



राष्ट्रीय प्रौद्योगिकी संस्थान मिजोरम
NATIONAL INSTITUTE OF TECHNOLOGY MIZORAM

**THE
COMPENDIUM**

September, 2022
Vol.~ I, Issue~ III

Monthly Newsletter

Director's Message



Prof. S. Sundar
Director
NIT Mizoram

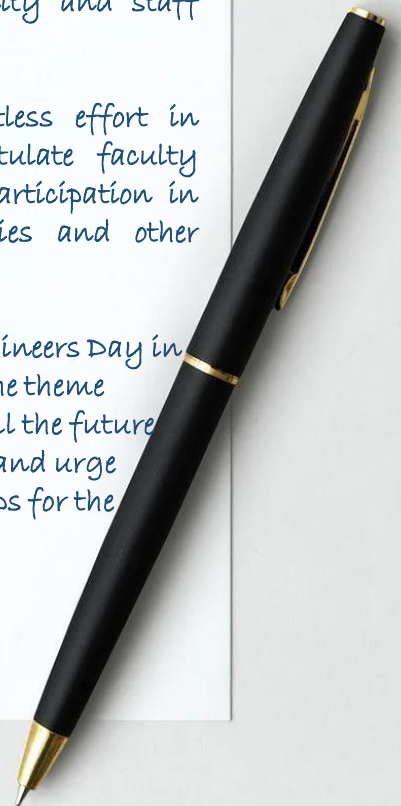
Greetings !!

This is the third issue of the first volume of the Institute newsletter 'THE COMPENDIUM'. It is a short collection of advancement of our students, teaching fraternity and staff during the month of August, 2022.

I appreciate the Editorial team for their relentless effort in bringing out 'THE COMPENDIUM'. I congratulate faculty members and students for their publications, participation in academic events, organising academic activities and other notable achievements.

This month NIT Mizoram celebrated National Engineers Day in association with Institute of Engineers, India on the theme 'Smart Engineering for the Better World'. I wish all the future Engineers of the Institute a happy engineer's day and urge them for innovation, entrepreneurship and start-ups for the better dream India.

I wish all the readers a happy reading !!



Editor~ In~ Chief's Message



Dr. Shuchi
Asst. Prof.
Dept. of HSS (English)

Warm Greetings !!

I am pleased to bring out the third issue of the Institute monthly newsletter, 'THE COMPENDIUM: a synopsis of events and academic prosperity of NIT Mizoram'.

The highlights of the current issue are academic & outreach activities and wide spectrum of research & development at NIT Mizoram for the month of September, 2022..

The 'EVENTISTRY' section displays memorable moments of celebration of National Engineers Day and various programmes such as Sign Language Day, Workshop on Innovation Entrepreneurship and Start-up for Young.

I express my heartfelt gratitude towards the Director, NIT Mizoram, Prof. S. Sundar for his encouragement and support.

I extend my sincere thanks to the Editor, Dr. Saurav Suman for all his helps and technical supports.

I also thank all my colleagues (faculty & office staff) and students of NIT Mizoram for their support by sending their achievements to us.

EDITORIAL BOARD



Chairman
Prof. S. Sundar
Director
NIT Mizoram



Editor-in- Chief
Dr. Shuchi
Assistant Professor
Dept. of HSS (English)



Editor
Dr. Saurav Suman
Assistant Professor
Dept. of Mechanical Engg.

SOCIAL MEDIA CELL



Nodal Officer
Dr. Surender Ontela
Assistant Professor
Dept. of BS (Mathematics)

STUDENT MEMBER



Mr. K. Santha Ram
Research Scholar
Dept. of HSS (English)

RESEARCH AND DEVELOPMENT

❖ FDP/WORKSHOPS ORGANIZED

✚ One-day Seminar on Engineers Day on 15th September 2022

National Institute of Technology Mizoram organized a one-day seminar on the theme of 'Smart Engineering for the Better World' on the occasion of National Engineers Day on 15th September 2022. As a part of the celebrations, a speech competition was also conducted on the topic "Smart Engineering for a Better India".

