



राष्ट्रीय प्रौद्योगिकी संस्थान मिजोरम  
NATIONAL INSTITUTE OF TECHNOLOGY MIZORAM



# THE COMPENDIUM

SEPTEMBER 2023

VOLUME II, ISSUE III

# Director's Message



**Prof. S. Sundar  
Director  
NIT Mizoram**

*Greetings !!*

*This is the Third issue of the Second 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 September 2023.*

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

*I wish all the readers a happy reading !!*



# Editor~ In~ Chief's Message



Dr. Shuchi  
Associate Professor  
Dept. of HSS (English)

*Warm Greetings !!*

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

*The highlights of the current issue encompass academic & outreach activities and a wide spectrum of research & development for the month of September 2023.*

*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 help and technical support.*

*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**



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**Mr. K. Santha Ram**

**Research Scholar**

**Dept. of HSS (English)**

## RESEARCH AND DEVELOPMENT

### ❖ WORKSHOPS/CONFERENCES/STTP/FDP/EXTRA-MURAL LECTURES CONDUCTED

#### ✚ An Overview of Computational Electromagnetics for Power Engineers

NIT Mizoram organized an Extra-mural lecture on the topic “An Overview of Computational Electromagnetics for Power Engineers” on 19<sup>th</sup> September 2023. The speaker for the lecture was Prof. Udaya Kumar, IISc Bangalore, India.

**National Institute of Technology Mizoram**  
An Institute of National Importance under Ministry of Education (Shiksha Mantralaya), Govt. of India  
Chaltlang, Aizawl, Mizoram - 796012, INDIA

Presents  
**An Extramural Talk**  
on  
**An Overview of Computational Electromagnetics for Power Engineers**

**Speaker**  
  
**Prof. Udaya Kumar**  
Dept of Electrical Engineering  
IISc Bengaluru

**Patron**  
  
**Prof. S. Sundar**  
Director  
NIT Mizoram

Organized by  
**NIT Mizoram**

Time: **03:00 PM (IST)**  
Date: **September 19, 2023**

Meeting ID will be Provided to Registered Participants

Registration Link:  
<https://forms.gle/gvTWPhdDTQuAzSwCA>

**No Registration Fees**

**\*Last Date and Time of Registration\***  
**19.09.2023 Till 11:00 AM**

#### ✚ Role of Engineers to Convert Technical Problems to Good Business Solutions

NIT Mizoram organised an extra-mural lecture on the topic of “Role of Engineers to Convert Technical Problems to Good Business Solutions” on 29<sup>th</sup> September 2023. The speaker for the lecture was Dr. Debabrata Chattopadhyay, Senior Energy Specialist, World Bank, Washington DC.

**National Institute of Technology Mizoram**  
An Institute of National Importance under Ministry of Education (Shiksha Mantralaya), Govt. of India  
Chaltlang, Aizawl, Mizoram - 796012, INDIA

Presents  
**An Extramural Talk**  
on  
**Role of Engineers to Convert  
Technical problem to Good Business  
Solutions**

Organized by  
**NIT Mizoram**

Time: **06:00 PM (IST)**  
Date: **September 29, 2023**

Meeting ID will be Provided to Registered Participants

Registration Link:  
<https://forms.gle/ERnN75SbYpDnfzuT7>

\*Last Date and Time of Registration\*  
**29.09.2023 Till 11:59 AM**

**Speaker**  
  
**Dr. D. Chattopadhyay**  
Senior Energy Specialist  
World Bank

**Patron**  
  
**Prof. S. Sundar**  
Director  
NIT Mizoram

**No  
Registration  
Fee**

### ❖ PUBLICATION (Journal/Conference/Book Chapter)

1. Kumar Raja Vanapalli, Rajarshi Bhar, Sunil K Maity, Brajesh K Dubey, Sandeep Kumar, Vinod, "Life cycle assessment of fermentative production of lactic acid from bread waste based on process modelling using pinch technology", Science of The Total Environment (<https://doi.org/10.1016/j.scitotenv.2023.167051>).
2. Soumyadeep Maity, Subhajit Maur, Sovan Dalai, Biswendu Chatterjee, Saibal Chatterjee, "Electromagnetic and Thermal Modelling of a Dry-Type Transformer using FEMM and ANSYS Maxwell", 2nd IEEE International Conference on Industrial Electronics: Developments & Applications, Manipur, India.
3. Soumyadeep Maity, Pradipta Ghosh, Subhajit Maur, Biswajit Chakraborty, Sovan Dalai, Biswendu Chatterjee, Saibal Chatterjee, "Effects of Standard and Non-standard Lightning Impulse on Dry-type Nomex Insulation Samples", 2nd IEEE International Conference on Industrial Electronics: Developments & Applications, Manipur, India.
4. Chandan Kumar, Biswarup Ganguly, Debangshu Dey, Saibal Chatterjee, "A Deep Learning Framework for Noise Elimination of Partial Discharge Signals", 2nd IEEE International Conference on Industrial Electronics: Developments & Applications, Manipur, India.
5. Debasis Chatterjee, Pabitra Kumar Biswas, Chiranjit Sain, Amarjit Roy and Furkan Ahmad, "Efficient Energy Management Strategy for Fuel Cell Hybrid Electric Vehicles Using Classifier Fusion Technique", IEEE Access (10.1109/ACCESS.2023.3312618).



