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EDUCATION

Ph.D. in Industrial Engineering and Management Sciences, June 2006

Northwestern University, Evanston, IL.

Advisor: Professor Barry L. Nelson and Professor Bruce E. Ankenman

Thesis: Efficient Generation of Cycle Time-Throughput Curves via Simulation for Manufacturing

M.S. in Industrial Engineering and Management Sciences, Dec 2002

Northwestern University, Evanston, IL.

B.E. in Electronic Engineering, July 2000

Tsinghua University, Beijing, China.

Major: Electronics Engineering

PROFESSIONAL EXPERIENCE

Assistant Professor, Industrial and Management Systems Engineering Department, West Virginia University, Morgantown, WV, 2006–Present.

Research Assistant, Department of Industrial Engineering and Management Sciences, Northwestern University, Evanston, IL, 2002–2006.

Intern, General Motors R&D, Warren, MI, 06/2004 – 08/2004.

PUBLICATIONS

Journal Articles

- **F. Yang**, “Neural network metamodeling for cycle-time based performance profiles in manufacturing,” submitted to *European Journal of Operations Research*.

- **F. Yang**, J. Liu, B. L. Nelson, B. E. Ankenman and M. Tongarlak, "Metamodeling for cycle time-throughput-product mix surfaces using progressive model fitting," *Production Planning and Control*, Accepted.
- **F. Yang**, B. E. Ankenman and B. L. Nelson, 2008, "Cycle time percentile curves for manufacturing systems," *INFORMS Journal on Computing* Vol. 20, No. 4, 628-643.
- **F. Yang**, B. E. Ankenman and B. L. Nelson, 2007, "Efficient generation of cycle time-throughput curves through simulation and metamodeling," *Naval Research Logistics* Vol. 54, 78-93.

Working Papers

- **F. Yang**, "Transient analysis of manufacturing systems: a simulation-based transfer function modeling approach for responsive production planning."
- J. Fowler, J. Liu, H. Wan, and **F. Yang**, "Simulation-based statistical analysis for efficient capacity expansion: a case study of semiconductor manufacturing systems."
- **F. Yang**, and H. Wan, "A linear regression-based factor screening method using sequential design of experiments."
- B. E. Ankenmen, B. L. Nelson, M. Tongarlak, J. Fowler, G. Mackulak, D. Pabst, and F. Yang, "Cycle time prediction via simulation on demand."

Book Chapter

- B. E. Ankenman, J. M. Bekki, J. W. Fowler, G. T. Mackulak, B. L. Nelson, and **F. Yang**, "Simulation in production planning, an overview with emphasis on recent developments in cycle time estimation," Chapter 6 in *Planning in the Extended Enterprise: A State of the Art Handbook*, eds. By K. G. Kempf, P. Keskinocak, and R. Uzsoy, Springer.

Refereed Proceedings

- J. Liu, **F. Yang**, 2008, "Evaluating the transient behavior of queueing systems via simulation and transfer function modeling," *Proceedings of the 2008 Winter Simulation Conference*, 516-524.
- J. Xu, **F. Yang** and H. Wan, 2007, "Controlled sequential bifurcation for software reliability study," *Proceedings of the 2007 Winter Simulation Conference*, 281-288.
- **F. Yang**, J. Liu, M. Tongarlak, B. E. Ankenman and B. L. Nelson, 2007, "Metamodeling for cycle time-throughput-product mix surfaces using progressive model fitting," *Proceedings of the 2007 Winter Simulation Conference*, 322-330.
- **F. Yang**, B. E. Ankenman and B. L. Nelson, 2005, "Estimation of percentiles of cycle time in manufacturing simulation," *Proceedings of the 2005 Winter Simulation Conference*, 475-484.
- R. T. Johnson, **F. Yang**, B. E. Ankenman and B. L. Nelson, 2004, "Nonlinear regression fits for simulated cycle time vs. throughput curves for semiconductor manufacturing," *Proceedings of the 2004 Winter Simulation Conference*, 1951-1955.

SPONSORED RESEARCH

“Sensitivity Analysis of Reliability for Structure-Based Software via Simulation,” sponsored by the NASA Office of Safety and Mission Assurance (OSMA) Software Assurance Research Program (SARP) managed through the NASA Independent Verification and Validation (IV&V) Facility, Fairmont, West Virginia; 2006-2007; \$49,900.

CONFERENCE PRESENTATIONS

- “Evaluating the transient behavior of queueing systems via simulation and transfer function modeling,” Presentation, *INFORMS (Institute for Operations Research and the Management Sciences) Annual Meeting*, Washington, DC, Oct. 12-15, 2008.
- “Controlled sequential bifurcation for software reliability study,” Presentation, *Winter Simulation Conference*, Washington, DC, Dec. 9-12, 2007.
- “Metamodeling for cycle time-throughput-product mix surfaces using progressive model fitting,” Presentation, *Winter Simulation Conference*, Washington, DC, Dec. 9-12, 2007.
- “Metamodeling for cycle time-throughput-product mix surfaces using progressive model fitting,” Presentation, *INFORMS (Institute for Operations Research and the Management Sciences) Annual Meeting*, Seattle, WA, Nov. 4-7, 2007.
- “Multi-product cycle time and throughput evaluation via simulation on demand,” *INFORMS (Institute for Operations Research and the Management Sciences) Annual Meeting*, Pittsburgh, PA, Nov. 5-8, 2006.
- “Estimation of percentiles of cycle time in manufacturing simulation,” Presentation, *Winter Simulation Conference*, Orlando, FL, Dec. 4-7, 2005.
- “Nonlinear regression fits for simulated cycle time vs. throughput curves for semiconductor manufacturing,” Presentation, *Winter Simulation Conference*, Washington, DC, Dec. 7-10, 2004.
- “Efficient generation of cycle time-throughput (CT-TH) curves through simulation and metamodeling,” Presentation, *INFORMS Annual Conference*, Atlanta, GA, Oct. 17-22, 2003.

PROFESSIONAL AFFILIATIONS AND SERVICES

Member, Institute for Operations Research and Management Science (INFORMS), 2001-Present.

Member, INFORMS Simulation Society, 2003- Present.

Judge, INFORMS QSR (Quality, Statistics, and Reliability) Best Student Paper, 2008
Judge, Student Paper Contest, IIE 2006 Region IV Conference, West Lafayette, IN, Feb 10-12, 2006.

Academic Co-Chair, INFORMS Northwestern Student Chapter, 2005-2006.

COURSES TAUGHT

- IENG 455 Simulation by Digital Methods
- IENG 756 Introduction to Applied Stochastic Processes