**Celebration of 55th Engineers Day on
"Smart Engineering for a Better World"**

Organized by:
The Institution of Engineers (India)
(Established 1920, Incorporated by Royal Charter 1935)
Mizoram State Centre

In collaboration with
राष्ट्रीय प्रौद्योगिकी संस्थान मिजोरम
NATIONAL INSTITUTE OF TECHNOLOGY MIZORAM
(An Institution of National Importance under Ministry of Education, Govt. of India)

Coordinator:
Dr. Saurav Suman
Faculty, Dept. of ME, NIT Mizoram
Member, MC Division, MSC-IE(I)

Chief Guest: Prof. S. Sundar, Director, NIT Mizoram
Invited Speakers: 1. Dr. Avilash Sahoo, Faculty, Department of ME, NIT Meghalaya
2. Mr. Pankaj Tyagi, Deputy Manager, R&D, Hero MotoCorp Pvt. Ltd., Jaipur, Rajasthan

Date: 15th September, 2022 at 5.00 PM
Google Meet Link: <https://meet.google.com/vqk-tvfj-vuy>

Celebration of 55th Engineers Day on
"Smart Engineering for a Better World"

Sl. No.	Program Proceedings	Time
1	Welcome Speech by Er. K. Laisawmyvela, FIE Chairman, MSC-IE(I)	05:00 PM – 05:05 PM
2	Chief Guest Prof. (Dr.) S. Sundar Director, NIT Mizoram	05:05 PM – 05:10 PM
3	Speech by: Dr. Avilash Sahoo, Faculty, Dept. of ME, NIT Meghalaya	05:10 PM – 05:40 PM
4	Speech by: Mr. Pankaj Tyagi, Deputy Manager, R&D, Hero MotoCorp Pvt. Ltd., Jaipur, Rajasthan	05:40 PM – 06:10 PM
5	Vote of Thanks: Dr. Saurav Suman Faculty, NIT Mizoram, Member, MC Division, MSC-IE(I)	06:10 PM – 06:15 PM

✚ AICTE sponsored Faculty Development Program on COGNITIVE SKILLS, DESIGN AND CRITICAL THINKING from 19/09/2022 to 23/09/2022

The AICTE sponsored a 5-day Workshop on "COGNITIVE SKILLS, DESIGN AND CRITICAL THINKING"

organized in the Dept. of Mechanical Engineering, NIT Mizoram in virtual mode. The FDP was a great success with a wide range of participants from across India and abroad (Thailand, Singapore etc.)

About the Institute

National Institute of Technology Mizoram was established in the year 2010 in the state of Mizoram with an objective to impart education, research & training leading to B. Tech, M. Tech & Ph.D. degrees. The institute has been declared as an Institute of National Importance by an Act of Parliament. The Institute has six departments viz. Depts. of Computer Science & Engineering, Civil Engineering, Electronics & Comm. Engineering, Electrical & Electronics Engineering, Mechanical Engineering and Basic Sciences & HSS. NIT Mizoram strongly urge to promote Science & Technology through the research activities. The Institute is pursuing to enhance its research and development activities and the faculties and research scholars are the key workforce in achieving excellence in that direction. Faculty members are advised to involve in State-of-the-Art Research & Development in various fields of Science and Technology.

Targeted Participants

- Faculty members from all CPTIs, Universities, UGC and AICTE approved institutions, colleges.

How to Register

Registration: Free of cost.
Click to Join: meet.google.com/wif-yfca-wxu

National Institute of Technology Mizoram

Organizing

AICTE sponsored Five-Day Faculty Development Program on Cognitive Skills, Design and Critical Thinking

19th September- 23rd September, 2022

Importance of FDP

The need to teach and develop cognitive learning and Critical thinking skills has become an essential part of today's learning era. Cognitive learning outcomes refer to the intellectual skills possessed by a person. Information about such skills is beneficial for the students as well as the teachers. This information is a source of self-motivation to learn better and to improve the way, style, or learning strategy. Critical thinking skills are an active and organized cognitive process that is done to understand ourselves, familiarize ourselves with what is happening around us as well as consider the thinking processes of others. This FDP includes resourceful academic experts with immense knowledge of the topic.

