

Report of an Industry Expert Talk on
“Electrical Power System Design”
Organised by
Department of Electrical and Electronics Engineering
30-12-2020

Organized in association with: IEEE Students Chapter MITS

Submitted by: Dr A V Pavan Kumar, Associate Professor & Head, Dept. of EEE

Resource Person: Mr. Lalit Kotturi, Senior Design Engineer, at Balfour Beatty Kilpatrick, Motherwell, Scotland, UK

Faculty attended:

Dr A V Pavan Kumar, Assoc. Prof & Head, EEE Dept.;
Dr M Vaigundamoorthi, Prof., Dept. of EEE, IEEE College level Coordinator;
Dr M Vijay, Assoc. Prof., Dept. of EEE;
Dr Aurobinda Bag, Sr Asst. Prof, Dept. of EEE;
Dr Sudarshan Swain, Sr Asst Prof., Dept. of EEE;
Mr. N Shyam Sunder, Asst. Prof., Dept. of EEE;
Mr. Siva, Asst. prof., Dept. of EEE.

Students Attended EEE: 30

Venue: Online Microsoft Teams

The Guest lecture started by 3. 30 PM, the speaker **Mr. Lalit Kotturi**, was introduced to the students by Dr A V Pavan Kumar.

The Speaker focused the presentation on job prospective, software and programming languages essential for industry, Substation design, Electrical standards followed in UK and India in electrical design and installation. The key points of the talk are

