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Associate Professor, Systems Science and Industrial Engineering

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EDUCATION

Ph.D., Industrial Engineering, Clemson University, Clemson, SC, USA August, 2003
M.S., Mechanical Engineering, Jordan University of Science & Technology, Jordan June, 2000
B.S., Mechanical Engineering, Jordan University of Science & Technology, Jordan June, 1998

CURRENT EMPLOYMENT

Sep 1, 2009 – Associate Professor, Systems Science and Industrial Engineering, State University of New York at Binghamton, Binghamton, New York
Sep 1, 2003 – Aug 31, 2009 Assistant Professor, Systems Science and Industrial Engineering, State University of New York at Binghamton, Binghamton, New York
Nov 27, 2007 – present Assistant Director, Watson Institute for Systems Excellence (WISE), State University of New York at Binghamton, Binghamton, New York

PROFESSIONAL EXPERIENCE

Teacher of Record Department of Industrial Engineering, Clemson University, Clemson, SC
(Jan '02-May '03)
Research Assistant Department of Industrial Engineering, Clemson University, Clemson, SC
(Aug '00-Aug '03)
Lab Manager Advanced Technology Systems Laboratory (ATSL), Department of Industrial Engineering, Clemson University, Clemson, SC
(Jan '02-Aug '03)
Teaching Assistant Department of Industrial Engineering, Clemson University, Clemson, SC
(Aug '00-May '02)
Teaching Assistant Department of Mechanical Engineering, Jordan University of Science & Technology, Irbid, Jordan
(Oct '98-Jun '00)
Mechanical Engineer Ministry of Public Works and Research, Amman-Jordan
(Sep '98-Sep '99) Newly Graduated Engineers Program, Mechanical Engineering Division

Engineering Intern Royal Jordanian Airlines, Amman, Jordan (2 months)
(Jun '97-Sep '97) Turkish Airlines, Structural Repair Center, Istanbul, Turkey (1 month)
Aircraft Maintenance Technology

RESEARCH AREAS

- Human Factors Engineering and Process Improvement in Healthcare Delivery Systems
- Healthcare Delivery Systems Research and Optimization
- Modeling of Humans in Manufacturing (Inspection) and Aviation Systems (Unmanned Systems)
- Digital Human Modeling (Human Performance Modeling)
- Advanced Technology Training (Virtual Reality)
- Human-Automation Interaction (Human Trust)

PUBLICATIONS

Journal Publications (Published)

1. Mandahawia, N., Al-Araidah, O., Boran, A., and **Khasawneh, M.T.**, "*Application of Lean Six Sigma Tools to Minimize Length of Stay for Ophthalmology Day Case Surgery*," (Accepted: International Journal of Six Sigma and Competitive).
2. Al-Momani, E.S., Meilunas, M., Borgesen, P., and **Khasawneh, M.T.**, "*How to Assess the Effect of Time at Operating Temperature on the Service Life of Lead Free Solder Joints*," (Accepted Pending Revisions: Journal of Electronics Packaging).
3. Al-Araidah, O., Dalalah, D., Azeez, M.A., and **Khasawneh, M.T.**, "*A Person-Aboard Order Picking of Small Items Considering Human Reach Capabilities*," (Accepted Pending Revisions: International Journal of Industrial Ergonomics).
4. Okur, A.C., Kaluskar, P., and **Khasawneh, M.T.**, "*The Effect of Instruction Mode and Distraction Condition on Learning Performance of Manual Assembly Task*," (Accepted Pending Revisions: Journal of Management and Engineering Integration).
5. Raghavan, V.A., Venkatadri, V., Kesavakumaran, V., Wang, S., **Khasawneh, M.T.**, and Srihari, K., "*Reengineering The Cardiac Catheterization Lab Processes: A Lean Approach*," Special Issue, Healthcare Systems Engineering Journal, 1(1), 45-66, 2010.
6. Al-Araidah, O., Momani, A., **Khasawneh, M.T.**, Momani, M., "*Lead-Time Reduction Utilizing Lean Tools Applied to Healthcare Systems: The Inpatient Pharmacy at a Local Hospital*," Journal for Healthcare Quality, 32(1), 59-66, 2010.
7. **Khasawneh, M.T.**, Bowling, S.R., and Gramopadhye, A.K., "*Effect of System Error Occurrence Patterns on Human Trust in Hybrid Inspection Systems*," (Accepted pending revisions: International Journal of Industrial Ergonomics).
8. Cornell, M.A. and **Khasawneh, M.T.**, "*Effect of Barrel Length on Rifle Handling Performance*," (Accepted: International Journal of Industrial Ergonomics).
9. Bowling, S.R., **Khasawneh, M.T.**, Kaewkuekool, S., and Cho, B.R., "*A Logistic Approximation to the Cumulative Normal Distribution*," Journal of Industrial Engineering and Management, 2(1), 114-127, 2009.
10. Eberhart, M.J. and **Khasawneh, M.T.**, "*The Effect of Visual Distraction on Visual Inspection Performance*," Journal of Management and Engineering Integration, 1(2), 40-45, December 2008.
11. Sudarsanam, K., Bhopte, B., and **Khasawneh, M.T.**, "*Preventing WMSDs In Medical Sonographers Using Digital Humans: An Evaluation Study*," Journal of Management and Engineering Integration, 1(2), 46-51, December 2008.
12. Cornell, M.A. and **Khasawneh, M.T.**, "*An Ergonomic Comparison of Firearm Safety Mechanisms*," Ergonomics, 51(9), 1394-1406, 2008.
13. **Khasawneh, M.T.**, Bowling, S.R., and Cho, B.R., "*A Markovian Approach to Determining Process Means with Dual Quality Characteristics*," Journal of Systems Science and Systems Engineering, 17(1), 66-85, 2008.

14. Bowling, S.R., **Khasawneh, M.T.**, Kaewkuekool, S., Jiang, X., and Gramopadhye, A.K., "Evaluating the Effects of Virtual Training in an Aircraft Maintenance Task," *International Journal of Aviation Psychology*, 18(1), 104-116, 2008.
15. Bhowmick, A., **Khasawneh, M.T.**, Bowling, S.R., Gramopadhye, A.K., and Melloy, B.J., "Evaluation of Alternate Multimedia for Web Based Asynchronous Learning," *International Journal of Industrial Ergonomics*, 37(7), 615-629, 2007.
16. Rao, P., Bowling, S.R., **Khasawneh, M.T.**, Gramopadhye, A.K., and Melloy, B.J., "Impact of Training Standard Complexity on Inspection Performance," *Human Factors and Ergonomics in Manufacturing*, 16(2), 1-24, 2006.
17. **Khasawneh, M.T.**, Bowling S.R., Kaewkuekool, S., and Cho, B.R., "Tables of a Truncated Standard Normal Distribution: A Singly Truncated Case," *Quality Engineering*, 17(1), 33-50, 2005.
18. **Khasawneh, M.T.**, Bowling S.R., Kaewkuekool, S., and Cho, B.R., "Tables of a Truncated Standard Normal Distribution: A Doubly Truncated Case," *Quality Engineering*, 17(2), 1-15, 2005.
19. Kelkar, K., **Khasawneh, M.T.**, Bowling, S.R., Gramopadhye, A.K., Melloy, B.J., and Grimes, L.W., "The Added Usefulness of Process Measures Over Performance Measures in Interface Design," *International Journal of Human-Computer Interaction*, 18(1), 1-18, 2005.
20. Master, R., Jiang, X., **Khasawneh, M.T.**, Bowling, S.R., Grimes, L.W., Gramopadhye, A.K., and Melloy, B.J., "Measurement of Trust Over Time in Hybrid Inspection Systems," *Human Factors and Ergonomics in Manufacturing*, 15(2), 177-196, 2005.
21. Singh, V., **Khasawneh, M.T.**, Bowling, S.R., Kaewkuekool, S., Jiang, X., and Gramopadhye, A.K., "The Evaluation of Alternate Learning Systems in an Industrial Engineering Course: Asynchronous, Synchronous and Classroom," *International Journal of Industrial Ergonomics*, 33(6), 495-505, 2004. **Listed among the Top 25 Hottest Articles on Science Direct (July - September 2004).**
22. Jiang, X., **Khasawneh, M.T.**, Master, R., Bowling, S.R., Gramopadhye, A.K., Melloy, B.J., and Grimes, L.W., "Measurement of Human Trust in a Hybrid Inspection System Based on Signal Detection Theory Measures," *International Journal of Industrial Ergonomics*, 34(5), 407-419, 2004.
23. Haddad, O., Alkam, M., and **Khasawneh, M.T.**, "Entropy Generation Due to Laminar Forced Convection in the Entrance Region of a Concentric Annulus," *Energy, The International Journal*, 29(1), 35-55, 2004.
24. Bowling, S.R., **Khasawneh, M.T.**, Kaewkuekool, S., and Cho, B.R., "A Markovian Approach to Determining Optimum Process Target Levels for a Multi-Stage Serial Production System," *European Journal of Operational Research*, 159(3), 636-650, 2004.
25. Gramopadhye, A.K., Melloy, B.J., Chen, S., Jiang, X., **Khasawneh, M.T.**, Kaewkuekool, S., and Bowling, S. R., "Using High Fidelity Simulator for Aircraft Inspection Training: Development and Evaluation," *Human Factors and Aerospace Safety*, 3(2), 121-146, 2003.