Resource Persons

- Experts from IITs/NITs/Universities/Industries

PATRON

Prof. S Sundar
Director, NIT Mizoram

Nodal Officer

Dr. K. Gyanendra Singh
Dean (SW), NIT Mizoram

Course Coordinators

Dr. H. Lalhmingsanga, HoD.
Dr. Saurav Suman, JP
Department of Mechanical Engineering
NIT Mizoram.
Email: lalhmingsanga.mech@nitmz.ac.in

Convener



Dr. Shuchi Kaparwan
HoD, Dept. of BS & HSS
NIT Mizoram

Organizing Committee

Dr. Saibal Chatterjee, Dean (Acad.), NIT Mizoram
Dr. Alok Shukla, Dean (R & C), NIT Mizoram
Dr. Ajmal Koya, Dean (FW), NIT Mizoram
Dr. Pabitra K. Biswas, Assoc. Dean (SW), NIT Mizoram
Dr. Bidesh Roy, Assoc. Dean (SW), NIT Mizoram
Dr. Bachu Deb, Asst. Prof. ME, NIT Mizoram
Dr. Abhijit Banik, Asst. Prof. ME, NIT Mizoram

✦ SERB-INAE sponsored a 5-day workshop (Hybrid mode) on INNOVATION, ENTREPRENEURSHIP AND START-UP FOR YOUNG from 26/09/2022 to 30/09/2022

NIT Mizoram organized SERB-INAE a 5-day workshop in hybrid mode. Online and offline went smoothly with participants ranging from research scholars to working professionals and faculty across India. NIT Mizoram invited resource persons from academia, industry, serial entrepreneurs and from the judiciary.

<p>About the Institute</p> <p>National Institute of Technology Mizoram was established in the year 2010 in the state of Mizoram with an objective to impart education, research & training leading to B. Tech, M. Tech & Ph.D. degrees. The institute has been declared as an Institute of National Importance by an Act of Parliament. The Institute has six departments viz. Depts. of Computer Science. & Engineering, Civil Engineering, Electronics & Comm. Engineering, Electrical & Electronics Engineering, Mechanical Engineering and Basic Sciences & HSS. NIT Mizoram strongly urge to promote Science & Technology through the research activities. The Institute is pursuing to enhance its research and development activities and the faculties and research scholars are the key workforce in achieving excellence in that direction. Faculty members are advised to involve in State-of-the-Art Research & Development in various fields of Science and Technology.</p>   <p>Targeted Participants</p> <ul style="list-style-type: none"> Faculty members, Research Scholars from all CFTIs, Universities, AICTE approved institutions. 	<p>National Institute of Technology Mizoram</p> <p>Organizing</p> <p>SERB-INAE sponsored Five-Day Workshop (Hybrid Mode) on Innovation, Entrepreneurship and Start-Up for Young</p> <p>September 26 - 30, 2022</p> <p>About the Workshop</p> <p>Launched on 16th January, 2016, the Startup India Initiative has rolled out several programs with the objective of supporting entrepreneurs, building a robust startup ecosystem and transforming India into a country of job creators instead of job seekers. The educational Institutes also need to update their curriculum and course delivery to produce job creators instead of job seekers. NIT Mizoram plans to have a one-week hybrid workshop on 'Innovation, Entrepreneurship and Start Up for Young' in collaboration with INAE during September 26-30, 2022. The workshop is aimed at academicians and students of north east India. Due to logistics issues, it is proposed to be in hybrid mode where the experts and the internal participants shall be physically present at NIT Mizoram and the external participants shall be present through online mode.</p> <p>All the participants attending offline are required to make their own arrangements for their lodging and boarding.</p>	<p>PATRON</p> <p>Prof. (Dr.) S. Sundar Director, NIT Mizoram</p> <p>Course Outline</p> <p>The key takeaways of the workshop shall be</p> <ul style="list-style-type: none"> The many faces of and contexts for entrepreneurship and startup. What it takes to be an entrepreneur and your own potential to be one. Importance of IPR in entrepreneurship and Start-Up. Learn to recognize opportunities to generate and assess your own business idea. The operational issues in developing new business ventures. Revision of Course Curriculum and course delivery. How North East can be a startup Hub of India? Social Entrepreneurship. Support from Govt of India for innovators, budding entrepreneurs. Design Thinking and Innovation, etc. <p>Course Coordinators</p> <ul style="list-style-type: none"> Prof. Saibal Chatterjee Dean (Academics), NIT Mizoram. Email: saibal.eee@nitmz.ac.in Dr. Surender Ontela FiC Examinations, NIT Mizoram Email: surender.math@nitmz.ac.in <p>Organizing Committee</p> <p>Dr. Rudra Sankar Dhar, Assistant Professor, Dept. of ECE Dr. Anumoy Ghosh, Assistant Professor, Dept. of ECE Dr. Ramesh Kumar, Assistant Professor, Dept. of EEE</p>
<p>How to Register</p> <p>Registration: Free of cost.</p> <p>Fill in the details here:</p> <p>https://docs.google.com/forms/d/e/1FAIpQLSd-yMk4ZjckKsOjG'TOANx_nQSx4I4HXGx-1WjW3qdJD29Olg/viewform</p>		

