SECURITY CONSTRAINED POWER MANAGEMENT SYSTEM FOR THE NG IPS SHIPS

Salman Mashayekh

Ph.D student, Department of Electrical and Computer Engineering, Texas A&M University
Advisor: Prof. K. Butler

Abstract
Optimality and security are two important issues for the Next Generation of Integrated Shipboard Power Systems (NG IPS). This work discusses the importance of an effective Security Constrained Power Management System (SCPMS) for the NG IPS. The SCPMS aims to operate the system optimally while keeping the system secure. This presentation also explores the benefits of an integrated approach for the SCPMS. To investigate different schemes for the SCPMS, a case study was performed on a simplified NG IPS model in PowerWorld™ simulator. This case study showed that the integrated scheme for the SCPMS is more effective and provides better results, compared to the other schemes.

Biography
Mr. Mashayekh received his B.S. and M.S. in Electrical Power Systems from University of Tehran, Iran, in 2006 and 2008, respectively. He joined the Power System Automation Lab in Texas A&M University as a PhD student in 2008. His research interests are in power management system for isolated power systems. His job focuses on contingency analysis, dynamic stability studies, security enhancement, etc.