Journal Publications (In Preparation)

1. Thiruvengadachari, S. and **Khasawneh, M.T.**, "A DOE Approach to Human Reliability Assessment Modeling and Prediction," (*International Journal for Human Computer Interaction*).
2. Alshara, K.M. and **Khasawneh, M.T.**, "A Stochastic Model for Determining the Optimal Process Mean With a Single-Sampling Plan," (*International Journal of Production Research*).
3. Alshara, K.M. and **Khasawneh, M.T.**, "The Determination of the Optimal Process Mean Under a Double-Sampling Plan," (*International Journal of Production Economics*).
4. Devaraju, B. and **Khasawneh, M.T.**, "The Integrated Effect of Noise and Illumination on Occupational Skill Performance," (*International Journal of Industrial Ergonomics*).
5. Sundaram, S., Wang, S., **Khasawneh, M.T.**, and Srihari, K., "A Staffing Model for Allocation of Full-Time Equivalents at a Hospital Pharmacy" (*INFORMS Interfaces*).
6. Mari, J., Wang, S., **Khasawneh, M.T.**, Lam, S.S., Srihari, K., and Gandhi, T., "Using Design for Six Sigma to Design an Equipment Depot at a Hospital," (*International Journal of Six Sigma and Competitive Advantage*).
7. Bosire, J., Wang, S., **Khasawneh, M.T.**, Lam, S.S., Srihari, K., and Gandhi, T., "Designing an Integrated Surgical Care Delivery System," (*International Journal of Six Sigma and Competitive Advantage*).

8. Khandekar, S., Wang, S., **Khasawneh, M.T.**, Lam, S.S., Srihari, K., and Gandhi, T., "*Scheduling Low Acuity Patients in the Emergency Department*," (Journal of Quality and Safety in Health Care).
9. Thiruvengadachari, S. and **Khasawneh, M.T.**, "*Reliability Analysis of Human-Machine Systems: An Integrated Model-Based Approach*," (Reliability Engineering and System Safety).
10. Zheng, H., Bhuvanesh, A., **Khasawneh, M.T.**, Lam, S.S., and Srihari, K., "*A Virtual Reality Simulator for SMT Placement Machine Training: Feeder Setup*" (Journal of Engineering Systems Simulators).
11. El-Sharo, M., Wang, S., **Khasawneh, M.T.**, Gomez, S. and Srihari, K., "*Using Queuing Model and Simulation Model to Optimize Operations in the Emergency Department*," (In progress: Annals of Emergency Medicine).
12. El-Sharo, M., Wang, S., **Khasawneh, M.T.**, "*Predicting Admission to the Hospital From the Emergency Department Using Artificial Neural Network and Time Series Analysis*," (In Progress: TBD).

Conference Publications (Fully Refereed)

1. Al-Momani, E., Borgesen, P., **Khasawneh, M.T.**, and Sammakia, B., Alqudah, R. and Meilunas, M., "A Tool for Predicting Reliability of Lead-Free Soldered Electronic Packages under Thermal Cycling Conditions". International Conference on Soldering & Reliability (ICSR), May 18-20, 2010, Toronto, Ontario, Canada.
2. Al-Momani, E.S. and **Khasawneh, M.T.**, "*Manual Operations Improvement in a Semi-Automatic Electrical Inspection Station*," (Abstract Submitted: Proceedings of the 16th International Conference on Industry, Engineering, and Management Systems, Cocoa Beach, Florida, March 8-10, 2010).
3. Al-Momani, E.S., Elsharo, M., Samson, A., **Khasawneh, M.T.**, and Srihari, K., "*Ergonomic Assessment of Manual Filling Station Operations in an Automated Medicine Dispensing System*," (Abstract Submitted: Proceedings of the 16th International Conference on Industry, Engineering, and Management Systems, Cocoa Beach, Florida, March 8-10, 2010).
4. Liu, J., and **Khasawneh, M.T.**, "*A Markovian Approach to Determining Optimum Process Means Under Rectifying Inspection Plan*," (Abstract Submitted: Proceedings of the 16th International Conference on Industry, Engineering, and Management Systems, Cocoa Beach, Florida, March 8-10, 2010).
5. Pierce, D., Salinkar, J., Yoon, S., and **Khasawneh, M.T.**, "*Pre-Admission Testing (PAT) Process Flow Optimization and Patient Chart Standardization for Elective Surgeries*," Proceedings of the Industrial Engineering Research Conference (IERC), Cancun, Mexico, June 5-9, 2010.
6. Salinkar, J., Pierce, D., Wang, S., and **Khasawneh, M.T.**, "*Streamlining the Discharge Process with a Dedicated Discharge Nurse*," Proceedings of the Industrial Engineering Research Conference (IERC), Cancun, Mexico, June 5-9, 2010.
7. Elsharo, M., Wang, S., Yoon, S., and **Khasawneh, M.T.**, "*Discrete Event Simulation Analysis to Allocate Optimal Bed Capacity and Operating Hours of ED Inpatient Holding Area*," Proceedings of the Industrial Engineering Research Conference (IERC), Cancun, Mexico, June 5-9, 2010.
8. Wang, Z., Yoon, S., **Khasawneh, M.T.**, and Srihari, K., "*Analysis for Campus Evacuation Routing and Planning to Minimize Transportation Network Clearing Time*," Proceedings of the Industrial Engineering Research Conference (IERC), Cancun, Mexico, June 5-9, 2010.
9. Norouzzadeh, S., Wang, S., Yoon, S., and **Khasawneh, M.T.**, "*An observational study of retail pharmacy productivity and efficiency to establish a carve-in Pharmacy Benefit Management*," Proceedings of the Industrial Engineering Research Conference (IERC), Cancun, Mexico, June 5-9, 2010.
10. Al-Fandi, L., Mabe, N., and **Khasawneh, M.T.**, "*The Impact of Threat Type and Image Color on Baggage Screening Performance: A Preliminary Investigation*," Proceedings of the 10th Asia Pacific Industrial Engineering & Management Systems (APIEMS) Conference, pp. 2432-2437, December 14-16, 2009, Kitakyushu, Japan.
11. Kalkundri, K., **Khasawneh, M.T.**, and Srihari, K., "*A Partial Evaluation of the USARSim Modeling Environment*," Proceedings of the 10th Asia Pacific Industrial Engineering & Management Systems (APIEMS) Conference, pp. 2438-2443, December 14-16, 2009, Kitakyushu, Japan.
12. Gopakumar, B., Wang, S., **Khasawneh, M.T.**, Srihari, K., and Gandhi, T., "*Improving Hospital Inpatient Discharge Planning Process Using Lean Thinking Principles*," Proceedings of the 29th American Society for Engineering Management (ASEM) National Conference, October 14-17, 2009, Springfield, MO.