❖ PUBLICATION (Journal/Conference/Book Chapter)

1. Majumder P, Deb B and Gupta R, "Design and Development of Solar Assisted Fluidized Bed Dryer Integrated with Liquid Desiccant Dehumidifier: Theoretical Analysis and Experimental Investigation" (<https://doi.org/10.1016/j.enconman.2022.116281>) Energy Conservation and Management (ECM)—Elsevier
2. Majumder P, Deb B, Gupta R, Sablani S.S "A Comprehensive Review of Fluidized Bed Drying: Sustainable Design Approaches, Hydrodynamic and Thermodynamic Performance Characteristics, and Product Quality" (<https://doi.org/10.1016/j.seta.2022.102643>) Sustainable Energy Technologies and Assessments-Elsevier
3. Samiran Pramanik, Saikat Chandra Bakshi, Chaitali Koley, Debasis Mitra, Alessio Monti, and Filiberto Bilotti, "Active Metasurface Based Reconfigurable Polarization

- Converter with Multiple and Simultaneous Functionalities*" IEEE Antennas and Wireless Propagation Letters, (Accepted)
4. Anu Kumar Das, Dayal Ch Shill, Saibal Chatterjee, "Experimental Investigation on Breakdown Performance of Coconut Oil for High Voltage Application", Electric Power Systems Research, (Accepted)
 5. Anu Kumar Das, Dayal Ch Shill, Saibal Chatterjee, "Lightning Impulse Breakdown Performance of Saturated vs Unsaturated Vegetable Oil and their Mixtures with Mineral Oil" Industrial Crops and Products, Volume 184, 15 September 2022
 6. Sanjukta Nej, Anumoy Ghosh, Adnan Ghaffar, "Compact Quad-Band Compact MIMO Antenna Design with Enhanced Gain for Wireless Communications", (<https://doi.org/10.3390/s22197143>) Sensors- Volume: 22,7143
 7. Malsawmdawngkima Hnamte, Ajmal Koya Pulikkal, "Clay-Polymer Nanocomposites for Water and Wastewater Treatment: A Comprehensive Review", (2022, 10.1016/j.chemosphere.2022.135869), Chemosphere
 8. Irom Ragish Singh, Ajmal Koya Pulikkal, "Preparation, Stability and Biological Activity of Essential Oil-Based Nano Emulsions: A Comprehensive Review" (2022,10.1016/j.onano.2022.100066), OpenNano

