

VITAE

Name: Gary W. Black, Ph.D., P.E.
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Education

Doctor of Philosophy, Industrial & Systems Engineering December 2001
University of Alabama in Huntsville Huntsville, Alabama 4.00/4.00 GPA
Dissertation Title: *Predictive, Stochastic and Dynamic Extensions to Aversion Dynamics Scheduling*
Dissertation Area: Production Scheduling/Heuristics
Dissertation Advisors: Sherri L. Messimer and Kenneth N. McKay

Master of Science, Industrial Engineering December 1998
University of Tennessee Knoxville, Tennessee 3.94/4.00 GPA
Capstone Project Title: *A Simulation-Based Approach to Multi-Level Product Structure Scheduling in a Low-Volume/High-Mix, n-Job/m-Machine Batch-Style Electronics Manufacturing Environment*

Bachelor of Science, Industrial Engineering May 1985
Pennsylvania State University State College, Pennsylvania 3.21/4.00 GPA

Position Summary

Associate Professor, Decision Sciences 2008 – Present
University of Southern Indiana Evansville, Indiana

Assistant Professor, Production/Operations Management 2004 – 2008
University of Southern Indiana Evansville, Indiana

Assistant Professor, Industrial Engineering 2002 – 2004
Tennessee Technological University Cookeville, Tennessee

Industrial Engineer 1995 – 2002
Siemens Energy and Automation Johnson City, Tennessee

Industrial Engineer 1988 – 1994
Raytheon Company, Missile Systems Division Bristol, Tennessee

Manufacturing Engineer 1987 – 1988
International Signal and Control, Defense Division Lancaster, Pennsylvania

Industrial Engineer 1985 – 1987
Raytheon Company, Missile Systems Division Andover, Massachusetts

Primary Consulting Interests

Optimization, efficiency analyses and computer simulation studies pertaining to all types of logistical, production and service processes across a variety of industries

Journal Papers -- In Print

Black, G.W., McKay, K.N., and Varghese, S.E., "'Anticipatory Batch Insertion' to Mitigate Perceived Processing Risk", *International Journal of Production Research*, Vol. 46, No. 4, 2008, pp. 853-871.

McKay, K.N. and Black, G.W., "The Evolution of a Production Planning System: A Ten-Year Case Study", *Computers in Industry*, Vol.58, No. 8-9, 2007, pp. 756-771.

Black, G.W., McKay, K.N., and Morton, T.E., "Aversion Scheduling in the Presence of Risky Jobs," *European Journal of Operational Research*, Vol. 175, No. 1, 2006, pp. 338-361.

McKay, K.N. and Black, G.W., "Aversion Dynamics – Adaptive Production Control Heuristics Incorporating Risk," *Journal of the Operations Research Society of Japan*, Vol. 49, No. 3, 2006, pp. 152-173.

Black, G.W., McKay, K.N., and Messimer, S.L., "Anti-Fragmentation in Aversion Dynamics Scheduling," *International Journal of Production Research*, Vol. 43, No. 1, 2005, pp. 109-129.

Black, G.W., McKay, K.N., and Messimer, S.L., "Predictive, Stochastic and Dynamic Extensions to Aversion Dynamics Scheduling," *Journal of Scheduling*, Vol. 7, No. 4, 2004, pp. 277-292.

Journal Papers – Accepted and Pending Publication

Celuch, K., Black, G., and Warthan, B., "Student Self Identity as a Critical Thinker: The Influence of Attitudes, Attitude Strength and Normative Beliefs", accepted September 2008 and pending publication in *Journal of Marketing Education*.

Working Papers

Black, G.W., Ard, D., Smith J.R. and Schibik, T.J., "The Impact and Significance of the Weibull Distribution on the Performance of the Single-Factor ANOVA Model".

Black, G.W., Schibik, T.J., Smith J.R. and Wells, S.A., "The Impact of Weibull Data and Autocorrelation on the Performance of the Shewhart and Exponential Weighted Moving Average Control Charts".