13. Gopakumar, B., Wang, S., **Khasawneh, M.T.**, Srihari, K., and Gandhi, T., "*A Capacity Planning and Management for an Obstetrics Unit in a Hospital*," Proceedings of the 29th American Society for Engineering Management (ASEM) National Conference, October 14-17, 2009, Springfield, MO.
14. Gopakumar, B., Wang, S., **Khasawneh, M.T.**, Srihari, K., and Gandhi, T., "*A Systems Approach for Hospital Bed Capacity Planning*," International Conference on Industrial Engineering and Engineering Management, December 11-13, 2009, Hong Kong.
15. Wang, S., **Khasawneh, M.T.**, and Srihari, K., "*Development of Health Systems Curriculum in Industrial and Systems Engineering*," Proceedings of the 2009 ASEE Annual Conference & Exposition, Austin, TX, June 14 - 17, 2009.
16. Kalkundri, K., **Khasawneh, M.T.**, Greene, C.M., and Srihari, K., "*A Human Factors and Ergonomics Implementation Framework in Electronics Manufacturing: A Case for Digital Human Modeling*," Proceedings of the Industrial Engineering Research Conference (IERC), Miami, FL, May 30 – June 3, 2009.
17. El-Sharo, M., Wang, S., **Khasawneh, M.T.**, Gomez, S., and Srihari, K., "*Predicting Admission and Discharge Decisions of ED Patients Using Artificial Neural Networks*," Proceedings of the Industrial Engineering Research Conference (IERC), Miami, FL, May 30 – June 3, 2009. [**Invited**]
18. Solanki, N., Wang, S., **Khasawneh, M.T.**, and Srihari, K., "*Hospital Pharmacy IV Room Redesign in Compliance with USP 797 Regulation*," Proceedings of the Industrial Engineering Research Conference (IERC), Miami, FL, May 30 – June 3, 2009. [**Invited**]
19. Samson, A., Salaskar, S., **Khasawneh, M.T.**, Wang, S., and Srihari, K., "*Digital Human Modeling in Healthcare Systems: Overview, Opportunities, and Applications*," Proceedings of the Industrial Engineering Research Conference (IERC), Miami, FL, May 30 – June 3, 2009.
20. Gopakumar, B., Wang, S., Gandhi, T., **Khasawneh, M.T.**, and Srihari, K., "*A Simulation-Based Approach To Hospital Bed Capacity Planning*," Proceedings of the Industrial Engineering Research Conference (IERC), Miami, FL, May 30 – June 3, 2009.
21. Bhagat, A., Wang, S., **Khasawneh, M.T.**, and Srihari, K., "*Enhancing Hospital Health Information Management Using Industrial Engineering Tools*," Proceedings of the Society for Health Systems Conference and Expo, Chicago, IL, April 1-4, 2009.
22. Gopakumar, B., Wang, S., **Khasawneh, M.T.**, Srihari, K., and Cummings, D., "*Reengineering Radiology Transcription Process through Voice Recognition*," International Conference on Industrial Engineering and Engineering Management, December 11-13, 2008, Singapore.
23. Gopakumar, B., Wang, S., **Khasawneh, M.T.**, and Srihari, K., "*Enhancing the Scheduling of Interventional Radiology Cases Using Data Analysis and Modeling and Simulation*," International Conference on Industrial Engineering and Engineering Management, December 11-13, 2008, Singapore.
24. Su, W., Wang, S., **Khasawneh, M.T.**, and Gandhi, T. "*Managing Hospital Relocation from an Industrial Engineering Perspective*," Proceedings of the 29th American Society for Engineering Management (ASEM) National Conference, West Point, NY, November 12-15, 2008.
25. Bhuvanesh, A., Wang, S., **Khasawneh, M.T.**, Lam, S.S., Srihari, K., and Gandhi, T., "*Applying SHERPA to Analyze Medication Administration in the Cardiac Telemetry Unit*," Industrial Engineering Research Conference (IERC), Vancouver, Canada, May 17-21, 2008.
26. Bosire, J., Khandekar, S., Wang, S., **Khasawneh, M.T.**, and Gandhi, T., "*Enhancing Space Utilization in Surgical Preparatory and Recovery Units*," Industrial Engineering Research Conference (IERC), Vancouver, Canada, May 17-21, 2008.
27. Sundaram, S., Wang, S., **Khasawneh, M.T.**, Srihari, K., Tremel, L. and Schmidt, R., "*Improving Pharmacy Operations through Simulation*," Proceedings of the Society for Health Systems Conference and Expo, Orlando, FL, February 21-24, 2008.
28. Upadrasta, B., **Khasawneh, M.T.**, and Lam, S.S., "*Advanced Technology Training for Operating the Microlithography Machine*," Proceedings of the 12th International Conference on Human-Computer Interaction (HCI 2007), Beijing, P.R. China, July 22-27, 2007.
29. Upadrasta, B., **Khasawneh, M.T.**, and Lam, S.S., "*A Virtual Reality-Based Simulator for the MRS Lithography Machine: Task Analysis and Methodology*," Proceedings of the Industrial Engineering Research Conference (IERC), Nashville, TN, May 19-23, 2007.

30. Dasalla, K., Mabe, N., Lam, S.S., and **Khasawneh, M.T.**, "*Neural Networks and Simulation Applications for International Security: Baggage Screening*," Proceedings of the Industrial Engineering Research Conference (IERC), Nashville, TN, May 19-23, 2007.
31. Bhuvanesh, A., Gandhi, Tejas, Lam, S.S., **Khasawneh, M.T.**, Srihari, S., and Wang, S., "*Using Artificial Neural Networks for Forecasting in Healthcare: Methodology and Findings*," Proceedings of the Industrial Engineering Research Conference (IERC), Nashville, TN, May 19-23, 2007.
32. Fusco, D., and **Khasawneh, M.T.**, "*Effects of Optimal Display Position of a Visual In-Vehicle Task on Simulated Driving Scenarios*," Proceedings of the 13th International Conference on Industry, Engineering, and Management Systems, Cocoa Beach, Florida, March 12-14, 2007.
33. Pronti, P., Jenner, D., Misawa, M., and **Khasawneh, M.T.**, "*Aircraft Instrumentation Usability Study*," Proceedings of the 13th International Conference on Industry, Engineering, and Management Systems, Cocoa Beach, Florida, March 12-14, 2007.
34. Bhuvanesh, A. and **Khasawneh, M.T.**, "*Performance Assessment of Humans in Leadframe Inspection: A Preliminary Study*," Proceedings of the 50th Human Factors and Ergonomics Society Conference, San Francisco, California, October 16-20, 2006.
35. Thiruvengadachari, S., and **Khasawneh, M.T.**, "*Empirical Validation of Human Reliability Assessment Techniques: A Preliminary Study*," Proceedings of the Industrial Engineering Research Conference, Orlando, Florida, May 20-24, 2006.
36. Alshara, K.M., **Khasawneh, M.T.**, and Bowling, S.R., "*Determining the Most Economic Process Mean for Various Quality Characteristics*," Proceedings of the Industrial Engineering Research Conference, Orlando, Florida, May 20-24, 2006.
37. Bhuvanesh, A., **Khasawneh, M.T.**, Lam, S.S., and Srihari, K., "*Task Analysis for SMT Placement Machine Setup for Virtual Reality-Based Training: Methodology and Findings*," Proceedings of the Industrial Engineering Research Conference, Orlando, Florida, May 20-24, 2006.
38. Lander, R., Reid, A., and **Khasawneh, M.T.**, "*Impact of Ergonomics on Game-Pad Design: Qualitative and Quantitative Analysis*," Proceedings of the Industrial Engineering Research Conference, Orlando, Florida, May 20-24, 2006.
39. Samanlioglu, F., **Khasawneh, M.T.**, Bowling, S.R., and Jiang, X., "*A Multi-Criteria Strength-Stress Reliability Optimization Model in Engineering Design*," Proceedings of the Industrial Engineering Research Conference, Orlando, FL, May 20-24, 2006.
40. Kaewkuekool, S., Jiang, X., Samanlioglu, F., Bowling, S.R., and **Khasawneh, M.T.**, "*A Logistic Regression Model for Predicting Trust in an Inspection System*," Proceedings of the Industrial Engineering Research Conference, Orlando, FL, May, 2006.
41. Kaewkuekool, S., Nansa-arg, S., **Khasawneh, M.T.**, Bowling, S.R., Jiang, X., and Gramopadhye, A.K., "*Effect of Prior Information on Task Environments and Feedback Training to Improve Aircraft Inspection Performance*," The 9th Baltic Region Seminar on Engineering Education (Sponsored by UNESCO International Centre for Engineering Education UICEE), Gdynia, Poland, June 17-20, 2005.
42. Jiang, X., **Khasawneh, M.T.**, Bowling, S.R., "*Measuring Trust in Inspection Systems: A Multivariate Approach*," Proceedings of the Industrial Engineering Research Conference, Atlanta, Georgia, May, 2005.
43. Thiruvengadachari, S., **Khasawneh, M.T.**, Bowling, S.R., and Jiang, X., "*Human-Machine Systems Reliability: Current Status and Research Perspective*," Proceedings of the Industrial Engineering Research Conference, Atlanta, Georgia, May, 2005.
44. Sichtig, H. and **Khasawneh, M.T.**, "*Using Eye-Tracking Technology and Brain Wave Measurements in Medical Diagnostics: Current Status and Research Perspectives*," Proceedings of the 11th International Conference on Human-Computer Interaction (HCI 2005), Las Vegas, NV, July 22-27, 2005.
45. Bowling, S.R., **Khasawneh, M.T.**, and Kaewkuekool, S., "*Evaluating Velocity and Acceleration Based Filters for 3D Eye-Movement Analysis in a Virtual Environment*," Proceedings of the Industrial Engineering Research Conference, Atlanta, Georgia, May, 2005.
46. **Khasawneh, M.T.**, Bowling, S.R., Jiang, X., Gramopadhye, A.K., and Melloy, B.J., "*Effect of Error Severity on Human Trust in Hybrid Systems*," Proceedings of the Human Factors and Ergonomics Society 48th Annual Meeting, pp. 439-443, New Orleans, Louisiana, September, 2004.