❖ WORKSHOPS/CONFERENCES/STTP/FDP ATTENDED

1. Lalengkima (Research Scholar, Economics) presented a paper entitled "A Study on the Performance of Farmer Producer Organizations (FPOs) in Mizoram" in International Seminar on Accounting, Finance and Business Management (ISAFBM'2022), Assam (Central) University Silchar, September 27, 2022
2. Thelma Lalhmingthangi, presented a paper entitled "The Political Economy of Development in Mizoram" in International Seminar on Accounting, Finance and Business Management (ISAFBM'2022), Assam (Central) University Silchar, September 27, 2022
3. Radha Pyari Devarsu, (Part-time Research Scholar, Mathematics) presented a paper titled "Optimization analysis of the exponential heat source and radiation influence on the Cu-Ag-H₂O hybrid nanofluid flow over a spinning disk considering Hall current: Response Surface Methodology Approach" in an international conference on Mathematical Sciences and Emerging Applications in Technology (ICMSEAT-2022)" organized by the Department of Mathematics, School of Sciences, GITAM (deemed to be University, Hyderabad, September 9 - 11, 2022.
4. Subhajit Panda, (Part-time Research Scholar, Mathematics) presented a paper titled "Illustration of Radiative Heat on the Three-Dimensional Micropolar Nanofluid flow for the Hamilton-Crosser Conductivity Model through a Circular Cylinder" in an International conference on "Mathematical Sciences and Emerging Applications in Technology (ICMSEAT-2022) organized by the Department of Mathematics, School of Sciences, GITAM (deemed to be University, Hyderabad, September 9 - 11, 2022

5. Musala Venkataramana Reddy, (Part-time Research Scholar, Mathematics) presented a paper titled "*Optimization and sensitivity analysis of heat transfer on mixed convective radiative nanofluid flow over an inclined cylinder with exponential heat sources: Response Surface Methodology*" in an international conference on Mathematical Sciences and Emerging Applications in Technology (ICMSEAT-2022)" organized by the Department of Mathematics, School of Sciences, GITAM (deemed to be University, Hyderabad, September 9 - 11, 2022
6. Dharanikota Rupalakshmi, (Part-time Research Scholar, Mathematics) has presented a paper titled "*Finite Element Analysis on Hydromagnetic Casson Fluid Flow over an Inclined Ramped Thermal Surface in Porous Medium with Radiation*" in an international conference on Mathematical Sciences and Emerging Applications in Technology (ICMSEAT-2022) organized by the Department of Mathematics, School of Sciences, GITAM (deemed to be University, Hyderabad, September 9 - 11, 2022
7. Anupama Ganguly (Research Scholar, EEE) presented a paper entitled "*Comparative Performance Analysis of Hybrid MPPT for Standalone Photovoltaic Boost DC-DC Converter*", 3rd International Conference on Microelectronics Computing Systems Machine Learning and Internet of Things (MCMII-2022), September 17-18, 2022
8. Venkatesh Tadivalasa and Pabitra Kumar Biswas, "*Controlling of PV fed BLDC Motor using FUZZY and PSO Techniques*", Accepted in IEEE International Conference on Futuristic Technologies (INCOFT), Belgaum, India
9. K. Santha Ram (Research Scholar, English) attended AICTE sponsored FDP on *Cognitive Skills, Design and Critical Thinking* at NIT Mizoram from September 19-23, 2022
10. K. Santha Ram (Research Scholar, English) attended SERB-INEA Sponsored workshop on *Innovation, Entrepreneurship and Start-up for young* at NIT Mizoram from September 26-30, 2022
11. Fahad Khan (Research Scholar, English) attended AICTE sponsored FDP on *Cognitive Skills, Design and Critical Thinking* at NIT Mizoram from September 19-23, 2022
12. O Ashokan (Part-time Research Scholar, English) AICTE sponsored FDP on *Cognitive Skills, Design and Critical Thinking* at NIT Mizoram from September 19-23, 2022
13. SK Enamul (Research Scholar, Mathematics) attended SERB-INEA Sponsored workshop on *Innovation, Entrepreneurship and Start-up for Young* at NIT Mizoram from September 26-30, 2022
14. Pungja (Research Scholar, Mathematics) attended SERB-INEA Sponsored workshop on *Innovation, Entrepreneurship and Start-up for Young* at NIT Mizoram from September 26-30, 2022
15. Padma Umeda (Research Scholar, Mathematics) attended SERB-INEA Sponsored workshop on *Innovation, Entrepreneurship and Start-up for Young* at NIT Mizoram from September 26-30, 2022