Refereed Conference Proceedings (with Papers)

Black, G.W., Wells, S.D., Smith, J.R. and Sundaram, M.R., "Shewhart and EWMA Control Charts in the Presence of Autocorrelation and Weibull Data," Proceedings of the *Decision Sciences Institute Annual Conference*, November 2005 (San Francisco, CA).

Black, G.W., Ard, D., and Smith J.R., "An Empirical Investigation of the Effects of the Weibull Distribution on the One-Way Fixed Effects ANOVA Model", Proceedings of the *Decision Sciences Institute Annual Meeting*, November 2004 (Boston, MA).

Black, G.W., McKay, K.N., and Morton, T.E., "Risky Jobs Within Aversion Dynamics Scheduling," *IIE Research Conference*, May 2004 (Houston, TX).

Black, G.W., McKay, K.N., and Messimer, S.L., "Proactive and Dynamic Post-Event Impact Extensions to Aversion Dynamics Scheduling," *IIE Research Conference*, May 2003 (Portland, OR).

Invited Conference Presentations

Black, G.W., McKay, K.N., and Morton, T.E., “Aversion Scheduling Under Risky Jobs,” *INFORMS Conference*, October 2003 (Atlanta, GA).

Black, G.W., McKay, K.N., and Messimer, S.L., “Predictive, Stochastic and Dynamic Extensions to Aversion Dynamics Scheduling,” *INFORMS Conference*, November 2002 (San Jose, CA).

International Workshops

Black, G.W., McKay, K.N., and Morton, T.E., “Aversion Scheduling in the Presence of Risky Jobs,” *5th International Workshop on Human Factors, Organizational Issues and Modelling in Planning, Scheduling and Control*, July 2003 (University of Limerick, Ireland).

Course Taught

- ECON 265 (USI undergraduate) – Elementary Statistics
- DSCI 351 (USI undergraduate) – Introduction to Operations Research
- DSCI 445 (USI undergraduate) – Operations Management
- DSCI 501 (USI graduate) – Survey of Operations Research
- DSCI 601 (USI graduate) – Quantitative Methods for Business Decisions
- DSCI 699 (USI graduate) – Independent Study
- IME 3100 (Tenn. Tech undergraduate) – Engineering Economy
- IME 3200 (Tenn. Tech undergraduate) – Engineering Statistics
- IME 3310 (Tenn. Tech undergraduate) – Process Improvement
- IME 4510 (Tenn. Tech undergraduate) – Senior Design (Project)
- IME 6400 (Tenn. Tech graduate) – Industrial Optimization Methods
- IME 6440 (Tenn. Tech graduate) – Industrial Scheduling
- IME 6910 (Tenn. Tech graduate) – Graduate Seminar (Research Methods)

Graduate Committees Served On

- Joseph Ernest, M.S. thesis, “A Coordination Framework for Cooperative Multi-Robot Interaction,” 2005.
- Sabrina Wells, M.S. thesis, “Shewhart and EWMA Control Charts in the Presence of Autocorrelation and Non-Normal Data”, 2004.
- Ning Liu, Ph.D. dissertation, “Agent-Based Distributed Manufacturing Scheduling,” 2003-2004.
- Derek Ard, M.S. thesis, “Robustness Study of ANOVA Procedure Under Weibull Distributed Data,” 2003.

Professional Registration/Licensure

Registered Professional Engineer (inactive status), State of Tennessee (License # 00108018)

Service and Engagement Activities

Departmental Service:

- Member, Finance Program Review Team, Department of Economics and Finance, USI, 2007
- Member, Faculty Search Committee, Department of Economics and Finance, USI, 2005
- Coordinated various searches for adjunct faculty to teach decision science courses, USI, 2006-2007
- Developed plan to address frequently missed quantitative analysis questions in ETS Field Test, USI, 2005
- Participated in various Economics and Finance faculty search activities and functions, USI, 2005-2007
- Assisted in preparation for ABET accreditation visit, Tennessee Technological University, 2002.

