstt. Prof.
Department: Computer
Science & Engg.
PhD, IIT Kanpur



DR. SAHIL GARG

Current Position: Asstt. Prof.
Department: Civil Engg.
PhD, IIT Kanpur



**PROF. ANIL KUMAR
CHAUBEY**

Current Position: Visiting Prof.
Department: AGP
CSIR - NATIONAL INSTITUTE OF
OCEANOGRAPHY, Goa (Goa university)



**DR. PEAYUSH KUMAR
CHAUBEY**

Current Position: Asstt. Prof.
Department: Physics
PhD, University of Florida



**DR. KISHOR BHASKARRAO
NANDAPURKAR**

Current Position: Visiting Prof.
Department: FMME
PhD, IIT Bombay



DR. SAIFI IZHAR

Current Position: Asstt. Prof.
Department: Environmental
Science & Engg.



DR. MADHUMITA PATEL

Current Position: Asstt. Prof.
Department: Environmental
Science & Engg.
PhD, University of Alberta,
Canada



PROF. R N MUKHERJEE

Current Position: Visiting Prof.
Department: Chemistry
PhD, Indian Association for the
Cultivation of Science



**DR. SAMRAT
MUKHOPADHYAY**

Current Position: Asstt. Prof.
Department: Electronics Engg.
PhD, IIT Kharagpur



DR. SRUTI KANUNGO

Current Position: Asstt. Prof.
Department: HSS
PhD, IIT Kanpur



DR. BANDITA BARMAN

Current Position: Asstt. Prof.
Department: Civil Engg.
PhD, IIT Guwahati



**DR. MANTRIPRAGADA
VISHNU TEJA**

Current Position: Asstt. Prof.
Department: FMME
PhD, IIT Madras



DR. SUDESHNA SEN

Current Position: Asstt. Prof.
Department: Physics



PROF. PRADIP SIRCAR

Current Position: Visiting Prof.
Department: Electrical Engg.

IN-NEWS

ata Steel : Season 5 of 'Women
Scholarship Programme concludes
thrilling finale

09/15/2021 | 11:22am BST
Mumbai, September 15, 2021
The programme received 950+ entries
from institutes in India ~
Electrical Engineering
winner, Metallurgy
richy ser
fre

NIRF रैंकिंग में आईआईटी धनबाद ने लगाई छलांग, इंजीनियरिंग कालजा में जीव
सबसे शानदार स्थान

धनबाद मुख्य संवाददाता • P...
Thu, 09 Sep 2021

Jharkhand 02

DMANBAD student wins innovation Challenge award

Shekhar gave away cash award of Rs 1 lakh and mementos to Subham of middle School Dhairya besides other winners. The first runner-up were Ankit and Shobhik of Atomic Energy Central School East Sighbnum. They were awarded a cash award of Rs 75,000. The director too hailed the innovative ideas of the participants from different schools across Jharkhand. Senior faculty members including prof Dhairaj Kumar who is dean Innovation of the institute were present during the award function.



DMANBAD
Dr. Sharma was
winner of the
ation Challenge
nikar organised at
award function was
aturday during which
guest, Dr. Mohit
i, Innovation Director,
ry of Education's
ation Cell, Government
ia graced the event with
online presence.
Gambhir hailed the interest
own by the school students in
e innovation challenge.
IIT-ISM director prof Rajiv

IIT (ISM) launches innovation hub for entrepreneur support

Newly established centre will provide tech help to v...



Jharkhand news digest: IIT (ISM) develops luminescent material

Covid-19 reported in Jamshedpur

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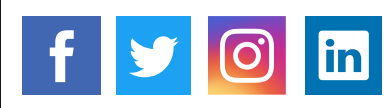
MEDIA & BRANDING TEAM

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CO-COORDINATOR (DESIGN)
SUNNY KUMAR
**COORDINATOR (PROD. &
CREATIVE DESIGN)**
TUSHAR SABOO

COORDINATOR (CONTENT)
MANISH KUMAR
CO-COORDINATOR (CONTENT)
KOVID SAI NAIK
CONTENT & DESIGNING INPUTS
MS. PURABI DAS
(JUNIOR ASSISTANT)



MacBook Pro



THANK YOU FOR READING!