



**ARKA JAIN  
University**  
Jharkhand



### Circular

**Ref. No. AJU/AD/ENGG/039/2025-26**

**Date: 19.08.2025**

The expert Lecture on "Fault detection on Transmission line" is going to be jointly organized by Department of Electrical and Electronics Engineering, School of Engineering & IT, and ARKA JAIN University in association with Innovation Council Cell on 30/08/2025 for Diploma 3<sup>rd</sup> Semester EEE Students.

**Link for registration:** <https://forms.gle/Qh5889NAX6twNWxq5>

**Mode of learning:** ONLINE Mode

**Registration fee:** Nil

**Max no. of Participants:** 35

**Last Date for Registration:** 29.08.2025 (till 7:00.P.M)

**Coordinators:**

Prof. Taniya Ghosh([taniya.g@arkajainuniversity.ac.in](mailto:taniya.g@arkajainuniversity.ac.in))

**Convenor:**



Dr. Ashwini Kumar  
Assistant Dean  
School of Engineering & IT  
Arka Jain University, Jharkhand

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## EXPERT LECTURE ON “FAULT DETECTION ON TRANSMISSION LINE”

Date of Event	30.08.2025
Name of the Event	Expert Lecture on “FAULT DETECTION ON TRANSMISSION LINE”
Type of the Event	Skill Development on GENERATION TRANSMISSION & DISTRIBUTION
Conducted by	School of Engineering & IT, ARKA JAIN UNIVERSITY JHARKHAND
Resource Person	Mr.Saptarshi Roy Lecturer, Department of Electrical Engineering Mirmadan Mohanlal Govt Polytechnic, Palashi, WB
Convener	Dr. Ashwini Kumar
Co-Ordinator	Prof. Taniya Ghosh (Assistant Professor)
No. Of Participants	30

### OBJECTIVE:

The objective of the expert lecture was to provide participants with a comprehensive understanding of **fault detection techniques** and their critical role in ensuring the safety, reliability, and efficiency of power systems. The session aimed to:

1. **Introduce fundamental concepts** of faults in power systems, including their causes, types, and effects on generation, transmission, and distribution networks.
2. **Explain modern methods and tools** used for fault detection, classification, and location in electrical systems.
3. **Highlight the importance of protection systems**, such as relays, circuit breakers, and automated monitoring technologies in fault mitigation.
4. **Showcase real-world applications** and case studies demonstrating fault detection and protection strategies in smart grids and conventional networks.
5. **Promote awareness of technological advancements**, including the use of artificial intelligence, IoT, and SCADA systems in modern fault diagnosis.
6. **Encourage proactive learning and research** in power system protection and automation to address current and future challenges in electrical infrastructure.

### DETAILS:

An Expert Lecture on Fault Detection Techniques in Generation, Transmission & Distribution Systems was organized by the School of Engineering & IT, ARKA, JAIN University on August 30, 2025. The lecture aimed to provide participants with comprehensive knowledge and technical insights into the fault detection methods essential for maintaining reliability and safety in power systems. The session covered a wide range of topics, including types of faults in electrical systems, protection schemes, fault detection and classification methods, and the application of modern technologies such as SCADA, AI, and IoT in power system fault analysis. The objective of the lecture was to enhance participants' understanding of the significance of fault detection and protection in power generation, transmission, and distribution networks. It also aimed to expose students and faculty to the latest tools, trends, and challenges in developing intelligent and automated fault detection systems used in modern power grids. The event was conducted in online mode via Google Meet, making it accessible to all students. The resource person for the lecture was: Mr. Saptarshi Roy, Lecturer, Department of Electrical Engineering, Mirmadan Mohanlal Govt Polytechnic, Palashi, WB. and this Successfully coordinated by Prof. Taniya Ghosh (Asst. Professor) Dept. of E.E.E., School of Engg. & I.T.

