



## **UI-ASSIST STUDENT WEBINAR SERIES**

*Thursday, 18<sup>th</sup> February 2021, Virtual Meeting*

*Time: 11:00 AM (IST)*

### **“Adaptive Protection Scheme for Microgrid”**

**Presenter: Nikhil Kumar Sharma, Research Scholar, RTDS Lab  
Indian Institute of Technology Bhubaneswar, India**



#### **About the Presenter:**

Nikhil Kumar Sharma received the B.Tech degree in Electrical Engineering from National Institute of Technology Raipur, India, M.Tech degree in Power System Engineering from Indian Institute of Technology Bhubaneswar, India. Presently, he is pursuing PhD under the supervision of Dr. S. R. Samantaray from RTDS Lab, School of Electrical Sciences, Indian Institute of Technology Bhubaneswar. His major research interests are distribution system planning, renewable energy resources, microgrid protection, including relay coordination and application of PMUs and WAMS in microgrids.

#### **Abstract:**

The integration of renewable sources or distributed generation (DG) sources to the existing power distribution network introduced the revolutionary concept of the microgrid. However, the operation and controlling principle of the microgrid is different from the existing power distribution grid and brings serious protection challenges. The existing relaying schemes are not sufficient to provide effective microgrid protection under these changing environments. This webinar will be focussed on the challenges imposed by the DGs on the protection schemes, which can affect the performance of the existing overcurrent, distance and differential relaying schemes. Further, an adaptive impedance-based protection technique will be presented as a step towards the development of fast and reliable protection scheme for the microgrid.