

Sherri L Messimer, Ph.D.

Associate Professor, Industrial and Systems Engineering and Engineering Management

Education

Ph.D./Industrial Engineering /Texas A&M University/ College Station, Texas/1989

M.S.I.E./Industrial Engineering/University of Texas at Arlington/Arlington, Texas/1984

B.S.I.E./Industrial Engineering/ University of Texas at Arlington/Arlington, Texas/1980

Experience

Associate Professor/ Industrial and Systems Engineering and Engineering Management / University of Alabama in Huntsville/January 1996 to present

Associate Dean/College of Engineering, Engineering Student Affairs/ University of Alabama in Huntsville/2004 to 2011

Assistant Professor/ Industrial and Systems Engineering and Engineering Management / University of Alabama in Huntsville/January 1989 to 1996

Honors

Alpha Pi Mu

Tau Beta Pi

RESEARCH CONTRACTS AND CONSULTING

Southern Alliance for Advanced Vehicle Manufacturing, IUERC, Philip Farrington, PI, collaboration with Auburn University and Tennessee Technological University. NSF Planning Grant awarded 3/2014. Co-PI.

Investigation of no lead solder and reliability “Prototyping for Auburn University,” 8/2013 to 3/2014, \$60,000, S. Messimer, PI

“F/DOD/Army/AMCOM Specialty Engineering Education and Training Program Support Manufacturing Design and Processing for Electronics,” 1/2013 to 12/2013, \$26,494.52, S. Messimer PI

“EMPOWER: Enrichment and Mentoring to Provide our Workforce with Enhanced Resources,” NSF Division of Undergraduate Education, Rhonda Gaede, Sherri Messimer, Jennifer English, Diana Bell, 2008 until present.

“Demand Management,” Course instructor, Continuing Education, 2011 until present.

“Evaluating the Efficacy of Low PPM Process Control Schemes in a High Volume Production Environment,” National Science Foundation, Phillip A Farrington, Sherri L. Messimer

“Design Assistant for Composite Structures,” Army MICOM, June 1992–August 1993, July 1993–May 1994, August 1994–August 1995, September 1996–September 1997, September 1997 – September 1998, June 1999 – September 2000. Witness-based simulation tool and lisp-based expert critiquing system to aid process, environmental and material planning of polymer matrix fiber reinforced composite materials.

“Intelligent Dynamic Control of AGV Systems,” National Science Foundation (Intelligent Material Handling Systems), June 1991–June 1992. Developed strategies for automated guided vehicles within Chrysler’s Huntsville Electronics Division (HED).

“Simulation-Based Process Improvement,” National Science Foundation and Chrysler HED, August 1992–December 1995, Definition of generic electronic manufacturing models that can be easily defined and implemented through common user-oriented interfaces, allowing users who are not familiar with simulation and simulation languages to address the needs of their particular functional area.

Battelle Summer Faculty Program (U.S. Army Missile Command), Summer 1990, 1991.

PUBLICATIONS IN BOOKS AND REFEREED JOURNALS

Brown, S. L., Leonard, K. M., Messimer, S.L. “Evaluation of Ozone Pretreatment on Flux Parameters of Reverse Osmosis for Surface Water Treatment,” *Journal of Ozonation Science and Engineering*, 30: 1-13, 2008.

Hector M. Olague, Letha H. Etzkorn, Sherri L. Messimer, and Harry S. Delugach, "An empirical validation of object-oriented class complexity metrics and their ability to predict error-prone classes in highly iterative, or agile, software: a case study," *Journal of Software Maintenance and Evolution: Research and Practice*, vol. 20, no. 3, pp. 171-197, May/June 2008.

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.

“Predictive, Stochastic and Dynamic Extensions to Aversion Dynamics Scheduling,” Black, Gary W, Kenneth N. McKay, Sherri L Messimer *Journal of Scheduling* 7: 277-292, 2004.

“Genetic Algorithm Optimization of a Filament Winding Process Modeled in WITNESS,” Wilson, E, Karr, C.L., and S. Messimer, *Materials and Manufacturing Processes*, 2002.

“Genetic Algorithm Optimization of A filament Winding Process Modeled in WITNESS,” Wilson, E, Karr, C.L., and S. Messimer. In A. De Wilde and L.C. Jain (Eds.), *Practical Applications of Soft Computing Techniques* (pp. 223-240). New York: Kluwer, 2002.

“A Weighted Variance Capability Index for General Non-Normal Processes,” *Quality and Reliability Engineering International*, Volume 15, Issue 5, 1999, (H.H. Wu, J.J. Swain, P.A. Farrington, and S.L. Messimer), pp. 397-402.

“Systems Modeling and Simulation,” P.A. Farrington, J.J. Swain, and S.L. Messimer, Chapter in *Integrated Product, Process, and Enterprise Design*, (B. Wang, Ed.), Chapman and Hall, 1997.

“Composites Design and Manufacturing Critiquing Assistant,” S. Messimer, J. Henshaw, J. Montgomery, J. Rogers, in *Artificial Intelligence in Engineering Design and Manufacturing (AIEDAM)* 10 (1996), 65-79.

“Industry/University Interaction for Simulation-Based Process Improvement,” S. Messimer, P. Farrington, J. Swain, J. Evans, *Journal of Technology Transfer* 19(3-4), pp. 87-99, (1995).

