

Electric Power and Power Electronics Institute Smart Grid Center

JOINT INVITED SEMINAR

Monday, November 14th, 2016, 11:00am – 12:00pm, WEB 236C

Managing Uncertainties of the Future Grid

Or

“Keeping the Lights on – Yesterday, Today, and Tomorrow!”

Dr. Jay Giri

Director – Power Systems Technology and Strategic Initiatives
GE Grid Solutions

Abstract

Managing the future grid will require creative, innovative solutions. Uncertainties in the grid are increasing due to the growth of less predictable & reliable renewable generation resources, demand response programs, distributed generation, microgrids, potential cyber-security issues and the aging infrastructure.

Energy Management Systems (EMS) have been deployed for decades at utility control centers to manage the electricity grid in real-time. Today these EMS capabilities are poised to be enhanced quite dramatically with growth of synchrophasor PMU measurements. Solutions to decentralize management of the grid are also being introduced – these include Distribution Management Systems, Substation Automation and advances in grid control devices. These new solutions will help us manage the uncertainties and challenges of the future smart grid.

Biography

Jay Giri is Director of Power Systems Technology and Strategic Initiatives at GE Grid Software Solutions in Redmond, Washington. He leads a team of power system engineers who deliver generation control, market applications and synchrophasor/phasor measurement unit (PMU) applications to control centers. He is a liaison for university research activities and an affiliate professor at the University of Washington.

In 1978, Jay and 11 other engineers co-founded Energy System Computer Applications (ESCA). Over time, ESCA became Alstom Grid in 2010 and GE Grid Solutions in 2015. Jay designed and implemented the original software for the ESCA automatic generation control (AGC) and dispatcher training simulator (DTS) power system simulation functions. Today this AGC controls over 50% of North American generation as well as generation in many other countries, and the DTS is one of the predominant simulators used by control centers worldwide.

He has a PhD from Clarkson University in New York and a B.Tech from the Indian Institute of Technology (IIT), Madras. In 2002, he was elected IEEE Fellow: “For contributions to the design and implementation of power system control centers” and is a member of the IEEE Power & Energy Society (PES) Governing Board. He is an Alstom Grid Senior Fellow and a member of the Washington State Academy of Sciences.