### OUTCOMES:

1. **Improved Conceptual Understanding:** Participants gained a clear understanding of different types of faults in power systems (symmetrical and asymmetrical), their causes, and their impact on system performance.
2. **Knowledge of Detection and Protection Methods:** Attendees were introduced to various fault detection techniques, including traditional protection methods (relays, circuit breakers) and modern approaches using AI, machine learning, and SCADA systems.
3. **Awareness of Technological Integration:** The lecture emphasized how advanced technologies like IoT, artificial intelligence, and real-time monitoring systems are being integrated into fault detection and grid protection strategies.
4. **Practical Insight into Real-World Systems:** Real-life case studies and practical examples helped participants connect theoretical knowledge with actual applications in power generation, transmission, and distribution networks.
5. **Encouragement Toward Research and Innovation:** The session motivated students and researchers to explore fault analysis and protection systems as a potential area for academic projects, research papers, and innovation.
6. **Understanding of Industry-Relevant Skills:** Participants became familiar with essential skills and tools used in the power sector, improving their readiness for industry roles related to power system maintenance, automation, and reliability.
7. **Enhanced Interdisciplinary Awareness:** The lecture highlighted the interdisciplinary nature of fault detection, involving electrical engineering, data science, control systems, and communication technologies.

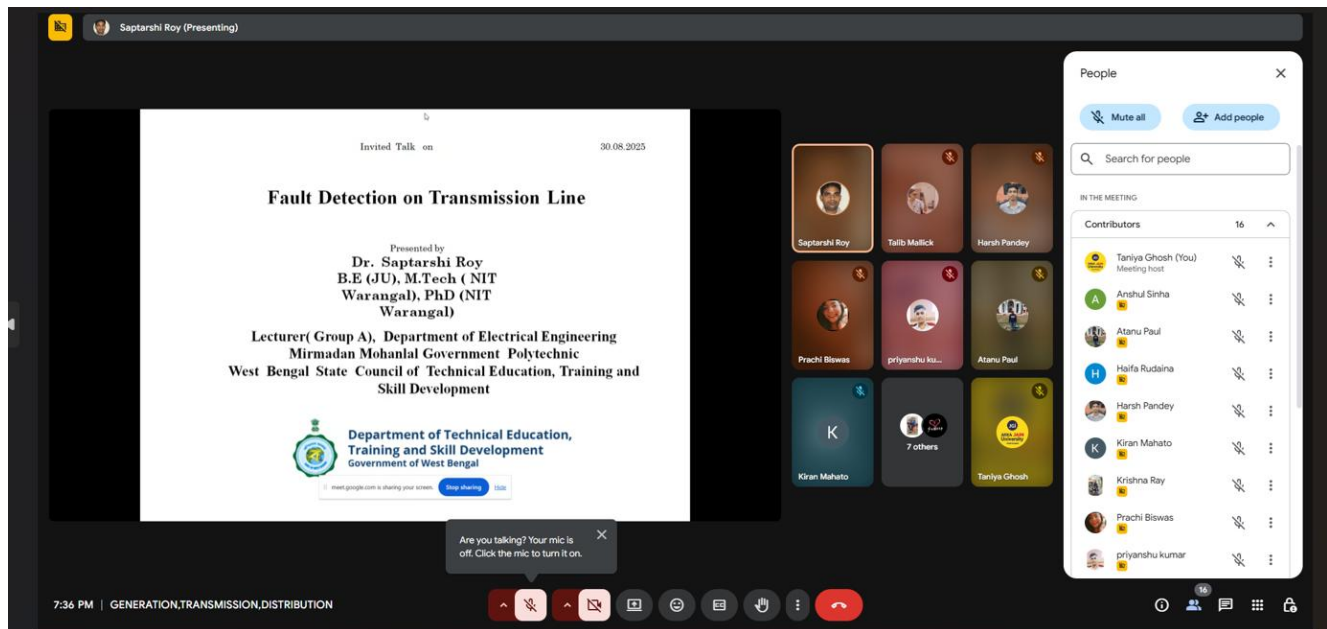
**8. Interactive Learning Environment:** The online format provided a platform for open discussion, queries, and expert interaction, enriching the overall learning experience.