47. **Khasawneh, M.T.**, Bowling, S.R., Jiang, X., Gramopadhye, A.K., and Melloy, B.J., "*Investigating Human Perception and Trust Due to Changes in Hybrid Inspection System Parameters*," Proceedings of the Industrial Engineering Research Conference, Houston TX, May 15-19, 2004.
48. Bowling, S.R., **Khasawneh, M.T.**, Jiang, X., and Gramopadhye, A.K., "*An Empirical Study on the Effect of Arrangement on Performance of Two Inspectors*," Proceedings of the Industrial Engineering Research Conference, Houston TX, May 15-19, 2004.
49. Tetteh, E.G., Jiang, X., Mountjoy, D.N., Bowling, S.R., Gramopadhye, A.K., and **Khasawneh, M.T.**, "*An Evaluation of Systematic Search Strategies on Inspection Performance Using a Job-Aiding Tool*," Proceedings of the Industrial Engineering Research Conference, Houston TX, May 15-19, 2004. **Selected as Best Ergonomics Paper.**
50. Howard, J.A., Kohl, R.M., Vining, B.J., Bowling, S.R., and **Khasawneh, M.T.**, "*An Approximate Solution for the Optimum Process Mean in a Single Stage Production System*," Proceedings of the Industrial Engineering Research Conference, Houston TX, May, 2004.
51. Gramopadhye, A.K., Desai, R., Bowling, S.R., and **Khasawneh, M.T.**, "*Task Analysis of General Aviation Inspection Activities: Methodology and Findings*," Proceedings of the Human Factors and Ergonomics Society, Denver, October, 2003.
52. Hall, R., Jiang, X., Bowling, S.R., **Khasawneh, M.T.**, Kaewkuekool, S., and Gramopadhye, A.K., "*An Evaluation for Job-Aiding for an Inspection Task*," Proceedings of the Human Factors and Ergonomics Society, Denver, October, 2003.
53. Jiang, X., **Khasawneh, M.T.**, Kaewkuekool, Bowling, S.R., Taylor, W., Bankers, S., McLendon, C., Gramopadhye, A.K., and Melloy, B.J., "*Impact of Task Complexity on Hybrid Inspection System Performance*," Proceedings of the Human Factors and Ergonomics Society, Denver, October, 2003.
54. **Khasawneh, M.T.**, Kaewkuekool, S., Bowling, S.R., Desai, R., Jiang, X., Duchowski, A.T., and Gramopadhye, A.K., "*The Effect of Eye Movements on Visual Inspection Performance*," Proceedings of Industrial Engineering Research Conference, Oregon, May, 2003.
55. Kaewkuekool, S., Bowling, S.R., **Khasawneh, M.T.**, and Gramopadhye, A.K., "*Correlating Humans' Trust to System's Action and Inspector's Intervention Behavior in a Hybrid Inspection System*," Proceedings of Industrial Engineering Research Conference, Oregon, May, 2003.
56. Jiang, X., **Khasawneh, M.T.**, Bowling, S.R., Kaewkuekool, Gramopadhye, A.K., and Melloy, B.J., "*Communication Between Humans and Machines in a Hybrid Inspection System*," Proceedings of Industrial Engineering Research Conference, Oregon, May, 2003.
57. Jiang, X., **Khasawneh, M.T.**, Bowling, S.R., Kaewkuekool, Gramopadhye, A.K., and Melloy, B.J., "*Correlating Signal Detection Theory Measures with Trust in a Hybrid Inspection System*," Proceedings of Industrial Engineering Research Conference, Oregon, May, 2003.
58. Gopinath, M., Kaewkuekool, S., **Khasawneh, M.T.**, Bowling, S.R., and Gramopadhye, A.K., "*A Tool for Conducting Ergonomic Audits*," Proceedings of Industrial Engineering Research Conference, Oregon, May, 2003.
59. **Khasawneh, M.T.**, Bowling, S.R., Kaewkuekool, S., and Cho, B.R., "*The Determination of Optimum Process Mean in a Single-Stage Production System: A Markovian Approach*," Invited Paper: Proceedings of Industrial Engineering Research Conference, Oregon, May, 2003.
60. Cho, B.R., Kaewkuekool, S., Bowling, S.R., and **Khasawneh, M.T.**, "*The Optimum Target Value for a Process Based on A Quadratic Loss Function*," Invited paper: Proceedings of Industrial Engineering Research Conference, Oregon, May, 2003.
61. Gramopadhye, A.K., Duchowski, A.T., Bowling, S.R., **Khasawneh, M.T.**, and Kaewkuekool, S., "*Technology the Equalizer: Can it be Used to Improve Novice Inspection Performance?*" Invited paper: HCI International, Crete, Greece, June, 2003.
62. Madhani, K., **Khasawneh, M.T.**, Kaewkuekool, S., Gramopadhye, A.K., and Melloy, B.J., "*Measurement of Trust in a Hybrid Inspection for Varying Error Patterns*," Proceedings of the Human Factors and Ergonomics Society, Baltimore, September, 2002.
63. Sahasrabudhe, R., Bowling, S.R., **Khasawneh, M.T.**, Gramopadhye, A.K., and Melloy, B.J., "*Analysis of Per-Item V/s Per Lot Paced Visual Inspection for High Target Probability*," Proceedings of the Human Factors and Ergonomics Society, Baltimore, September, 2002.

64. **Khasawneh, M.T.**, Bowling, S.R., Kaewkuekool, S., and Cho, B.R., "*A Cost Effective Strength-Stress Reliability Modeling and Optimization in Engineering Design*," Proceedings of the Industrial Engineering Research Conference, Orlando, May, 2002.
65. **Khasawneh, M.T.**, Bowling, S.R., Kaewkuekool, S., Gramopadhye, A.K., and Melloy, B.J., "*Measurement of Trust in Hybrid Inspection Systems: Review and Evaluation of Current Methodologies and Future Approach*," Proceedings of the Industrial Engineering Research Conference, Orlando, May, 2002.
66. Kaewkuekool, S., **Khasawneh, M.T.**, Bowling, S.R., Gramopadhye, A.K., Duchowski, A.T., and Melloy, B.J., "*Using Virtual Reality Technology to Support Job Aiding and Training*," Proceedings of the Industrial Engineering Research Conference, Orlando, May, 2002.
67. Bowling, S.R., Kaewkuekool, S., **Khasawneh, M.T.**, and Gramopadhye, A.K., "*Confined Space Work In Aircraft Maintenance Industry: Scope for Improving Safety and Reducing Errors*," Proceedings of the Industrial Engineering Research Conference, Orlando, May, 2002.