6. Suraj Gupta, Pabitra Kumar Biswas, “State Space Formation and Fuzzy Logic Control Based Performance Analysis of DC Motor Drives” IEEE Conference on Circuit, Power and Intelligent Systems, 2023 (CCPIS 2023).
7. Rozamlia, Jackson Gurung, Ajmal Koya Pulikkal, “Conductometric, Tensiometric and Spectroscopic Studies on the Interaction of Congo Red with Dodecyl Trimethylammonium Bromide: Effects of Electrolyte and Non-Electrolyte”, Journal of Molecular Liquids, (10.1016/j.molliq.2023.123094).
8. Dileep Kumar, Javed Masood Khan, Mihalj Posa, Ajmal Koya Pulikkal, Bidyut Saha, and Ajaya Bhattarai, “Effect of Quaternary Ammonium Gemini Surfactant Solution on the Rate Constant of the Ninhydrin-Lysine Reaction”, Industrial & Engineering Chemistry Research (10.1021/acs.iecr.3c02499).

### ❖ WORKSHOPS/CONFERENCES/STTP/FDP/EXTRA-MURAL LECTURES ATTENDED

1. Dr. P. K. Biswas (Dept. of Electrical Engineering) attended IEEE Conference on Circuit, Power and Intelligent Systems, 2023 (CCPIS 2023), Silicon Institute of Technology, Bhubaneswar, Odisha, from 01<sup>st</sup> to 3<sup>rd</sup> September 2023.
2. Soumyadeep Maity (Project Staff PhD student) attended the 2nd IEEE International Conference on Industrial Electronics: Developments & Applications, Manipur, India from 29<sup>th</sup> to 30<sup>th</sup> September, 2023.
3. Chandan Kumar (Full time Regular PhD student) attended the 2nd IEEE International Conference on Industrial Electronics: Developments & Applications, Manipur, India from 29<sup>th</sup> to 30<sup>th</sup> September 2023.

## **FACULTY AWARDS & ACHIEVEMENTS**

### **1. EXPERT/INVITED TALK /SESSION CHAIRED IN WORKSHOP/STTP/CONFERENCE:**

1. Prof. Ajmal Koya Pulikkal (Dept. of Basic Sciences) is awarded the Best Teacher Award-2023.
2. Prof. Saibal Chatterjee (Dept. of Electrical Engineering) had been invited as a member of BoS on 10<sup>th</sup> September for the M.Tech-High Voltage Engineering Program, Department of Electrical Engineering, UCEK (A), JNTU-Kakinada.
3. Prof. Saibal Chatterjee (Dept. of Electrical Engineering) has taken over as the Chairman of the Institution of Engineers (India) Mizoram State Centre for the term of 2023-25 from 26<sup>th</sup> September 2023.
4. Dr. P. K Biswas (Dept. of Electrical Engineering) delivered a keynote at the RERF Seminar titled Electromagnetic Levitation System and Its Innovative Applications on 29<sup>th</sup> September 2023.
5. Dr. P. K. Biswas (Dept. of Electrical Engineering) chaired a session ICICASEE-2023 GKCIET on 23<sup>rd</sup> September 2023.

## ❖ RESEARCH OUTLOOK @ NIT MIZORAM

Sushil Joshi, a full-time research scholar in Physics (Dept. of BS & HSS) working on Dielectric and multiferroic materials. His work is focused on analyzing the different properties of material which can be used for device application. Multiferroic materials are essential because of their multifunctional nature. They combine electric and magnetic properties in a single phase. His main objective is to produce a material that should be eco-friendly. A multiferroic material can be used in memory devices, spintronic devices, magnetic sensors, actuators, and other electronic devices. With this motive, a step has been taken to improve the quality of the material, which can enhance the properties of pre-existing materials that are being used for different devices.



गुरुर्ब्रह्मा गुरुर्विष्णुः गुरुर्देवो महेश्वरः।  
गुरुः साक्षात् परं ब्रह्म तस्मै श्री गुरवे नमः॥