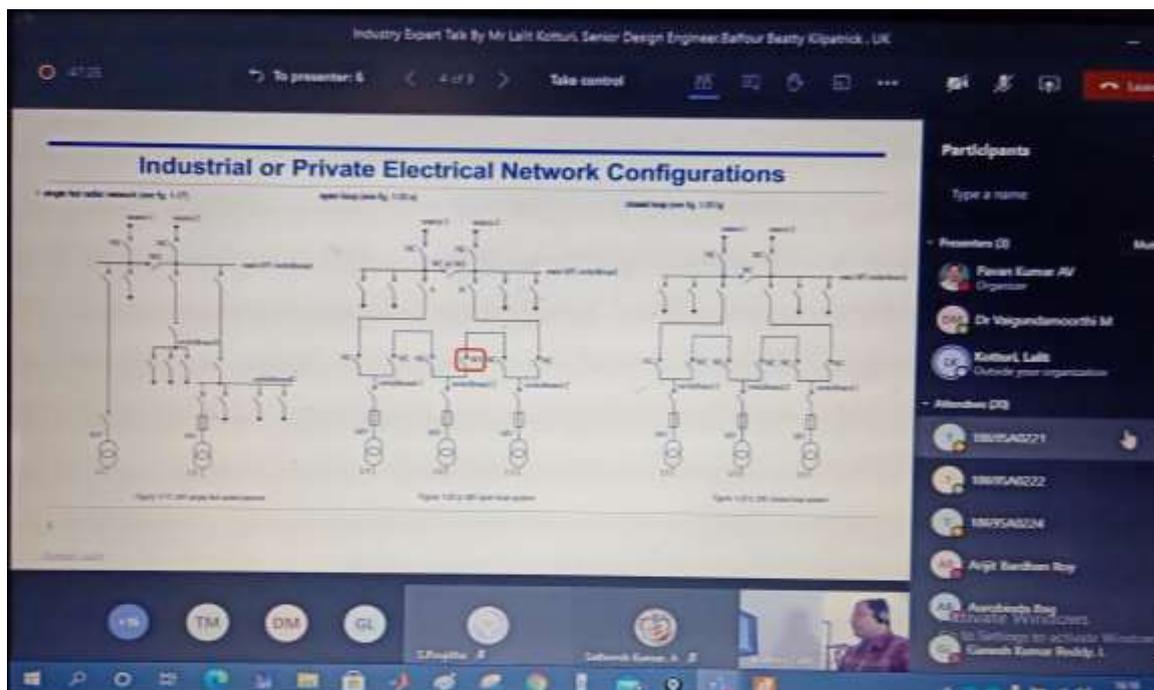
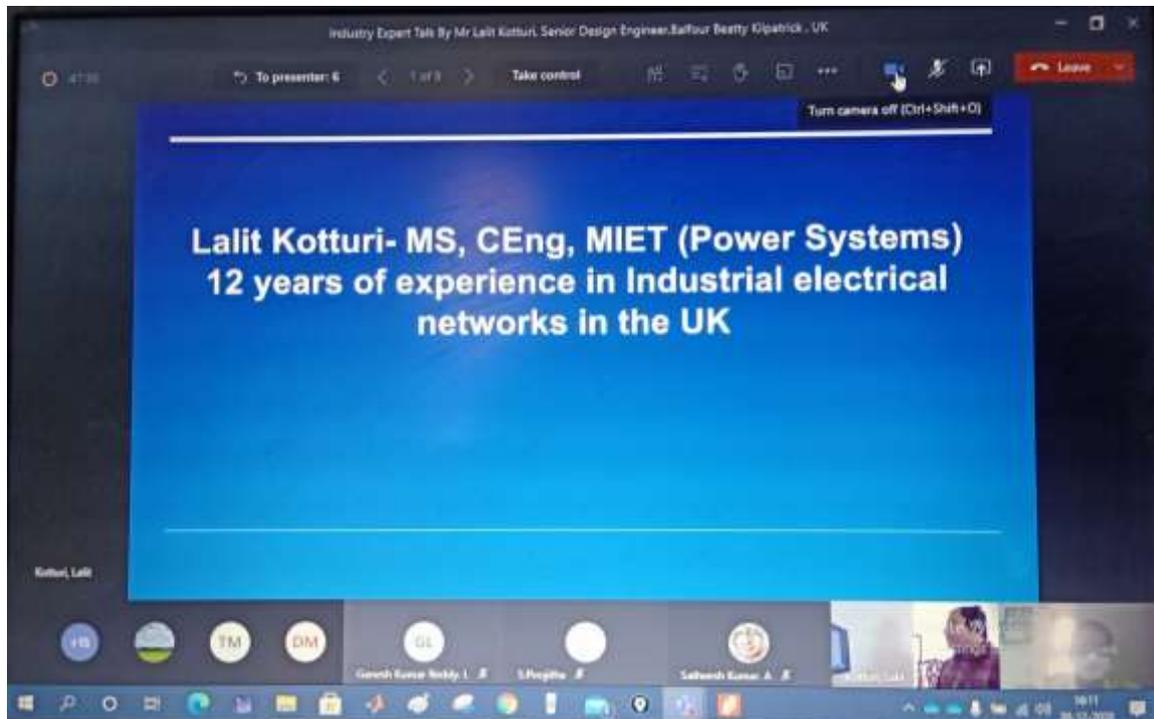
- 1. Overview of Practical Power Industry**
- 2. Job opportunities in Electrical Power system sector**
- 3. Programming skills required for getting job as design engineer in core sector**
- 4. Industry and Private Electrical Network Configuration**
- 5. Industry and Private Electrical Network substations details**
- 6. Industry and Private Electrical Network substations design standards**
- 7. Visual representation of various subsystem equipment and factors involved in selection of components.**
- 8. Design Concept of Indoor and outdoor substation design.**

The session ended with an interactive session with the students followed by vote of thanks by Dr M Vaigundamoorthi, Prof., Dept. of EEE, and IEEE College level Coordinator.

IEEE vtools link: <https://events.vtools.ieee.org/m/253583>

The Link to the recording of the Guest lecture: https://mitsacin-my.sharepoint.com/:v/g/person/eeehod_mits_ac_in/Eegh6UKjeiNCuyDAiG_Pv4B36_RvPUGPvzxU8nb7uEh4Q?e=6atmC5

Photographs:



Industry Expert Talk By Mr Lait Kotturi, Senior Design Engineer Balfour Beatty Kilpatrick, UK

40:43

Take control

Turn camera on (Ctrl+Shift+O)

Industrial or Private Electrical Network

MV/LV Substation Design

- Create SLD (protection and interlocking schemes etc.)
- Demand Load- initial loads can be estimated based on Wim2, request information from sources or from experience.
- MV & LV cable cross sectional area calculations to verify current carrying capacity, & voltage drop using software for LV and hand calculations for MV.
- System studies- Load flow, short circuit studies (IEC 60909) using specialist power system software.
- Substation system earthing and design of buried earth electrode (IEC & IEEE standards)
- Create substation layout drawings (general arrangement details etc.)
- Create equipment specifications, data sheets etc. for tendering.
- Substation Fire Alarm System (specialist vendor or building services engineer)
- Substation Automation (SCADA), IEC 61850 standard.
- Substation building services design- Lighting & small power.