Conference Publications

1. Zheng, H., Bhuvanesh, A., and **Khasawneh, M.T.**, "*Visual Search Performance of SMT Components Under Machine Pacing*," Proceedings of The 12th Annual International Conference on Industrial Engineering Theory, Applications & Practice, Cancun, Mexico, November 4-7, 2007.
2. Thiruvengadachari, S., **Khasawneh, M.T.**, and Jiang, X. "*Development and Usability of an Interactive Training Tool for Troubleshooting and Maintenance Operations*," Proceedings of the 12th International Conference on Industry, Engineering, and Management Systems, Cocoa Beach, Florida, March 13-15, 2006.
3. Bhuvanesh, A., **Khasawneh, M.T.**, Lam, S., and Srihari, K., "*Can Virtual Reality be Used to Measure and Train operators in Electronics Manufacturing?*" Proceedings of the 10th Annual International Conference on Industrial Engineering Theory, Applications and Practice, Clearwater, Florida, December 4-7, 2005, pp. 94-101.
4. Jiang, X., **Khasawneh, M.T.**, and Bowling, S.R., "*Human Reliability in Complex and Dynamic Systems*," Proceedings of the 11th International Conference on Industry, Engineering, and Management Systems, Cocoa Beach, Florida, March 14-16, 2005.
5. **Khasawneh, M.T.**, Bowling, S. R., Jiang, X., Gramopadhye, A.K., and Melloy, B.J., "*A Model for Predicting Human Trust in Automated Systems*," Proceedings of The 8th Annual International Conference on Industrial Engineering Theory, Applications and Practice, pp. 216-222, Las Vegas, NV, November, 2003.
6. Bowling, S.R., Kaewkuekool, S., **Khasawneh, M.T.**, Jiang, X., and Gramopadhye, A.K., "*Evaluating the Use of Virtual Reality for Training in Aircraft Inspection*," Proceedings of The 8th Annual International Conference on Industrial Engineering Theory, Applications and Practice, pp. 246-251, Las Vegas, NV, November, 2003.
7. Jiang, X., Gramopadhye, A.K., and **Khasawneh, M.T.**, "*Evaluating The Role of Humans in Hybrid Inspection Systems*," Proceedings of the XVth Triennial Congress of the International Ergonomics Association, Seoul, Korea, August, 2003.
8. Gramopadhye, A.K., Bowling, S.R., **Khasawneh, M.T.**, Kaewkuekool, S., Melloy, B.J., Duchowski, A.T., Medlin, E., and Cournia, N., "*Using Training to Improve Performance of Inspectors on the Hangar Floor*," Proceedings of the 16th Human Factors in Aviation Maintenance Symposium, San Francisco, April, 2002.
9. Singh, V., **Khasawneh, M.T.**, Bowling, S.R., Jiang, X., Master, R. and Gramopadhye, A.K., "*The Evaluation of Alternate Learning Systems: Asynchronous, Synchronous and Classroom*," Proceedings of the International Conference on Computer-Aided Ergonomics and Safety, Maui, August, 2001.

Conference Papers (In Review/Preparation)

1. Almeanazel, O., Hamasha, M., Irshaidat, F., Halaweh, M., and **Khasawneh, M.T.**, "*Effect of Color and Gender on Reaction Time in Cognitive Tasks*," (In review: Proceedings of the International Conference on Manufacturing and Engineering Systems (ICMES 2010), at Southern Taiwan University, Tainan, Taiwan, December 16-18, 2010).

2. Almeanazel, O., Hamasha, M., Halaweh, M., Lu, S., and **Khasawneh, M.T.**, "The Effect of Smoking, Gender, and Hand Dominancy on Hand Grip Endurance Limit," (In review: Proceedings of the International Conference on Manufacturing and Engineering Systems (ICMES 2010), at Southern Taiwan University, Tainan, Taiwan, December 16-18, 2010).
3. Al-Fandi, L., Elsharo, M., Al-Momani, E.S., and **Khasawneh, M.T.**, "*Ergonomic Evaluation and Redesign of Vending Machine Controls Using Digital Human Modeling*," (TBD).
4. Okur, A.C., Salaskar, S., Kaluskar, P., and **Khasawneh, M.T.**, "*Effect of Background and Object Color Combination on Visual Inspection Performance*," (TBD).
5. Kalaskar, S., **Khasawneh, M.T.**, and Wang, S., "*Improving the Ergonomics of Surgical Environments: A Digital Human Modeling Approach*," (TBD).
6. Samson, A., **Khasawneh, M.T.**, and Wang, S., "*Using Digital Human Modeling for Ergonomics Assessment of Patient Handling in Healthcare Systems*," (TBD).
7. Samson, A., Salaskar, S., **Khasawneh, M.T.**, and Wang, S., "*Applying Digital Human Modeling to Improve Performance of Medical Sonographers*," (TBD).
8. Sundaram, S., Wang, S., **Khasawneh, M.T.**, Wang, S., and Srihari, K., "*A Hospital Pharmacy Staffing Model*," (TBD).

Workshops, Invited Talks/Presentations, Guest Lectures, and Posters

1. **Khasawneh, M.T.**, "*Digital Human Modeling for Ergonomics Assessment in Healthcare Delivery Systems*," NYS Learning Resource Coordinators Conference, Decker School of Nursing, Binghamton University, May 17, 2010 (Invited).
2. **Khasawneh, M.T.**, Wang, S., and Srihari, K., "*Digital Human Modeling for Ergonomics Assessment in Healthcare Delivery Systems*," Mayo Clinic's 2nd Annual Conference on Systems Engineering and Operations Research in Healthcare, Mayo Clinic, Rochester, MN, August 17-18, 2009.
3. Sundaram, S., Wang, S., **Khasawneh, M.T.**, and Srihari, K., "*A Hospital Pharmacy Staffing Model*," Poster Presentation, Mayo Clinic's 2nd Annual Conference on Systems Engineering and Operations Research in Healthcare, Mayo Clinic, Rochester, MN, August 17-18, 2009.
4. Okur, A.C., Kaluskar, P., and **Khasawneh, M.T.**, "*The Effect of Instruction Mode and Distraction Condition on Learning Performance of Manual Assembly Task*," Presentation at the 15th International Conference on Industry, Engineering, and Management Systems, Cocoa Beach, Florida, March 9-11, 2009.
5. **Khasawneh, M.T.**, "*Digital Human Modeling: Overview, Applications, and Opportunities*," Invited/Guest Speaker, Advanced Process Laboratory, Unovis Consortium, Owego, NY, March 25, 2009.
6. Sundaram, S., Wang, S., **Khasawneh, M.T.**, and Srihari, K., "*Performance-Based Logistics in Healthcare Systems*" Poster Presentation, Proceedings of the Society for Health Systems Conference and Expo, Chicago, IL, April 1-4, 2009.
7. Bhuvanesh, A., **Khasawneh, M.T.**, and Lam, S.S., "*A Virtual Reality Based Simulator for the Microlithography Panel Printer*," Poster Presentation, Introduction to Graduate School, Winter Seminar, Hosted by the Alliances for Graduate Education and the Professoriate (AGEP), Binghamton University, January 14-15, 2009.
8. **Khasawneh, M.T.**, "*Digital Human Modeling in Healthcare: Overview, Opportunities, and Applications*," Greater New York Hospitals Association, New York, NY, October 2008.
9. **Khasawneh, M.T.**, "*Digital Human Modeling in Healthcare Delivery Systems*," Virtua Health, Marlton, NJ, July 2008.
10. Eberhart, M.J. and **Khasawneh, M.T.**, "*The Effects of a Visual Distraction on Human Performance During a Visual Inspection Task*," The 14th International Conference on Industry, Engineering, and Management Systems, Cocoa Beach, Florida, March 12-14, 2008.
11. Sudarsanam, K., Bhopte, B., and **Khasawneh, M.T.**, "*Preventing WMSDs In Medical Sonographers Using Digital Humans: An Ergonomic Evaluation*," The 14th International Conference on Industry, Engineering, and Management Systems, Cocoa Beach, Florida, March 12-14, 2008.
12. Zheng, H., Bhuvanesh, A., **Khasawneh, M.T.**, and Lam, S.S., "*A Virtual Reality-Based Training Simulator for the Microlithography Machine*," Poster Presentation, The 35th International Microelectronics and Packaging Society (iMAPS) Symposium & Expo, New England, May 6, 2008.

