



UI-ASSIST STUDENT WEBINAR SERIES

Thursday, 10/12/2020, Virtual Meeting
Time: 08:00 p.m. (IST) / 09:30 a.m. (EST)

“Harmonic stability analysis and resonance investigation of power-electronized power system”

**Presenter: Narendra Babu Y, Research Scholar,
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About the Presenter:

He received the B.E. degree in Electrical Engineering from PESCE Mandya, Karnataka, in 2012 and M.Tech. degree in power-electronics from PESIT, Bangalore, in 2015. During his Master's he was with Schneider Electric R & D, UPS Business Unit-Bangalore as Research Intern. Later, he worked as the Engineer-Design Support at Schneider Electric R & D, solar inverter division-Bangalore for 2 years. He is currently pursuing the Ph.D. degree from IIT Roorkee. His research interests are stability analysis and control of grid connected parallel inverters, investigation of resonance and harmonic instability in AC microgrid.

Abstract:

The conventional synchronous generators in traditional power system exhibits large time constants due to mechanical inertia of their rotating mass. In case of inverter fed power system, the network dynamics are getting altered due to lower inertia exhibited by power electronic converters. Thus, inverter fed power system appears more inductive or capacitive due to the converter filters and distribution system components, making the network more likely to be resonant or oscillatory in nature. In this context, characteristics of such system in terms of resonance and harmonic stability will be discussed in the student webinar. Further, in order to understand the stability issues, low frequency instability due to inverter-grid interactions will be explained in detail. The ongoing work will also be highlighted.