Statistics > Applications

Intrinsic Geometric Analysis of the Network Reliability and Voltage Stability

N. Gupta, B. N. Tiwari, S. Bellucci

(Submitted on 12 Nov 2010)

This paper presents the intrinsic geometric model for the solution of power system planning and its operation. This problem is large-scale and nonlinear, in general. Thus, we have developed the intrinsic geometric model for the network reliability and voltage stability, and examined it for the IEEE 5 bus system. The robustness of the proposed model is illustrated by introducing variations of the network parameters. Exact analytical results show the accuracy as well as the efficiency of the proposed solution technique.

Comments:	8 pages, 4 figures, 2 tables, Index Terms -- Circuit modeling, geometric modeling, parameter space method, power system reliability, power system stability, transmission planning, nonlinear methods, geometric controls, components optimization
Subjects:	**Applications (stat.AP)**; Mathematical Physics (math-ph); Data Analysis, Statistics and Probability (physics.data-an)
Cite as:	**arXiv:1011.2929v1 [stat.AP]**

Submission history

From: Stefano Bellucci [view email]

[v1] Fri, 12 Nov 2010 14:52:23 GMT (373kb)

Which authors of this paper are endorsers?