Participants

Type a name

Presenters (2)

- Praveen Kumar KV
- Dr. Valjandharam M

Attendees (20)

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Ajit Banthia Ray

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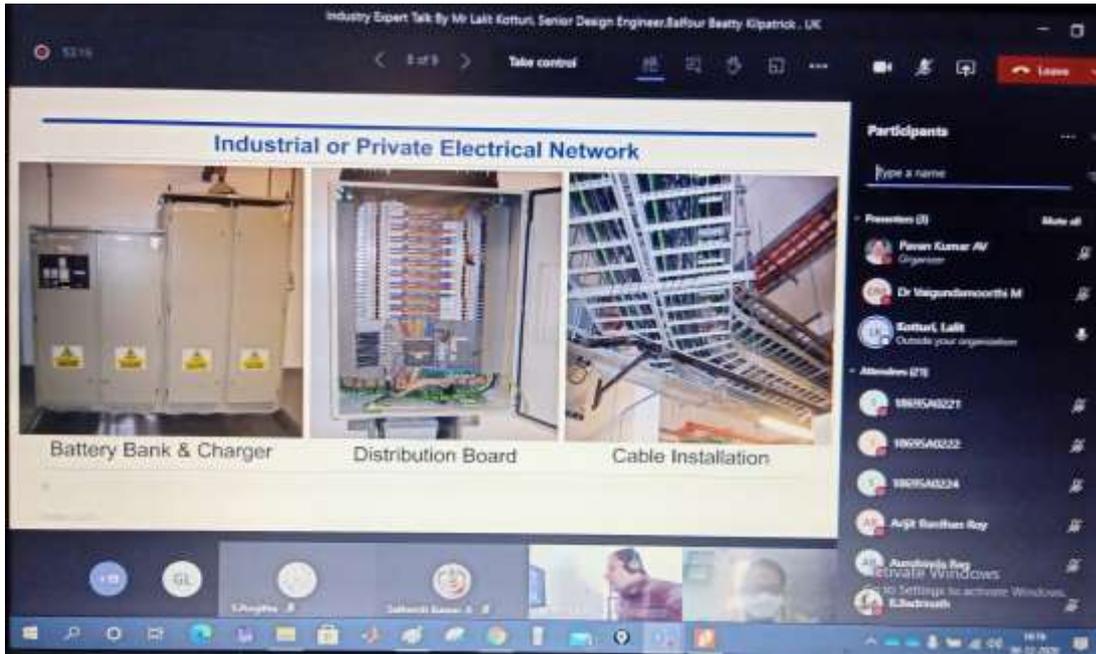
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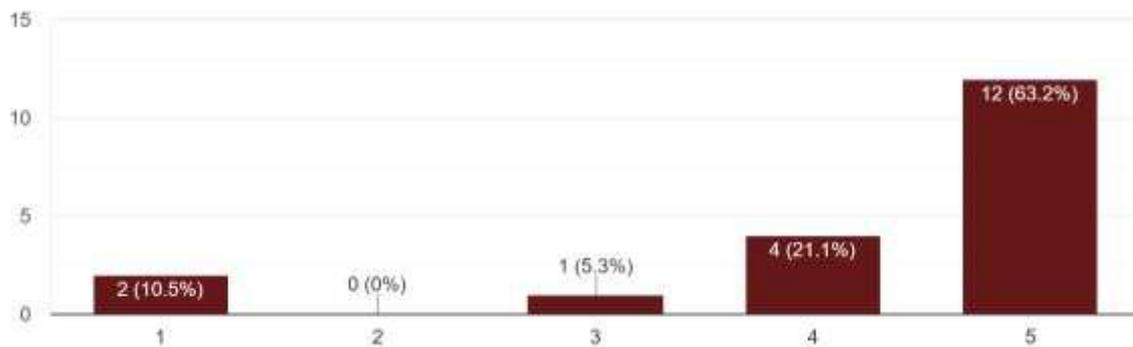
Feedback From the students / attendees

