The Department of Mechanical Engineering/College of Engineering and Applied Sciences
Stony Brook University

Mechanical Engineering Seminar

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Lecture Title: Real-Time Decision Support for Factory Control

Wednesday, June 22, 2011, 11:00AM, Room 173 Light Engineering

Abstract

Decision making in real time responsiveness is gaining interests in academic and modern industry. In this presentation, a real-time information enabled factory is studied and constraint-based supervisory factory control methodology is investigated to enhance real-time decision accuracy. However, energy efficiency management is usually isolated from traditional production control. Inability to track and analyze energy and manufacturing data as integrated and interdependent variables masks problems in the overall operation. This presentation furthermore discusses a system level energy saving methodology and performance-based energy efficiency analysis. Finally, battery manufacturing and re-manufacturing projects are briefly introduced with future research and vision.

Biography

Dr. Qing (Cindy) Chang is currently an Assistant Professor in Department of Mechanical Engineering at New York Institute of Technology (NYIT). Before joining NYIT in 2009, she was a Senior Researcher in Manufacturing Systems Research Lab, General Motors Research & Development Center. She received BS from Beijing Polytechnic University, Beijing, China, MS from University of Wisconsin - Madison and PhD in Manufacturing Program, University of Michigan - Ann Arbor, in 1991, 1996 and 2006, respectively.

She has published over 20 refereed journal articles and conference proceedings. She has received three US patents in the area of production system and control. She received General Motors Boss Kettering Awards in 2005, 2006 and 2008 respectively and The Charles L. McCuen Special Achievement Awards in 2005, 2006 and 2008 respectively. Her primary research interests are in design, analysis and control of production systems, Energy Management System and Green Product Technology.

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