“Measuring Technology Transfer Performance: A Case Study,” B.J. Schroer, P.A. Farrington, S.L. Messimer, and J.R. Thornton, *Journal of Technology Transfer* 20(3-4), (1995).

“Composites Design and Manufacturing Assistant,” S. Messimer, J. Henshaw, *International Journal of Materials and Product Technology*, 9, pp. 105-115 (1994).

“Object Pose Determination From Range Data,” P. Griffin, S. Messimer, *Computers and Industrial Engineering*, 22, pp. 245-255 (1992).

“Intelligent Dynamic Control of Automated Guided Vehicles,” L. Interrante, S. Messimer, S. Ho, K. Sackett, a chapter in the Material Handling Industry book entitled *Progress in Material Handling Research: 1992*, Braun-Brumfield, Inc., pp.353-366.

“Automated Visual Inspection of Bare Printed Circuit Boards,” P. Griffin, J. R. Villalobos, S. Messimer, *Computers and Industrial Engineering*, 18, pp. 505-509 (1990).

“Feature Point Tracking in Time-varying Images,” Paul M. Griffin, Sherri L. Messimer, *Pattern Recognition Letters*, 11, pp. 843-848 (1990).

“Automated Visual Inspection: A Tutorial,” J. Foster, P. Griffin, S. Messimer, J.R. Villalobos, *Computers and Industrial Engineering*, 18, pp. 493-504 (1990).

SELECTED PUBLICATIONS IN PROCEEDINGS

Virani, S., Messimer, S., Roden, P., Etkorn, L., “*Software Quality Management Tool for Engineering Managers*,” Proceedings of the Industrial Engineering Research Conference, Institute of Industrial Engineers, Vancouver, B.C., Canada, May 17-21, 2008, pp.1401-1406.

Roden P., Etkorn L., Virani S., Messimer S., Vinz B., “*A Validation of the Entropy-Based SDIe Metric*,” Proceedings of the 11th International Conference on Software Engineering and Applications, 2007.

Roden, P., Virani, S., Eitzkorn, L., Messimer, S., "An Empirical Study of the Relationship of Stability Metrics and the QMOOD Quality Models over Software Developed Using Highly Iterative or Agile Software Processes," Proceedings of the 7th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM '07), Sept. 30-Oct 1, 2007, pp.171-179.

"A Principal Components Analysis of Class Metrics in Three Object-Oriented Class Metrics Suites", Letha H. Eitzkorn, Glenn W. Cox, Sherri L. Messimer, and Hector Olague, In proceeding of: Proceedings of the 2007 International Conference on Software Engineering Research & Practice, SERP 2007, Volume II, June 25-28, 2007, Las Vegas Nevada, USA

"Anti-Fragmentation Extensions to Aversion Dynamics Scheduling," Black, G.W., McKay, K.N., and Messimer, S.L., IIE Research Conference, Portland, Oregon, May 2003.

"Predictive, Stochastic and Dynamic Extensions to Aversion Dynamics Scheduling," Black, G.W., McKay, K.N., and Messimer, S.L., INFORMS Conference Proceedings, San Jose, California, November 2002.

Genetic Algorithm Optimization of a Filament Winding Process Modeled in WITNESS," E. Wilson, S. Messimer, C. Karr, The 4th International Conference on Engineering Design and Automation. CD-ROM proceedings, Reference Number 29. 2000.

"Optimization of a Complex Manufacturing Line Using a Genetic Algorithm," E. Wilson, S. Messimer, C. Karr, Engineering Design and Analysis (EDA) Conference, Maui, Hawaii, August 9-12, 1998.

"Design Tool for Assessing Manufacturing and Environmental Impact," S. Messimer, D. Russell, D. Rochowiak, D. Utley, Engineering Design and Analysis (EDA) Conference, Maui, Hawaii, August 9-12, 1998.

"Impact of the Technology Reinvestment Project on Manufacturing Education," AIAA Space Programs and Technologies Conference, September 27-29, 1994, Huntsville, Alabama, (with B.J. Schroer, S.L. Messimer, D.B. Wallace, and G.L. Workman).

"The Implications of Chaos in Manufacturing," R. Shackelford, S. Messimer, in Proceedings of the 1993 Southeastern Simulation Conference, Huntsville, Al, October 1993.

"A Procedure for the Implementation of Rapid Prototyping," R. Shackelford, S. Messimer, in *Proceedings of the CALS & CE Conference*, Washington D.C., June 1991.

"Object Pose Determination Using Synthetic Discriminant Functions," Sherri L. Messimer, *Computers and Industrial Engineering*, **21**, 349-353 (1991).

"Superquadric-Based Part Identification and Tolerancing," Sherri L. Messimer, *Computers and Industrial Engineering*, **19**, 229-233 (1990).

“Applying software engineering in discrete event simulation,” S. Messimer, S.X. Zhang, B.J. Schroer and F.T. Tseng, In *Proceedings SCS Eastern Multiconference*, Nashville, TN, April 1990, pp 182-187.

“Graphical simulation for predictive display of FMS,” T. Grisham and S.L. Messimer, *Proceedings Southeastern Simulation Conference*, Huntsville, AL, October 1990.