

Yuliang Dong

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PERSONAL

Office Address:

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Cincinnati, OH 45221

EDUCATION

Ph D Thermal Power Engineering, North China Electrical Power University, Beijing, China, 2001-2005

MS Thermal Power Engineering, Northeastern Electric Power University, Jilin, China, 1998-2001

BS Thermal Power Engineering, Taiyuan Electric Power College, Taiyuan, China, 1992-1995

RESEARCH EXPERIENCE

Perform studies on Condition-based Maintenance Decision Support System for Power Plant Equipment, funded by National High Technology Research and Development of China (2005-2009)

- Developed condition-based maintenance decision and management method for power plant equipment based on improved RCM (Reliability Centered Maintenance)

- Research on condition-based maintenance theory and technology system, including health condition evaluation and prediction of power plant equipment, reliability prediction of important components, fault diagnosis model based on knowledge and data mining, risk analysis and evaluation, global maintenance optimization model based on quantitative RCM analysis.

- Research on condition-based maintenance decision support system and the method of long-term decision.

- Design and develop condition-based maintenance decision support system

Perform research on condition-based maintenance decision support system for power plant equipment (2001-2005, PhD thesis research)

- Establish improved RCM analysis and function model which adapts to power plant equipment.

- Analyze healthy condition evaluation and prediction for power plant equipment in theory.

- Power plant equipment maintenance decision making and modeling.

- Design and develop computerized maintenance management system

Perform research on CMMS and O&M workstation for power plant equipment, funded by State Power Company Science and Technology Foundation of China (2002-2004)

- Design and develop computerized maintenance management system

- Design and develop operation and maintenance workstation

Perform research on thermal equipment and system operation optimization and economy analysis (2000-2001)

EMPLOYMENT HISTORY

2008-present Associate Professor, Department of Thermal Power Engineering, North China Electrical Power University

2005-2008 Assistant Professor, Department of Thermal Power Engineering, North China Electrical Power University

Responsibilities:

Instruct graduate students (MS and Ph.D students)

Teaching

Lecturing college students following courses:

Steam Turbine Principle; Steam Turbine Operation

Power Station Thermal Equipment and Operation

Maintenance Management ; Fault Diagnosis of Thermal Equipment and System

Basic Maintenance theory

1995-1998 Thermal power engineer, Xiahuayuan Power Plant, Xiahuanyuan, Hebei,China

Responsibilities:

Maintain and repair power plant equipment, such as steam turbine, feed water pumps

Technical renewing and redesign of old equipment

Adjusting new equipment

Operation and maintenance management

AWARDS AND HONORS

China Electricity Science and Technology award, 2005

Sifang Foundation Fellowship, 2004

COMPUTER SKILLS

Application program development tool: **Delphi** ;

Database technology: **SQL server 2000**;

Simulation tool: **Matlab**;

Operation platform: **Windows series, Microsoft office**

SELECTED PUBLICATIONS:

- [1] Dong Yuliang, Wang Xudan, GU Yujong. "Risk-based maintenance decision and its application on power plant equipment". *Modern Electric Power*, 2008, 25(3).
- [2] Dong Yuliang, Gu Yujiong. "Condition evaluation of steam turbine sets based on evidential reasoning". *Proceedings of the CSEE*, 2007, 27(29).
- [3] Dong Yuliang, Ma Lvao, GU Yujong. "Research on short-term maintenance risk decision model of power plant equipment". *Journal of North China Electric Power University*, 2007, 34(3).
- [4] Dong Yuliang, Gu Yujiong. "Condition analysis for DEH regulating system based on characteristic extraction and information fusion", *Proceedings of the Sixth International Conference on Machine Learning and Cybernetics*, Hong Kong, 19-22 August 2007.
- [5] Yuliang Dong, Yujiong Gu, Yaqiong Li, Kun Yang. "Fault Diagnosis of Reverse Osmosis System for Chemical Water Treatment in Power Plant Based on FMEA and Rough Set Theory" , *The 6th world congress on intelligent control and automation*, 2006.6.
- [6] Dong Yuliang, GU Yujong, HE Chengbing & LI Yaqiong. "Safety Analysis of DEH System Based on fuzzy theory and evidential reasoning", *The 5th International Symposium on Safety Science and Technology*, 2006.10.
- [7] Dong Yuliang, Gu Yujong. "Research on variable weight synthesizing model for condition evaluating on large steam turbine". *Journal of North China Electric Power University*, 2005.112(2).
- [8] Dong Yuliang, Gu Yujiong, Yang Kun. "Synthetic evaluation on conditions of equipment in power plant based on fuzzy judgment and RCM analysis". *Proceedings of the CSEE*, 2004, 24(6).
- [9] Dong Yuliang, Gu Yujiong, Yang Kun. "Risk analysis of power plant equipment based on grey theory and RCM analysis". *Power Engineering*, 2004.24(6).
- [10] Dong Yuliang, Gu Yujong. "Study on condition evaluation for steam turbine DEH governing system". *Steam Turbine Technology*, 2004,46(2).
- [11] Dong Yuliang, Gu Yujiong, Yang Kun. "Research on the condition based maintenance decision of equipment in power plant". *The third International conference on machine learning and cybernetics*, 2004.8.
- [12] Dong Yuliang, Gu Yujiong, Yang Kun. "A combining prediction model and its application in power plant". *The third International conference on machine learning and cybernetics*, 2004.8.
- [13] Dong Yuliang, Gu Yujiong, Yang Kun. "Applying PCA to establish artificial neural networks for condition predicting of equipment in power plant". *2004 World Congress on Intelligent Control and Automation*, 2004,6.
- [14] Dong Yuliang, Gu Yujiong, Yang Kun. "Criticality analysis on equipment in power plant based on Monte Carlo simulation". *Proceedings of the CSEE*, 2003, 23(8).
- [15] Li Yong, Dong Yuliang, Yang Shanrang. "Research on the correcting method to the results of vacuum system tightness test of steam turbine". *Proceedings of the CSEE*, 2002,22(1).