GNIT

NEWSLETTER · ISSUE 01

DEPARTMENT OF ELECTRICAL ENGINEERING

ELECTRO IMPRESSION

Guru Nanak Institute of Technology

An Autonomous Institute, Affiliated to MAKAUT · Approved by AICTE· NAAC A+

Academic Highlights

JANUARY – JUNE 2023

"Powering ideas, engineering the future — a chronicle of learning beyond the classroom."

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About ElectroImpression

Electro Impression is the biannual newsletter of the Department of Electrical Engineering, Guru Nanak Institute of Technology, chronicling departmental activities, faculty and student accomplishments, and academic milestones.

Editorial Faculty Members

1. **Mr. Amit Debnath (Asst. Prof., Dept. of EE, GNIT)**
2. **Mr. Shyamal Roy (Asst. Prof., Dept. of EE, GNIT)**

Editorial Student Members

1. **Kaushik Maji (2nd year, EE, GNIT)**
2. **Diya Barui (2nd year, EE, GNIT)**
3. **Arnab Dutta (3rd year, EE)**
4. **Prathit Bandopadhyay (3rd year, EE)**

FROM THE LEADERSHIP

Messages



MESSAGE FROM PRINCIPAL

I am delighted to know that the Department of Electrical Engineering, GNIT has brought out its 1st Newsletter ***"ElectroImpression,"*** *for the academic year Even–2023.*

The newsletter provides a glimpse into the department's academic achievements, technical activities, innovations, and various student-centric initiatives. It reflects the dedication and collective efforts of our faculty members and students in pursuing excellence.

I congratulate the entire team for their sincere efforts and commend the editorial board for presenting the department's accomplishments so effectively. I wish the Department of Electrical Engineering continued success and greater achievements in the years ahead.

Prof. (Dr.) Santanu Kr. Sen
Principal, GNIT



MESSAGE FROM HOD (EE)

"It gives me immense pleasure to pen this prologue for the newsletter ***"ElectroImpression,"*** *which beautifully captures the achievements, activities, innovations, and milestones of the Department of Electrical Engineering. This newsletter reflects the vibrant academic environment, creative spirit, and continuous pursuit of excellence demonstrated by our students, faculty members, and staff.*

Through its pages, ***"ElectroImpression"*** *brings together the accomplishments, experiences, events, research initiatives, technical activities, and co-curricular engagements that have enriched the life of our department. It serves not only as a record of our journey but also as a platform to showcase the talent, dedication, and enthusiasm of our students and faculty.*

I extend my heartfelt congratulations to all the contributors and the editorial team for their sincere efforts, creativity, and commitment in bringing out this wonderful edition. Their collective contribution has transformed the newsletter into a meaningful representation of the department's academic and professional journey."

Dr. Barnali Kundu
HOD, EE Department

Vision, Mission, PEOs & PSOs

OUR VISION

To produce new generation technologists and entrepreneurs with innovation and advanced research by inculcating world class education to meet industry expectations and impart sustainable growth of the society in global perspective.

Mission

DM1 To impart quality education and innovative teaching learning methodologies.	**DM2** To develop professionals with the ability of critical thinking and innovativeness to face the real-life challenges in their respective domain.
DM3 To inculcate an urge of entrepreneurship, research and pursue higher studies.	**DM4** To imbibe the spirit of moral values and ethics for the sustainable growth of the society.

Program Educational Objectives (PEOs)

PEO1 To implant strong foundation in Science, Mathematics and Electrical Engineering to become successful professionals.	**PEO2** To impart knowledge on emerging technologies and entrepreneurship skills to produce future leaders.
PEO3 To train students in developing ethical attitudes, strong communication skills and capacity to relate engineering issues in social and environmental context.	**PEO4** To facilitate opportunity to work in a team in interdisciplinary projects for building leadership qualities.

