

Electric Power and Power Electronics Institute

INVITED SEMINAR

Thursday, May 28, 2015, 3:00 pm, 236C WEB

Reliability Simulation Model Incorporating Renewable Energy Sources

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Abstract

The power system reliability assessment aims to evaluate the adequacy of the system in attending the energy demand, being subject to failures of its components and energy unavailability. With the crescent integration of renewable energy sources to the grid, such as wind, solar, run of the river hydroelectric, etc., it became necessary to develop models to estimate the power availability that take into consideration the intermittent nature of such sources and also the impact their integration have on the power system reliability. This talk will present some results of researches in this area that has been carried out at COPPE/UFRJ and that led to stochastic simulation model for power system reliability evaluation incorporating renewable energy sources. Bio: Carmen Lucia Tancredo Borges has a BSc in electrical engineering from the State University of Rio de Janeiro (1984), MS in electrical engineering from the Federal University of Rio de Janeiro (1991) and her Ph.D. in computing and systems engineering from the Federal University of Rio de Janeiro, (1998). She is a full professor at the Federal University of Rio de Janeiro, working at the graduate school (COPPE) and the undergraduate school (Polytechnic School.) She has experience in teaching, research and development of projects in electrical engineering with emphasis in power systems, with focus in the following research areas: analysis, simulation and optimization, reliability, distributed generation, renewable energy, intelligent systems and high performance computing. She has been academic coordinator of the electrical engineering program of COPPE/UFIR in 2007, deputy coordinator of the Department of Electrical Engineering at the Polytechnic School/UFRI 2004-2011 and president of the IEEE PES chapter of the Rio section for the period from 2012 to 2014. She currently is head of the Department of Electrical Engineering, leader of the power systems group and member of the deliberative board of COPPE/UFRI. She is the coordinator of the CAPES special visiting professor project reliability assessment and Optimization of Power Grids with High Penetration of Variable Sources of Renewable Engineering, in collaboration with Dr. Chanan Singh of Texas A&M University.