

Introduction to the Complex Systems Security and Reliability mini-track

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This mini-track is part of the Complex Systems track. It focuses on the security and reliability challenges associated with the restructuring of the electric power industry. Specific topics include: steady-state and dynamic security assessment where the impacts of pre-specified contingencies are analyzed; Available Transfer Capability (ATC) which quantifies the ability of the interconnected system to accept increases in power transfers; and related technologies. Included in this is the issue of voltage stability, modeling and analysis of failure propagation, and nonlinear control.

This year's papers focus on how security and reliability of electric power systems are affected by changes that continue to emerge from the industry restructuring. The topics range from traditional security analysis by contingency simulation to network early warning systems. Collectively, the papers offer new ideas for dealing with the security and reliability challenges of complex power systems and the demands of a competitive environment.