13. Zheng, H., Bhuvanesh, A., **Khasawneh, M.T.**, and Lam, S.S., "*Virtual Environments for Training Operators of the Microlithography Machine in Roll-to-Roll Manufacturing*," Poster Presentation, The USDC Flexible Electronics and Displays Conference and Exhibition, Phoenix, Arizona, January 21-24, 2008.
14. "Diffusion of Information Technology in the Healthcare Industry," Virtua Health, Marlton, April 12, 2006.
15. **Khasawneh, M.T.**, "*Fundamentals of Engineering Exam Review: Mathematics*," Thomas J. Watson School of Engineering, SUNY at Binghamton, March 7&11, 2005.
16. **Khasawneh, M.T.**, "*Human Factors & Ergonomics in Engineering: An Overview*", A Presentation for 11th and 12th Grades, Chenango Valley High School, Binghamton, NY, February 28, 2005.
17. **Khasawneh, M.T.**, "*Forecasting Methods: Estimation/Uncertainty of Future Events*", A Presentation for the Senior Design Project Class, SSIE Department, SUNY at Binghamton, February 17 & March 18, 2005 (Spring Semester).
18. **Khasawneh, M.T.**, "*Human Factors and Ergonomics in Industrial and Systems Engineering*," WTSN 111 Discovering Engineering I, SUNY at Binghamton, New York, October 31, 2003 & November 8, 2004.
19. Bowling, S.R., and **Khasawneh, M.T.**, "*Modeling Humans in Inspection Systems: The Use of Advanced Technology*," Workshop, IIE Regional Conference, Clemson University, Clemson, SC, February, 2003.
20. **Khasawneh, M.T.**, "*Modeling and Performance Assessment of Humans in Complex Dynamic Systems: Trust Measurement and System Performance*," Poster Presentation, Clemson University Research Forum, Clemson, SC, March, 2003.
21. **Khasawneh, M.T.**, "*Undergraduate Research Leads to Great Jobs*," Seminar Series of IE 368 Professional Practice in Industrial Engineering, Industrial Engineering Department, Clemson University, Spring, 2002.
22. Bowling, S.R., **Khasawneh, M.T.**, and Kaewkuekool, S. "*Industrial Engineering Department Tour: Research at the Advanced Technology Systems Laboratory*," Industrial Engineering Department Tour, Clemson University, Clemson, SC, October, 2001.

Technical Reports

1. El-Sharo, M., Wang, S., **Khasawneh, M.T.**, and Srihari, K., "*Comprehensive Assessment of Emergency Department Operations Using Lean Concepts and Statistical Process Control*," Technical Report, Submitted to United Health Services, Quality Management (In Progress).
2. El-Sharo, M., Wang, S., **Khasawneh, M.T.**, and Srihari, K., "*Using Queuing Model and Simulation Model to Optimize Operations in Emergency Department Rapid Care Section*," Technical Report, Submitted to United Health Services, Quality Management (In Progress).
3. El-Sharo, M., Wang, S., **Khasawneh, M.T.**, Yoon, S., and Srihari, K., "*Evaluating and Analyzing the Admissions Unit at Wilson Memorial Hospital's Emergency Department*," Technical Report, Submitted to United Health Services, Quality Management (December 2009).
4. Norouzzadeh, S., Yoon, S., Wang, S., **Khasawneh, M.T.**, and Srihari, K., "*Improving UHS Retail Pharmacy Productivity to Establish Pharmacy Benefit Management*," Technical Report Submitted to United Health Services Hospitals (UHSH), Johnson City, NY (December, 2009).
5. Elsharo, M., Wang, S., **Khasawneh, M.T.**, and Srihari, K., "*Emergency Department Resources Utilization: A Lean Approach*," Technical Report Submitted to United Health Services Hospitals (UHSH), Johnson City, NY (December, 2009).
6. Gopakumar, B., Nagarur N., Wang, S., **Khasawneh M.T.**, and Srihari, K., "*Activity Based Costing in Healthcare Overhead Costing*", Technical Report Submitted to Virtua Health, Marlton NJ (April 2009).
7. Gopakumar, B., Wang, S., **Khasawneh, M.T.**, and Srihari, K., "*Continuous Process Improvement Using Lean at Virtua Memorial Lab*," Technical Report Submitted to Virtua Health, Marlton NJ (June 2009).
8. Gopakumar, B., Wang, S., **Khasawneh, M.T.**, and Srihari K., "*Improving Patient Flow at Virtua Memorial: A Lean Kaizen Approach*," Technical Report Submitted to Virtua Health, Marlton NJ (February 2009).

9. Al-Momani, E.S., El-Sharo, M.R., Samson, A., **Khasawneh, M.T.**, "*Ergonomics Assessment of Manual Operator Tasks in an Automated Medicine Dispensing System*," Technical Report Submitted to Innovation Associates (June 2009).
10. Gopakumar, B., Wang, S., **Khasawneh, M.T.**, and Srihari, K., "*Capacity Analysis for Future Expansion at Virtua Memorial Hospital*," Technical Report submitted to Management Engineering Department, Virtua Health, Marlton, NJ (May 2008).
11. Nair, S., El-Sharo, M., **Khasawneh, M.T.**, and Nagarur, N., "*A Business Model for the Evaluation of Standardized Subassemblies in Shelters Production*," Technical Report Submitted to Johnson Outdoors, Inc. (February 2008).
12. Bhuvanesh, A., Wang, S., **Khasawneh, M.T.**, Lam, S.S., and Srihari, K., "*Analysis of Different Pharmacy Distribution Models for Enhancing Patient Safety*," Technical Report submitted to Management Engineering Department, Virtua Health, Marlton, NJ (June 2007).
13. Bhuvanesh, A., Wang, S., **Khasawneh, M.T.**, Lam, S.S., and Srihari, K., "*Risk Assessment in Medication Administration*," Technical Report submitted to Management Engineering Department, Virtua Health, Marlton, NJ (June 2007).
14. Bhuvanesh, A., Srihari, K., **Khasawneh, M.T.**, Lam, S.S., Wang, S., "*Schematic Design Using Lean Tools – Departments: Medical Surgical, Progressive Care Unit, Cardio Telemetry, and Women's Health Unit*," Technical Report submitted to Management Engineering Department, Virtua Health, Marlton, NJ (April 2007).
15. Bhuvanesh, A., Zheng, H., **Khasawneh, M.T.**, Lam, S.S., and Srihari, K., "*Virtual Operator Training Optimization for SMT Placement Machine Setup*," Technical Report submitted to Integrated Electronics Engineering Center (IEEC), SUNY Binghamton, October, 2006.
16. Thiruvengadachari, S. and **Khasawneh, M.T.**, "*Development of an Interactive Animated Graphic System for Training Purposes*," Technical Report submitted to D&R Technical Solutions, Endicott, NY, September, 2005.
17. Gramopadhye, A.K., Melloy, B.J., **Khasawneh, M.T.**, Bowling, S.R., Kaewkuekool, S., and Duchowski, A.T., Medlin, E., and Cournia, N., "*Virtual Environment Technology for Aircraft Visual Inspection: Training and Job-Aiding*," Technical Report submitted to NASA/Ames Research Center, 2002.
18. Castle, C., Gramopadhye, A.K., **Khasawneh, M.T.**, Bowling, S.R., and Kaewkuekool, S., "*Evaluation of the Integrated AMT/AMT-T Curriculum*," Technical Report, Submitted to the Federal Aviation Administration, Biomedical and Behavioral Sciences Division, Washington DC 20591, Human Factors in Aviation Maintenance Research Program, Final Report, 2002.
19. Gramopadhye, A.K., Bowling, S.R., **Khasawneh, M.T.**, Kaewkuekool, S., "*Activity Report 2002: Advanced Technology Systems Laboratory*," Department of Industrial Engineering, Clemson University, Clemson, South Carolina, 2002.
20. Gramopadhye, A.K., Melloy, B.J., Master, R., **Khasawneh, M.T.**, Kaewkuekool, S., and Watson, J., "*Use of Computer Based Training to Improve Aircraft Inspection Performance*," Technical Report, Submitted to the Federal Aviation Administration, Biomedical and Behavioral Sciences Division, Washington DC 20591, Human Factors in Aviation Maintenance Research Program, Final Report, 2001.
21. Gramopadhye, A.K., Jiang, X., Bowling S.R., **Khasawneh, M.T.**, Kaewkuekool, S., and Desai, R., "*Activity Report 2001: Advanced Technology Systems Laboratory*," Department of Industrial Engineering, Clemson University, Clemson, South Carolina, 2001.