Program Specific Outcomes (PSOs)

PSO1 To explore the ideas, methodologies and cutting-edge technologies in Renewable Energy and Electric Vehicles for gaining competence to solve energy related problems.	**PSO2** To analyze, design and provide an engineering solution applying knowledge of Embedded System, Smart Grid, Power Electronics and Electric Drives.	**PSO3** To use modern software tools for simulation, analysis and designing electrical and electronic Systems.

BEYOND THE CLASS ROOM

Industrial Visits

INDUSTRIAL VISIT · 2 FEB 2023

The Department of Electrical Engineering organized a **One Day Industrial Visit** for 3rd year EE students at **West Bengal Power Development Corporation Limited (WBPDCL), Kolaghat Thermal Power Station**, Kolaghat, Purba Medinipur.





INDUSTRIAL VISIT · 13 MAR 202

The Department organized an Industrial Visit for 3rd year EE students at the **MSME Tool Room, Bon Hoogly, Kolkata**, focused on PLC based production units.





INDUSTRIAL VISIT · 22 MAY 20

An Industrial Visit for 2nd year EE students was organized at the **Carriage & Wagon Workshop, Eastern Railway, Liluah**.





KNOWLEDGE SESSIONS

Seminars, Workshops & Conferences

SEMINAR · 2 MAY 2023

A seminar entitled **"Electrical Mobility and Renewable Energy Development Infrastructure for Budding Entrepreneurs"** was organized in association with IIC and the Entrepreneurship Development Cell, held in the Seminar Hall.





SEMINAR · 8 MAY 2023

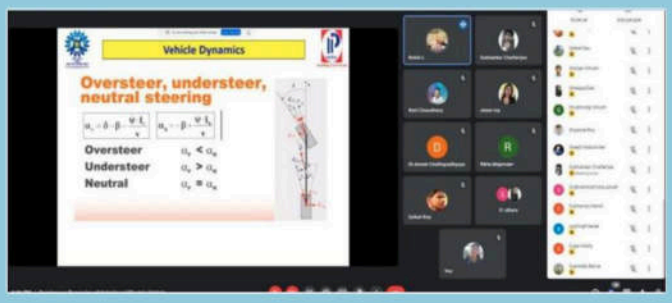
A seminar entitled **"Electrical Operation and Maintenance System of Indian Railways"** was organized in association with IIC-GNIT and EDC-GNIT at the Seminar Hall.





HYBRID SEMINAR · 26 MAY 202

A Hybrid Seminar entitled **"Dynamics of Hybrid and Electric Vehicle"** was organized in the Seminar Hall, coordinated by Dr. Barnali Kundu (HOD, EE) and Dr. Debasree Saha (Assoc. Prof., EE), with speaker Dr. Robindro Lairenlakpam, Senior Principal Scientist, CSIR – Indian Institute of Petroleum, Dehradun.





RESEARCH

Publications

Journal Publications

- **Sagnik Datta, Aveek Chattopadhyaya, Surajit Chattopadhyay, Arabinda Das** — "ANN-Based Statistical Computation for Remote End Fault Monitoring of the IEEE 14 Bus Microgrid Network", *IETE Journal of Research, Taylor & Francis*, 7th March 2023, pp. 1–15. DOI: 10.1080/03772063.2023.2182371
- **Barnali Kundu**, Subhamoy Dey, Souvik Pal, Aniruddha Sengupta, Manoshi Biswas, "Automated Transmission Line Fault Detection using Distance Locator", American Journal of Advanced Computing, American Journal of Advanced Computing, Volume 2, Issue 1, April 2023, pp. 1-5. (ISSN NO:2368-1209).
- **AveekChattopadhyaya**, "ANN-Based Statistical Computation for Remote End Fault Monitoring of the IEEE 14 Bus Microgrid Network", IETE Journal of Research, Taylor & Francis, 07th March, 2023, pp. 1-15, DOI: 10.1080/03772063.2023.2182371.
- **Susovan Dutta,Barnali Kundu, Rikta Majumder,** "GSM Based Smart Power Monitoring",AMERICAN JOURNAL OF ADVANCED COMPUTING, Volume 1, Issue 1, https://doi.org/10.15864/ajac.21007.