16. Sathyendar Sreepada (Research Scholar, Mathematics) attended SERB-INEA Sponsored workshop on *Innovation, Entrepreneurship and Start-up for Young* at NIT Mizoram from September 26-30, 2022
17. Malsawmdawngkima, attended Workshop on “*Quality Control and Standardization of Herbal Raw Materials for Value Addition and Sustainable Development in North East*” organized by Department of Horticulture Aromatic and Medicinal Plants (HAMP), Mizoram University. September 16, 2022
18. Irom Ragish Singh, attended Workshop on “*Quality Control and Standardization of Herbal Raw Materials for Value Addition and Sustainable Development in North East*” organized by Department of Horticulture Aromatic and Medicinal Plants (HAMP), Mizoram University. September 16, 2022

FACULTY AWARDS & ACHIEVEMENTS

- ✚ Prof. S Sundar, Director, NIT Mizoram has been awarded the DAAD (Deutscher Akademischer Austauschdienst) Research Ambassador 2022 and has been felicitated at the German Embassy, New Delhi on 19/09/2022 by Johannes Hoerber Cultural counsellor, German Embassy. Prof. S Sundar has had a long-standing association with DAAD and is familiar with the current research landscape in Germany.



1. Dr. Shuchi (Asst. Prof. Dept. of HSS) delivered a talk on “*Cognitive Skills and Emotional Intelligence*” at AICTE sponsored five-day FDP on Cognitive Skills, design and Critical Thinking, organized by NIT Mizoram on September 22, 2022.
2. Dr. Saurav Suman (Asst. Prof. Dept. of ME) delivered a talk on “*AR & VR: Improving Design Thinking Skills for Sustainable Design Thinking*” at AICTE sponsored five-day FDP on Cognitive Skills, design and Critical Thinking, organized by NIT Mizoram on September 20, 2022.

3. Dr. Bachu Deb (Asst. Prof. Dept. of ME) delivered a talk on “*Cognitive Skills, Design and Critical Thinking*” at AICTE sponsored five-day FDP on Cognitive Skills, design and Critical Thinking, organized by NIT Mizoram on September 22, 2022.
4. Dr. Konthoujam Gyanendra Singh (Associate Professor, Economics) chaired a session at *Post Pandemic Perspectives: Reflections and Realities*, Department of Management, Humanities & Social Sciences, NIT Agartala.

❖ DAYS CELEBRATED

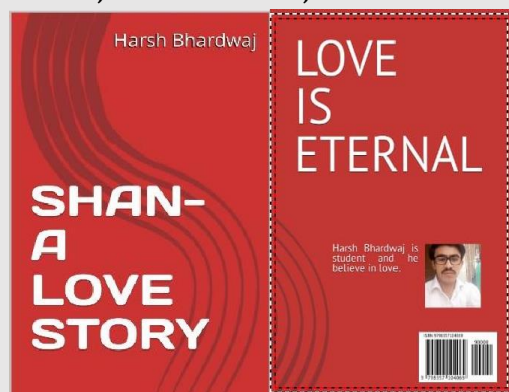
✚ SIGN- LANGUAGE DAY

As a part of the mobilization and social inclusion, National Institute of Technology Mizoram observed SIGN LANGUAGE DAY on 23rd September 2022. Dr. Elizabeth H, Associate Professor, Department of Social Work, Mizoram University was invited as the key speaker



STUDENTS ACHIEVEMENTS

1. Harsh Bhardwaj (Student, Btech EEE) published his book titled Shan-a Love Story. the book talks about Harsh and Anjali’s fight for their love. This story shows Trust is most important in love, without trust, there is no love.

