



Joint Seminars Organized by Irkutsk State University and Chulalongkorn University

Model for Power Shortage Estimation in Electric Power Systems: Interior Point Algorithms

Abstract: This talk addresses a model for power shortage estimation in electric power systems that has been developed at the Energy Systems Institute (ESI), Siberian Branch of Russian Academy of Sciences. The model is implemented in the computational software for electric power systems reliability analysis. Mathematical properties of the model are discussed. Algorithms of the interior point method applied for realization of the model are considered. Results of experimental studies of the algorithms are presented.

The Hybrid Model Based on the Hilbert-Huang Transform and Neural Networks for Forecasting the Nonstationary Processes of Power System*

Abstract: In this talk, the results of experimental studies of electricity price forecasting (EPF) in different price zones in Russia and Europe will be presented. In order to increase the accuracy of EPF the hybrid models based on the joint usage of the artificial neural network (ANN) and the Hilbert-Huang Transform (HHT) are proposed. The hybrid (HHTANN) model is examined based on the benchmark data of Australian national electricity market. The application of developed hybrid models for hourly EPF has demonstrated the forecast accuracy improvement using the most common metrics. The results of application of this algorithm for short-term forecasting of expected operating conditions of power systems will be also presented.

*This work is partly funded under 7th FWP within ICOEUR project (Intelligent coordination of operation and emergency control of EU and Russian power grids).

Date /Venue : Tuesday, 10th January 2012 at 2nd Floor, Room 209 Building 3,
Faculty of Engineering, Chulalongkorn University, Bangkok, Thailand

Time : 09.30-12.00 am.

Participations : FREE Seminar

Speakers: Professor V. I. Zorkaltsev and Dr Denis Sidorov
Melentiev Energy Systems Institute
Siberian Branch of Russian Academy of Sciences
Irkutsk State University

REGISTRATION FORM

Seminars on
“Model for Power Shortage Estimation in Electric Power Systems:
Interior Point Algorithms” and
“The Hybrid Model based on the Hilbert-Huang Transform and Neural Networks for
Forecasting the Nonstationary Processes of Power System”

Tuesday, 10th January 2012 at 2nd Floor, Room 209 Building 3,
Faculty of Engineering, Chulalongkorn University, Bangkok, Thailand
09.00-12.00 am.

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