Link for feedback form:

https://docs.google.com/forms/d/e/1FAIpQLSfIKi6jCbViun8Msjz4Mn4Gebtk7gU_hs8DcEn-yhrIcETMCg/viewform?usp=pp_url

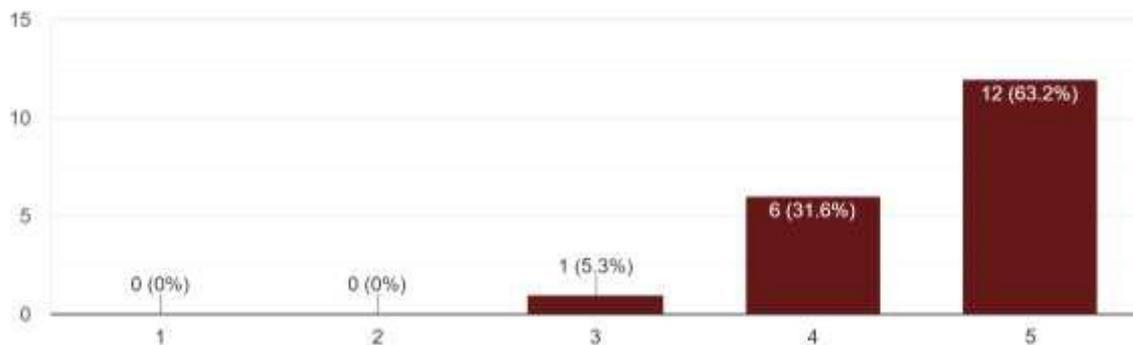
1. The interactive session was scheduled at a suitable time

19 responses



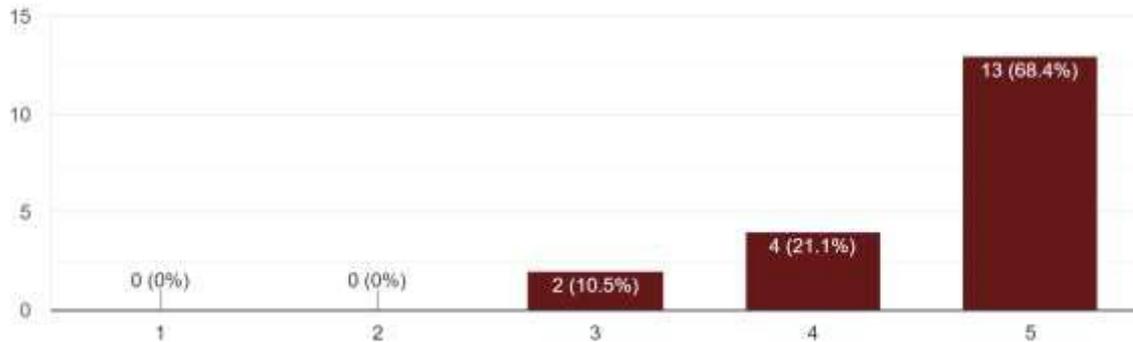
2. The interaction was useful and resource person explanation.