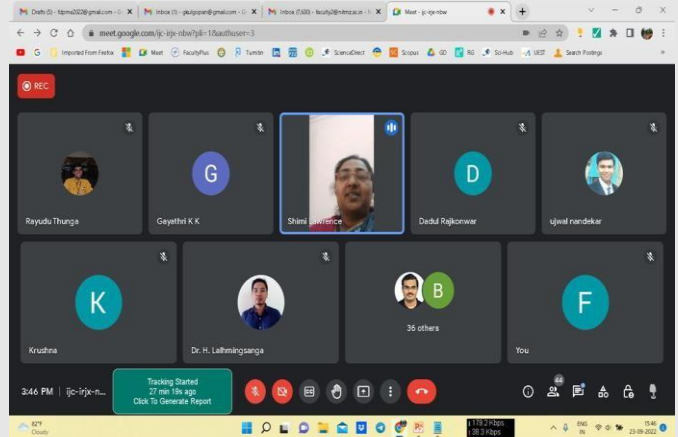
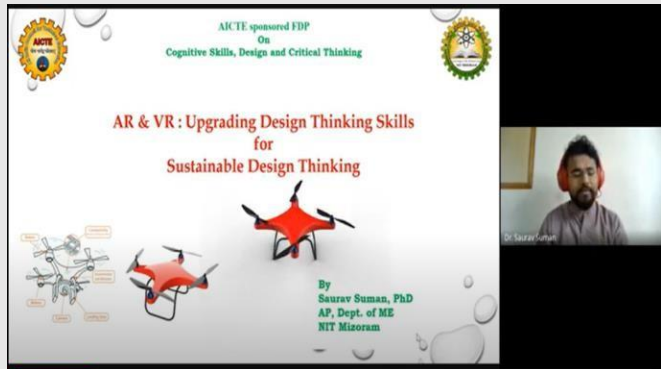
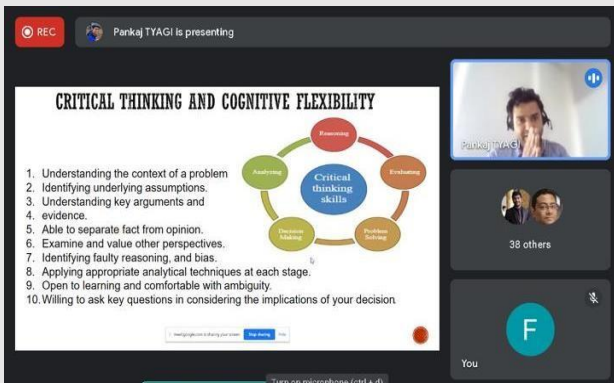


2. K. Santha Ram (Research Scholar, English) stood first in the speech competition on the topic, **Smart Engineering for a better India** organized by the **Institute of Engineers (India)** in collaboration with **NIT Mizoram** on September 15, 2022 on the occasion of Engineer's Day.

CONSULTANCY PROJECT

Name of the Faculty	Project Title	Funding Agency	Amount
Dr. Bijayananda Mohanty	Technical Appraisal of Detailed Project Report (DPR) for Construction of Aizawl By-pass on Western Side	Mizoram PWD	5,00,000
Dr. Bijayananda Mohanty	Technical & Economic Appraisal of Detailed Project Report (DPR) for Improvement and Strengthening of Tuirial Bamboo Link Road (from Tuirial Airfield to North Chaltlang)	Mizoram PWD	3,00,000
Dr. Bijayananda Mohanty	Technical & Economic Appraisal of Detailed Project Report (DPR) for Improvement and Strengthening of Saiphai Bamboo Link Road (from Lengpui to Saiphai Bamboo Plantation)	Mizoram PWD	3,00,000
Dr. Ricky Lalthazuala	Structural Redesign of T-beam bridge at Damdai River	Mizoram PWD	4,72,000
Dr. Ricky Lalthazuala	Technical Appraisal of Detailed Project Report (DPR) for Construction of Aizawl By-pass on Western Side	Mizoram PWD	5,00,000
Dr. Ricky Lalthazuala	Technical & Economic Appraisal of Detailed Project Report (DPR) for Improvement and Strengthening of Tuirial Bamboo Link Road (from Tuirial Airfield to North Chaltlang)	Mizoram PWD	3,00,000
Dr. Ricky Lalthazuala	Technical & Economic Appraisal of Detailed Project Report (DPR) for Improvement and Strengthening of Saiphai Bamboo Link Road (from Lengpui to Saiphai Bamboo Plantation)	Mizoram PWD	3,00,000

