

IMS Researcher Profile

Institution: UM

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Expertise: Signal processing

Current Research Activities: Signal processing, artificial neural networks, feature selection

Dissertation/Thesis Topics: ---

Project 1: Gear Shaving Cutting Tool Breakage Detection and Prediction [with BorgWarner]

- Perform data analysis, feature extraction using Phase1 data
- Build up detection model for multiple broken tool teeth using ANN
- Compose test plan for Phase 2 run-to-failure testing
- Performing data analysis using Phase 2 data
- Evaluate the capability of vibration signals in shaving tool tooth breakage prediction

Skills: MATLAB and other programming languages

Previous Background: B.S. 2003, Huazhong University of Science and Technology
M.S. 2006, Huazhong University of Science and Technology

Publications:

Brzezinski, A. J., Wang, Y., Choi, D.K., Qiao, X., Ni, J., "Feature-based Tool Condition Monitoring in a Gear Shaving Application," Submitted to 2008 ASME International Conference on Manufacturing Science and Engineering.

LI Yanghai, GAO Wei, HUANG Shuhong, WANG Yong, ZHANG Jinping & YANG Tao (2004). A java solution on data communication among webpages for a web-based fault diagnosis system. Computer Programming Skills & Maintenance, 12 (5), pp. 15-18. [In Chinese]

YANG Tao, HUANG Shuhong, GAO Wei, WANG Yong, ZHANG Jinping, ZHANG Bailing & HUANG Piwei (2004). Research on web-based monitoring and fault diagnosis system of steam turbine sets. Power Engineering, 24 (6), pp. 840-844. [In Chinese]

ZHANG Yanping, HUANG Shuhong, YANG Tao, WANG Yong & GAO Wei (2006). Research on continuous wavelet transform scalogram in fault diagnosis system of steam turbine sets. Turbine Technology, 48 (3), pp. 209-211. [In Chinese]