SEMINAR ANNOUNCEMENT

DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING
COLLEGE OF DESIGN AND ENGINEERING
Website: https://cde.nus.edu.sg/ece

Area: Power & Energy Systems

Host: Associate Professor Khambadkone, Ashwin M

Teaching Seminar

TOPIC	:	**Transmission Line Protection – Distance Relays**
SPEAKER	:	**Dr Shunbo Lei** **Assistant Professor, The Chinese University of Hong Kong, Shenzhen**
DATE	:	**Tuesday, 8 November 2022**
TIME	:	**2.00PM to 3.00PM**
VENUE	:	**Join Zoom Meeting** **https://nus-sg.zoom.us/j/4156763801?pwd=NUwzUWhwdlZlcGt3cmhyTzFld1V0QT09** **Meeting ID: 415 676 3801** **Passcode: 662108**

ABSTRACT

In this lecture, several basic concepts in transmission line protection will be introduced first. Based on that and assuming solid three-phase faults, the working principle of distance relays will be presented. Then we will analyze slightly more complicated cases considering the loading condition and fault impedance, and see how the performance of distance relays is affected by system conditions. The underreach and overreach issues will be specifically introduced. Solving such issues partly and bringing other benefits, zoned distance relays (specifically, the three-zone distance relay in this lecture) will be introduced. Last but not least, we will use an example to see how threshold impedances of a three-zone distance relay are set.

BIOGRAPHY

Dr. Shunbo Lei received his B.E. degree from Huazhong University of Science and Technology in 2013, and Ph.D. degree from The University of Hong Kong in 2017. He was a visiting scholar with Argonne National Laboratory from 2015 to 2017, a postdoctoral researcher with The University of Hong Kong from 2017 to 2019, and a research fellow with the University of Michigan-Ann Arbor from 2019 to 2021. He is currently an assistant professor at The Chinese University of Hong Kong, Shenzhen. His research interests lie broadly in power and energy, optimization and learning.

He has published over 50 research articles, including 2 ESI Top 1% Highly Cited Papers and 1 Wiley Top Downloaded Paper. He is currently serving as an associate editor for IEEE Transactions on Smart Grid, a lead guest editor for IET Renewable Power Generation, the secretary for IEEE PES Loads Subcommittee, the chair for IEEE PES Task Force on FlexGEB to Enhance Electric Service Resilience, and an advisor for IEEE PES Task Force on Datasets for BTM DERs.

He received the IEEE Transactions on Smart Grid Top 5 Outstanding Papers Award (2019-2021), IEEE PES General Meeting Best Conference Papers Award (2022), IEEE Transactions on Smart Grid Best Reviewers Award (2018, 2019 and 2021), and the Netherlands' 4TU Centre for Resilience Engineering-Young Resilience Fellowship (2021).