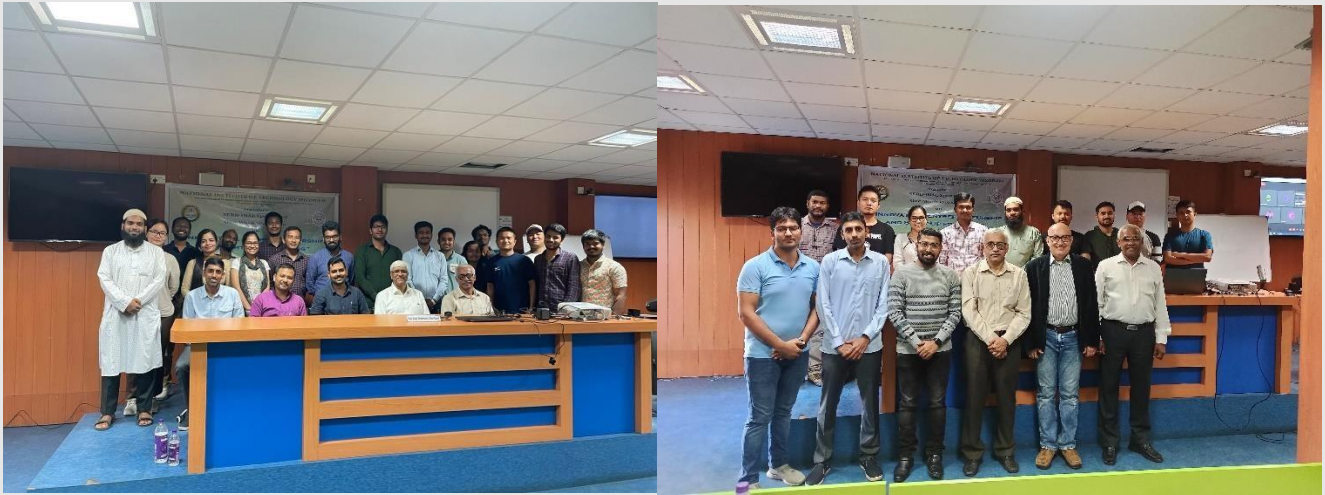
EVENTISTRY



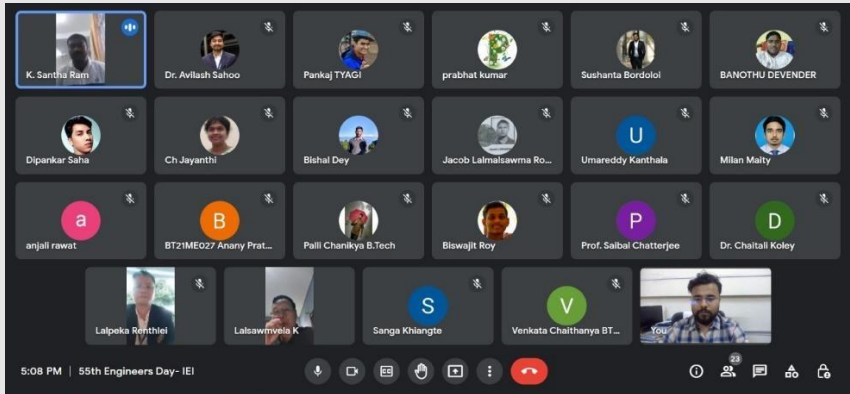
FDP on Cognitive Skills, Design and Critical Thinking



Workshop on Innovation, Entrepreneurship and Start-up for Young



Resource Persons and Offline Participants and the Coordinators of the Workshop on *Innovation, Entrepreneurship and Start-up for Young*



Celebration of 'Engineer's Day' on 15th September 2022 in association with Institute of Engineers, India, IE(I)



॥ विज्ञानं जानाति, नवोन्मेषण करोति॥

«SCIENCE IS ABOUT KNOWING, INNOVATION IS ABOUT DOING»