International Conferences

- **Susovan Dutta, Bishaljit Paul, BarnaliKundu,** "Modelling Impact Analysis of EVCSL and Effect of Renewable Mix in Distribution Grid", Fifth International Conference on Electrical, Computer and Communication Technologies (ICECCT), Erode, India, 22-24 February 2023. Published in IEEE Digital Library, DOI: 10.1109/ICECCT56650.202310179760.
- **Barnali Kundu, Susovan Dutta, Debasree Saha, "Cloud Based Intelligent Accident Proof Helmet and Detect State ofIntoxication",** 3rd International Conference on Artificial Intelligence and Smart Energy (ICAIS 2023), JCT College of Engineering and Technology, 2-4, February 2023.

National Conference Publications

- **Susovan Dutta, Barnali Kundu, Bishaljit Paul, Chandan Kumar Chanda** — "Modelling Impact Analysis of EVCSL and Effect of Renewable Mix in Distribution Grid", *IEEE Technically Co-sponsored International Conference on Electrical, Computer and Communication Technologies (ICECCT 2023)*, 22–24 February 2023.

- **Shyamal Kumar Roy, Suman Ghosh, Madhumita Chakraborty, Amit Debnath, Kaushik Maji, Sushovon Paul** — "Smart Traffic System Using Arduino", *13th Inter-University Engineering, Science & Technology Academic Meet 2023, FOSET*.

- **Subhamoy Dey, Souvik Pal, Aniruddha Sengupta, Manoshi Das, Dr. Barnali Kundu** — "Automated Transmission Line Fault Detection Using Distance Locator", *13th Inter-University Engineering, Science & Technology Academic Meet 2023, FOSET*.

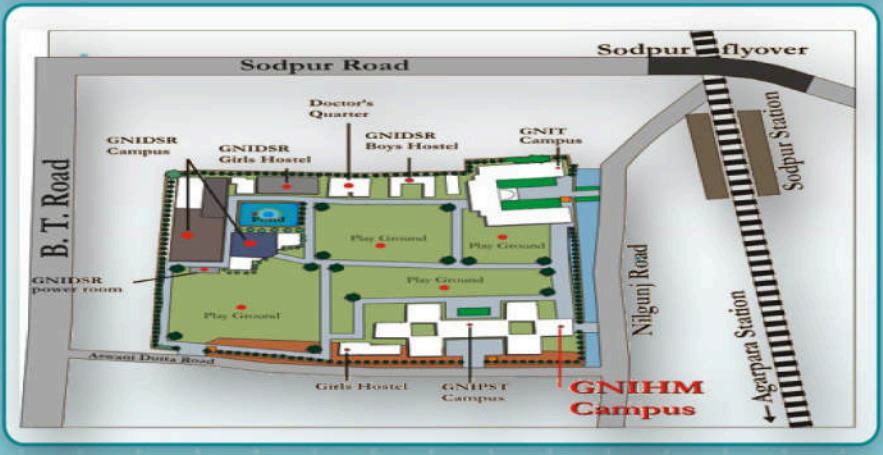
- **Tushar Ghosh, Sahil Mondal, Soumya Das, Amit Debnath, Susovan Dutta** — "Home Automation Using Node-MCU Wi-Fi Module", *13th Inter-University Engineering, Science & Technology Academic Meet 2023, FOSET*.

- **Aditi Maity, Diya Barui, Suman Ghosh, Barnali Kundu Sarkar, Shyamal Kumar Roy, Aveek Chattopadhyaya** — "Optimal Placement of Phasor Measurement Unit for Complete Observability of the Power System", *13th Inter-University Engineering, Science & Technology Academic Meet 2023, FOSET*.

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