



Power Systems Engineering Research Center

Cyber-Physical Systems Security for the Smart Grid

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PSERC Public Webinar
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2:00-3:00 p.m. Eastern Time (11:00-12:00 p.m. Pacific)

[Note: a poster on this work is available on the PSERC website: [Dec. 7 Workshop Poster, PDF 763KB](#). The white paper associated with this webinar will be available on the [PSERC website](#) in advance of the webinar.]

Description

One thing that virtually all of the information hierarchy components must deal with is cyber and physical security. This webinar (and the associated white paper) focuses on identifying a comprehensive set of cyber security challenges and the need for security at multiple levels of the cyber-physical power system, namely, information security, ICT infrastructure security, and application-level security. It identifies cyber security research issues beyond the traditional IT security issues. Example of these research issues are: (i) cyber attack risk modeling and risk mitigation, (ii) attack-resilient monitoring, protection and control algorithms, (iii) defense against coordinated cyber attacks, (iv) AMI infrastructure security, (v) trust management and attack attributions, and (vi) simulation models, data sets, test bed evaluations.

There is a need for going beyond (N-1) contingency criteria to deal with coordinated cyber attacks. Also, traditional models and algorithms (that are robust against random naturally occurring faults) are inadequate to deal with malicious cyber attacks, and hence the need for development of novel models and attack-resilient algorithms across generation, transmission, and distribution systems. Finally, attack deterrence, prevention, detection, mitigation, and attribution are linked.

This webinar is based on one of nine white papers in the project “The Future Grid to Enable Sustainable Energy Systems: An Initiative of the Power Systems Engineering Research Center” funded by the U.S. Department of Energy. More information about the Future Grid Initiative is available on the [PSERC website](#).

Biography: Manimaran Govindarasu is a professor in the Department of Electrical and Computer Engineering at Iowa State University, USA. His research expertise is in the areas of cyber security, cyber-physical security of smart grid, and real-time systems. He has published over 125 peer-reviewed research publications in these areas. He recently has developed a cyber security test bed for smart grid to conduct attack-defense evaluations and develop robust countermeasures against cyber attacks. He served as a co-editor of the recent IEEE PES magazine special issue (January 2012) on smart grid communications and security, serves on the editorial board of IEEE Transactions on Smart Grid, and serves as the Chair of Cyber Security Task Force at IEEE PES-PSACE-CAMS Subcommittee.

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Participation by Webinar: To connect to the webinar, [click here](#) and then on *2/7/2012*. The webinar will include the audio and slides. You will be able to send in your questions via the website. The archived webinar will be available immediately afterwards.

Registration for Webinar Participation: None required. There is no charge for participating!

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Professional Development Hour Certification: PDH certification is available for PSERC members (only). Send an email requesting PDH certification to pserc@asu.edu with the subject “PDH” after the seminar. *Include the name and title of each participant.*

Assistance: If you have any questions, please call 480-965-1643 or email pserc@asu.edu. You can also contact Dennis Ray, PSERC Deputy Director, at 608-265-3808 or djay@engr.wisc.edu.

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Ward welcomes feedback on the webinars and suggestions for future ones.