Patents Filed

1. **Khasawneh, M.T.**, Jedrysik, P.A., Moore, J.A., and Ceklovsky, J.P., "*Ergonomically-Designed Large-Display Workstation for Multipurposes*," (Filed Fall 2010).

INTERVIEWS (MAGAZINES, PROFESSIONAL COMMUNITY PRESS, etc)

1. *"Keeping It Real: High Tech Training Looks to Virtual Reality To Minimize Costs, Improve Results,"* Interview with *Rachel Coker* for *Binghamton Research Magazine*, Binghamton University, 2008.
2. *"Studying Ergonomics with Top of the Line Software,"* Interview with *Rita Stange* for *ConnectPress*, The Independent Community for UGS NX Users, November 8, 2006.
3. *"So You Want To Be an Engineer eh?"* Interview with *Rita Stange* for *ConnectPress*, The Independent Community for UGS NX Users, October 18, 2006.
4. *"Research Could Improve Baggage Screening,"* Interview with *Rachel Coker* for *Inside Binghamton University*, Volume 27, No. 16, January 26, 2006.

SPONSORED RESEARCH/FUNDING (CUMULATIVE EFFORT \$953,406; TOTAL \$1,912,540)

Federal/Industry (Cumulative Effort \$820,582; Total \$1,735,329)

1. *"Improving Healthcare Delivery System Performance at UHS,"* Co-Principal Investigator (with K. Srihari and S. Yoon), United Health Services, August 23, 2010 – August 19, 2011, \$128,912.
2. *"OR Operational Improvements and Pharmacy Consolidation,"* Co-Principal Investigator (with K. Srihari and S. Yoon), Virtua Health, \$47,027, August 23, 2010 – January 7, 2011.
3. *"Renewal of Improving the Efficiency and Effectiveness of Healthcare Delivery at Montefiore Medical Center,"* Principal Investigator (with K. Srihari and S. Yoon), Montefiore Medical Center, August 20, 2010 – August 19, 2011, \$59,928.
4. *"Improving Pharmacy and Operating Rooms Efficiency at Virtua Health,"* Co-Principal Investigator (with K. Srihari), Virtua Health, \$40,475, May 17, 2010 – August 27, 2010.
5. *"Improving Pharmacy and Operating Rooms Efficiency at Virtua Health,"* Co-Principal Investigator (with K. Srihari), Virtua Health, \$49,888, January 11, 2010 – May 14, 2010.
6. *"Operator Interaction Behavior and Performance with Large Interactive Displays: A Man-Machine Modeling Approach,"* US Air Force Research Laboratory, Air Force Office of Scientific Research, Principal Investigator, May 18, 2009 – August 7, 2009, \$19,100.00.
7. *"Improving the Efficiency of Operating Rooms and Pharmacy Department at Virtua Health,"* Co-Principal Investigator (with K. Srihari), Virtua Health, \$49,888, August 24, 2009 – January 8, 2010.
8. *"Improving the Efficiency and Effectiveness of Healthcare Delivery at Montefiore Medical Center,"* Principal Investigator (with K. Srihari), Montefiore Medical Center, November 2, 2009 – November 1, 2010, \$38,959.
9. *"Management and Improvement of Healthcare Delivery Operations at UHS Hospitals,"* Co-Principal Investigator (with K. Srihari), United Health Services, August 24, 2009 – August 20, 2010, \$129,485.
10. *"Research Focused on Equipment and Software Systems at Innovation Associates,"* Co-Principal Investigator (with K. Srihari), Innovation Associates, May 18, 2009 – August 28, 2009, \$45,960.00.
11. *"Ergonomics Assessment of Manual Operator Tasks in an Automated Medicine Dispensing System,"* Principal Investigator (with K. Srihari), Innovation Associates, April 15, 2009 – May 15, 2009, \$12,729.00.
12. *"Analysis of System Testing and Software Development Process,"* Co-Principal Investigator (with K. Srihari), Innovation Associates, January 5, 2009 – May 15, 2009, \$47,100.00.
13. *"Improving the Effectiveness and Efficiency of Healthcare Delivery Systems at Virtua Health,"* Co-Principal Investigator (with K. Srihari), Virtua Health, \$33,253.00, May 18, 2009 – August 21, 2009.
14. *"Pursuit of Operational Excellence Using Industrial and Systems Engineering Tools,"* Co-Principal Investigator (with K. Srihari), Virtua Health, January 5, 2009 – May 15, 2009, \$44,479.00.
15. *"Improving System Reliability and Enhancing the Effectiveness of Software Deployment,"* Co-Principal Investigator (with K. Srihari), Innovation Associates, August 25, 2008 – January 31, 2009, \$47,100.00.
16. *"Test Procedure Design in a Complex Manufacturing Environment,"* Co-Principal Investigator (with K. Srihari), Innovation Associates, June 24, 2008 – August 29, 2008, \$8,936.00.
17. *"Research in Product Testing and Error Reduction,"* Co-Principal Investigator (with K. Srihari), Innovation Associates, May 19, 2008 – August 29, 2008, \$26,096.00.

18. *"Continuous Process Improvement in Hospital Operations,"* Co-Principal Investigator (with K. Srihari), United Health Services Hospitals, August 25, 2008 – August 21, 2009, \$77,637.00.
19. *"Enhancing the Operational Competency of Healthcare Delivery Using Industrial and Systems Engineering Tools,"* Co-Principal Investigator (with K. Srihari), Virtua Health, August 25, 2008 – January 2, 2009, \$44,326.00.
20. *"Process Research in Electronics Manufacturing,"* Co-Principal Investigator (with K. Srihari), Universal Instruments, August 25, 2008 – January 2, 2009, \$88,547.00.
21. *"Enhancing the Effectiveness of Healthcare Delivery Using Industrial and Systems Engineering Tools,"* Co-Principal Investigator (with K. Srihari), Virtua Health, May 19, 2008 – August 29, 2008, \$27,796.00.
22. *"Enhancing the Effectiveness of Healthcare Delivery through Industrial and Systems Engineering Tools,"* Co-Principal Investigator (with K. Srihari), Virtua Health, January 7, 2008 – May 16, 2008, \$26,257.00.
23. *"Research in Electronics Packaging,"* Co-Principal Investigator (with K. Srihari), Universal Instruments Corporation, May 19, 2008 – August 22, 2008, \$60,508.00.
24. *"Research in Electronics Packaging and Manufacturing,"* Co-Principal Investigator (with K. Srihari), Unovis Solutions, January 7, 2008 – May 16, 2008, \$74,750.00.
25. *"Continuous Process Improvement for Hospital Operations,"* Co-Principal Investigator (with K. Srihari), United Health Services, August 27, 2007 – August 22, 2008, \$74,887.00.
26. *"Continuous Process Improvement in Health Systems,"* Co-Principal Investigator (with K. Srihari), Virtua Health, August 27, 2007 – January 4, 2008, \$38,372.00.
27. *"A Business Model for the Evaluation of Standardized Subassemblies in Shelters Production,"* Johnson Outdoors Inc., Principal Investigator (with N. Nagarur), November 8, 2007 – February 1, 2008, \$20,686.00.
28. *"Process Improvement and Efficiency Enhancement in Health Care Delivery,"* Co-Principal Investigator (with K. Srihari), Virtua Health, May 21, 2007 – August 24, 2007, \$40,898.00.
29. *"Continuous Process Improvement in Health Systems,"* Co-Principal Investigator (with K. Srihari and S. Lam), Virtua Health, January 8, 2007 – May 18, 2007, \$68,220.00.
30. *"Continuous Process Improvement in Health Care: Research and Development at Virtua Health,"* Co-Principal Investigator (with K. Srihari and S. Lam), Virtua Health, May 29, 2006 – January 5, 2007, \$97,345.00.
31. *"Multisensory Cueing to Improve UAV Operator Performance during Landing,"* US Air Force Research Laboratory (Administered by the American Society for Engineering Education), Principal Investigator, June 5, 2006 – August 28, 2006, \$21,000.00.
32. *"Process Flow Analysis and Continual Process Improvement at UHS Hospitals,"* United Health Services Hospitals, Co-Principal Investigator (with K. Srihari), August 28, 2006 – August 24, 2007, \$72,532.00.
33. *"Digitization of Health Records in a Health Care Setting,"* United Health Services Hospitals, Co-Principal Investigator (with K. Srihari), August 29, 2005 – August 25, 2006, \$36,127.00.
34. *"Improving the Efficiency and Process Flow in Radiology Services,"* United Health Services Hospitals, Co-Principal Investigator (with K. Srihari), August 29, 2005 – August 25, 2006, \$36,127.00.