19 responses



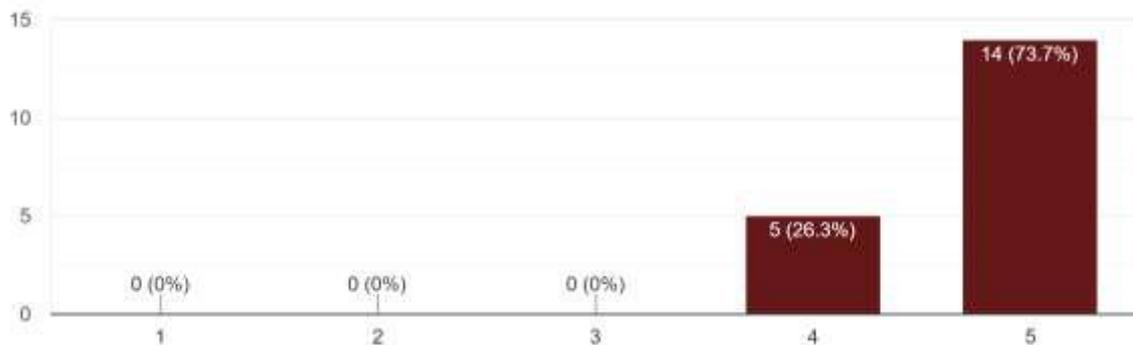
3. The information in the interaction was presented in a clear and organized manner.

19 responses



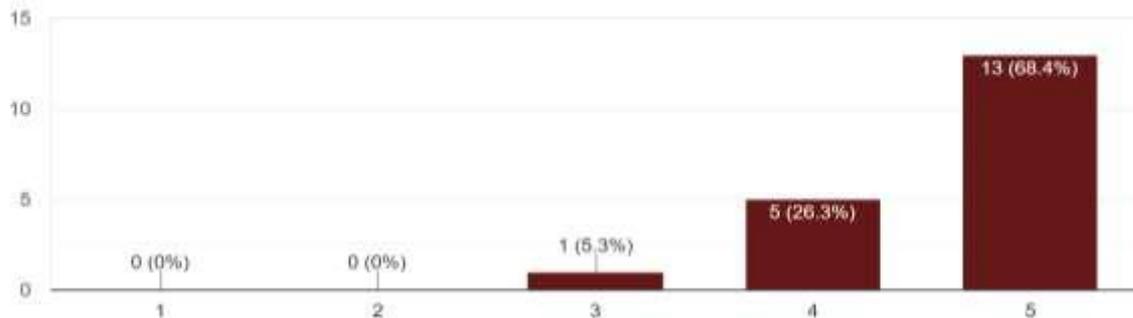
4. The presenter responded to questions in an informative, appropriate and satisfactory manner.

19 responses



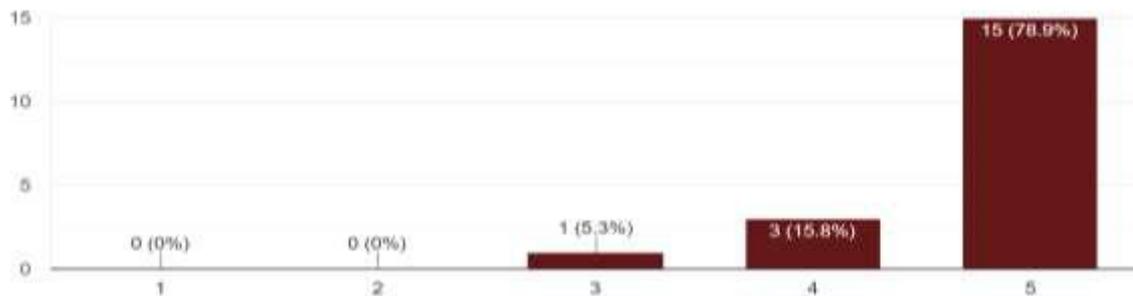
5. your impression of facilities provided by the institute for interaction.

19 responses



6. Overall, the session was informative and valuable.

19 responses



7. In what ways could this interaction have been improved to better suit your needs?

13 responses

- Used in Future Aspects
- Nothing it's fine
- More interaction
- Future career Opportunities
How to survive in current world without Learning code
with our Domain Knowledge?
- Good performance
- It is good interaction
- Practical experience
- Nice interaction

7. In what ways could this interaction have been improved to better suit your needs?

13 responses

- Good performance
- It is good interaction
- Practical experience
- Nice interaction
- Yes
- Everyone will get to know about that
- Good
- Getting better idea on Job opportunities and structure and type of jobs
- Scope of abroad opportunities.

8. Any Other Comments

9 responses

No

Learnt Useful Lecture From the Class

Exams Time.
It's not a perfect time .

Nice

Interactive the students

Good lecture

NA