College Service:

- Member, Teaching, Learning, Assessment, Curricular Committee, USI College of Business, 2005-present
- Compiled analysis of number of classrooms/labs required for new College of Business Building (with B. Henderson), USI College of Business, 2006
- Reviewer, AITP Student Papers, USI College of Business, 2005
- Member, Curriculum Committee, USI College of Business, 2004-2005
- Developer, MBA Student Enrollment Forecasting Model, USI College of Business, 2004-present
- Interpreter, Strong Interest Inventories, School of Business, USI College of Business, 2004-present
- Student Advisor, School of Business, USI College of Business, 2004-present

University Service:

- Member, University Graduate Committee, USI, 2008-present
- Adviser, to Engineering Department re: Curriculum of Industrial Engineering Concentration
- Member, University Faculty Affairs Committee, USI, 2006-present
- Member, Student Academic Grievance Committee, USI, 2005-2007
- Proctor, Assessment Day, USI, 2004-present
- Member, Distance Learning Committee, Tennessee Technological University, 2003-2004
- Member, Academic Misconduct Committee, Tennessee Technological University, 2003-2004

Professional Service:

- Co-VP of Membership, APICS (Assoc. for Operations Management), Ohio Valley Chapter, 2005-present
- Referee, *Production and Operations Management*: “An Analysis of the Impact of Information Delays on FMS Performance in Static and Dynamic Scheduling Environments,” Paper POM-MOD-01-07-04, 2007.
- Referee, *Computers & Industrial Engineering*: “Scheduling to Reduce Total Weighted Tardiness on Parallel Machines with Ready Times”, Blind” Manuscript 03/344-2, 2006.
- Referee, *Applied Artificial Intelligence*: “Comparative Study of Dispatching Rules in a Real-Life Job Shop” by P. Mizrak and G.M. Bayhan, 2005.
- Referee, *Computers and Operations Research*: “A Scheduling Framework for Large Job-Shop Scheduling Problem”, 2004.
- Referee, *European Journal of Operational Research*: Effective Algorithms for Integrating Scheduling of Handling Equipment at Automated Container Terminals, Paper 103316, 2004
- Referee, *ASEE Transactions*: Dynamically Optimal Policies for Stochastic Scheduling Subject to Preemptive-Repeat Machine Breakdowns, by Xiaoqiang Cai, Xianyi Wu, Xian Zhou, 2003
- Referee, Various Papers, *Institute of Industrial Engineering and Decision Sciences Institute Conferences*
- Reviewed textbook *Production Control in Practice: A Survival Guide for Planners and Schedulers* (by McKay, K.N. and Wiers, V.C.), 2004

Community Service:

- Authored “*Computer Simulation for Business Process Improvement*,” Evansville Business Journal, 2006
- Participated in Oroborus ‘Day on the Bus’ Tour, 2006
- Judge, Student Scholarship Selection Committee, Tri-State Industrial Safety Council, 2005

Awards/Fellowships/Special Recognitions/Honorary Memberships

- *Malcolm Koch Summer Research Fellowship*, College of Business, University of Southern Indiana, 2007
- *Excellence in Teaching Faculty Award*, College of Business, University of Southern Indiana, 2006-2007
- *Who’s Who in Finance and Business*, 34th Edition, Marquis Society, 2004-2005
- *Who’s Who in America*, 58th Edition, Marquis Society, 2004
- *Who’s Who in the World*, 21st Edition, Marquis Society, 2003
- *Who’s Who in America*, 57th Edition, Marquis Society, 2002
- Alpha Pi Mu (The National Industrial Engineering Honor Society) – 2001 to present

- *Outstanding Graduate Student Award*, Industrial & Systems Engineering Program, The University of Alabama in Huntsville, 2001-2002 Academic Year
- Candidate, *Outstanding Graduating Senior Award*, Industrial and Manufacturing Engineering Department, The Pennsylvania State University, 1985

Professional Society Memberships

- Association for Operations Management (APICS) – 2004-2008
- Decision Sciences Institute (DSI) – 2004-2006
- Institute for Operations Research and the Management Sciences (INFORMS) – 2001-2004
- Institute for Industrial Engineers (IIE) – 2001-2004