Cornell University $\mathbb{I}$*nformation,* $\mathbb{S}$*ystems, and* $\mathbb{N}$*etworks seminar*

Optimal Power Flow: Radial Networks and Beyond

Rhodes Hall 380: July 3, 2012 @ 12:00PM

ISN Seminar Speaker:
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Abstract

Optimal power flow is a non-convex problem in power systems. Recently there has been evidence of convex relaxations to work for various practical circuits. In this talk, we first restrict ourselves to the class of radial networks and characterize the conditions under which the relaxation is indeed intact. Then we proceed to show equivalence of two popular relaxation models over these networks. Our analysis is extended to general circuits and the equivalence is explored in more detail.

Biography

Subhonmesh Bose graduated with B.Tech. from Indian Institute of Technology Kanpur in 2009 in Electrical Engineering and is currently a graduate student in the integrated MS-PhD program at California Institute of Technology in the Rigorous Systems Research Group. His research interests are in the intersection of complex systems, optimization and strategic behavior with application to social networks and power systems. In the smart grid area, his research focuses on optimal power flow, its convex relaxations and its integration with other applications such as storage and markets. Subhonmesh has worked with Prof. S. Low, Prof. A. Wierman, Prof. K. M. Chandy and Prof. B. Hassibi in the past few years at Caltech.