Electric Power and Power Electronics Institute

WEEKLY SEMINAR SERIES – SPRING 2016
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BASICS OF POWER SYSTEM OPERATIONS – PART 4

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Abstract

Power Systems deals with Generation, Transmission, Distribution and Utilization of electric power. Power Systems have grown in size and requires sophisticated automation systems to management them in order to ensure reliable power to the consumers. Two-part series of talks will provide some basics of Energy Management Systems (EMS) and Distribution Automation Systems (DAS) which are critical components in operating power systems. EMS system is an important component in any Power System Control Center which is used to operate the Transmission system. This talk will provide the basics of EMS and provides details of Supervisory Control and Data Acquisition (SCADA) System and some of the Advanced Network Application Functions such as State Estimation (SE), Contingency Analysis (CA), etc., which play a key role in reliable and secure operation of the power grid.

Biography

Dr. Sarma Nuthalapati obtained his bachelors and masters degrees from NIT Warangal, India, in 1983 and 1986 respectively. He obtained his Ph.D. degree from Indian Institute of Technology, Delhi, India in 1995. He worked at ERCOT for more than 8 years in the Advanced Network Applications Group in its Operation Department. Dr. Sarma is involved in organizing several panel sessions at the IEEE PES Society General Meetings. He is currently the Chair of the IEEE Task Force on Real Time Contingency Analysis. Dr. Sarma is also a member of the NERC Standards Authorization Request (SAR) Drafting Team on 'Project 2009-02 Real-Time Monitoring and Analysis Capabilities' and a member of the NERC Synchrophasor Subcommittee (SMS). He is a Member of the CIGRE Working Group B2.59 on 'Forecasted Line Ratings' and IEEE Task Force on 'Predicting Overhead Line Thermal Ratings'. He is also active at the NASPI Working Group meetings and was recently given NASPI Control Room Solutions Task Team Most Valuable Player (MVP) Award for being a leading organizer and contributor to the CRSTT and the NERC Synchronized Measurement Subcommittee and a public champion for Synchrophasor Technology'. Earlier he served as Secretary and Vice-Chair of the IEEE Distribution Automation Working Group. He is a senior member of IEEE and a member of IEEE Power and Energy Society (PES). He is also an IEEE PES Distinguished Lecturer.