### POSTER OF THE EVENT

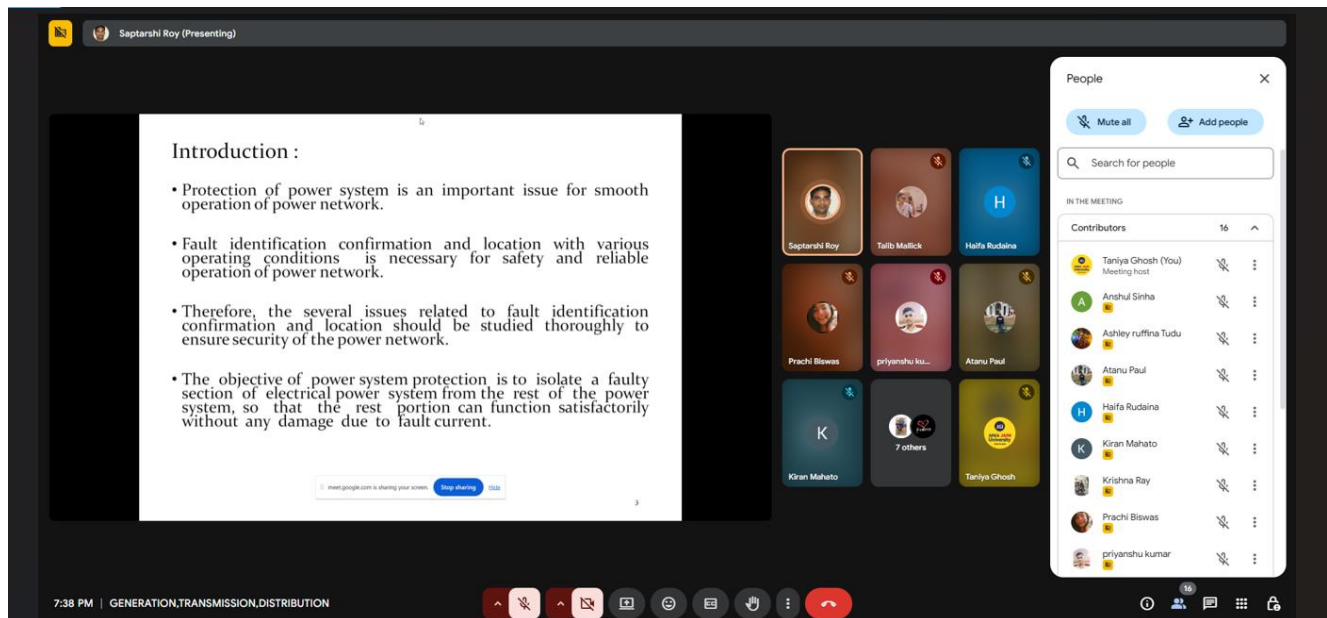


Poster of the Expert Lecture: Fault detection technique

## PHOTOS OF THE EVENT



**Fig 1: Screenshot of the Expert Lecture**



**Fig 2: Screenshot of the Expert Lecture**

## FEEDBACK ANALYSIS PARTICIPANTS ATTENDING THE SESSION

Student Feedback Analysis							
S. no	Description	Rating Scale					Total
		1	2	3	4	5	
1	I'm happy with the amount of information presented in today's sessions.	0	0	0	4	26	30
2	Did the event help you with new learnings or knowledge?	0	0	0	0	30	30
3	The duration of the event was just right. (Not too long or not too short)	0	0	0	29	1	30
4	Would you say the speakers or presenters were knowledgeable?	0	0	0	0	30	30
5	Overall, how satisfied were you with the event?	0	0	0	01	29	30



## LIST OF PARTICIPANTS

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