Internal (Cumulative Effort \$131,824: Total \$176,211)

1. *"Prediction and Analysis of Thermal Cycling Results for Lead Free Soldered Products,"* Integrated Electronics Engineering Center (IEEC), SUNY at Binghamton, Principal Investigator, June 1, 2009 – May 31, 2010, \$40,000.00.
2. *"NYS/UUP Individual Development Award",* \$500.00, May 5, 2009.
3. *"Healthcare Delivery: A Balance of Art and Science,"* Provost's Office, Binghamton University, Co-Principal Investigator (with K. Srihari, S. Wang, and M. DeGennaro), \$6000, Submitted November 14, 2008.
4. *"Advanced Technology Training for Machine Operation and Troubleshooting,"* Center of Advanced Microelectronics Manufacturing (CAMM), Principal Investigator, July 1, 2008 – June 30, 2009, \$45,716.10.
5. *"Adaptive Human-Centered Automation for Control of Advanced Microelectronics Manufacturing Systems,"* Center of Advanced Microelectronics Manufacturing (CAMM), Principal Investigator (With S. Lam), August 1, 2006 – August 24, 2007, \$41,174.00.

6. *"NYS/UUP Individual Development Award"*, \$1,000.00, October 27, 2006.
7. *"Travel Award: Object Recognition and Target Detection Research,"* Binghamton Foundation Eckler Funds Award, Binghamton Foundation, SUNY at Binghamton, December 1, 2005 – June 30, 2006, \$1,000.00.
8. *"Instructional Equipment/Software to Support the Human Factors and Ergonomics Curriculum in The Department of Systems Science and Industrial Engineering,"* Laboratory Improvement, Dean's Office, Thomas J. Watson School of Engineering and Applied Science, SUNY at Binghamton, June 2005, \$5,107.00.
9. *"Travel Support for Graduate Student: Human-Computer Interaction International Conference 2005,"* The Knoll-MacDonald Endowment Scholarship, T.J. Watson School of Engineering and Applied Science, SUNY at Binghamton, July 2005, \$764.00.
10. *"A Virtual Reality Decision Support System for SMT Placement Machines Setup,"* Integrated Electronics Engineering Center (IEEC), SUNY at Binghamton, Principal Investigator (with S. Lam and K. Srihari), \$30,000.00, June 1, 2005 – June 1, 2006.
11. *"Instructional Equipment For Human Factors and Ergonomics Courses at The Department of Systems Science and Industrial Engineering,"* Laboratory Improvement, Dean's Office, Thomas J. Watson School of Engineering and Applied Science, SUNY at Binghamton, April 2004, \$5,950.85.

SOFTWARE AND EQUIPMENT GRANTS (Cumulative Total \$13.2 Million)

1. *"Digital Human Modeling Software to Enhance Human Factors Instruction at Binghamton University,"* UGS Corporation, In-Kind Software Grant, \$13,200,000, August 4, 2006 (**Largest In-Kind Grant in Binghamton University's History**).

Strategic Partnership for Industrial Resurgence PROJECTS (Cumulative Total \$126,500) – Each Project Provided Student Tuition/Stipend for One Academic/Summer Semester

1. *"Phase II of Ergonomic Assessment of Manual Tent Manufacturing Operations,"* Johnson Outdoors, Inc., Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$8,500.00, August 20, 2010 – December 31, 2010.
2. *"Phase I of Ergonomic Assessment of Manual Tent Manufacturing Operations,"* Johnson Outdoors, Inc., Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$8,500.00, May 17, 2010 – December 31, 2010.
3. *"Ergonomic Assessment of Manual Tent Manufacturing Operations: Preliminary Evaluation,"* Johnson Outdoors, Inc., Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$8,500.00, January 4, 2010 – May 15, 2010.
4. *"Process and Layout Optimization for Tent Manufacturing,"* Johnson Outdoors, Inc., Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$8,500.00, August 28, 2009 – January 4, 2010.
5. *"Engineering Design and Information System Enhancement of Harness Assembly,"* Sheltered Workshop, Inc., Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$7,500.00, August 25, 2008 – January 5, 2009.
6. *"A Customer-Centered Approach to Layout Design for Improved Flow,"* YMCA, Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$7,500.00, August 25, 2008 – January 5, 2009.
7. *"Impact of Additional Family Locker Room on Layout Design,"* YMCA, Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$7,500.00, May 26, 2008 – August 25, 2008.
8. *"Productivity Enhancement and Process of Improvement of Tent Manufacturing Processes,"* Johnson Outdoors, Inc., Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$7,500.00, January 28, 2008 – May 15, 2008.

9. *"A Feasibility Study of Automatic Cutting Operations to Replace Manual Processes,"* Johnson Outdoors, Inc., Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$7,500.00, January 28, 2008 – May 15, 2008.
10. *"Product Design and Harness Assembly Enhancement,"* Sheltered Work Shop, Inc., Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$7,500.00, January 28, 2008 – May 15, 2008.
11. *"Increasing Material and Space Utilization in Tent Manufacturing,"* Johnson Outdoors, Inc., Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$7,500.00, August 28, 2007 – January 5, 2008.
12. *"Product Design and Productivity Enhancement at Sheltered Workshop,"* Sheltered Work Shop, Inc., Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$7,500.00, August 28, 2007 – January 5, 2008.
13. *"Process and Ergonomics Improvements in the Filter Connector Assembly Line,"* Amphenol Aerospace, Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$7,500.00, April 10, 2007 – August 15, 2007.
14. *"Facility Layout Optimization and Ergonomics Consideration at Sheltered Workshop,"* Sheltered Work Shop, Inc., Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$7,500.00, January 5, 2007 – August 15, 2007.
15. *"Continuous Process Improvement for the Disabled Population Workforce,"* Sheltered Work Shop, Inc., Strategic Partnership for Industrial Resurgence (SPIR), Principal Investigator, \$7,500.00, September 1, 2006 – January 5, 2007.
16. *"Development of an Interactive Animated Graphic System for Training Purposes,"* D&R Technical Solutions, Inc., Strategic Partnership for Industrial Resurgence (SPIR), \$10,000.00, May 16, 2005 – September 16, 2005.

TEACHING (* Course also offered via EngiNet, Binghamton University's Distance Learning Program)

▪ **Graduate Courses Taught**

- | | |
|--|-----------------------------|
| SSIE 505 Applied Probability and Statistics* | Fall '03, '04, '05, and '06 |
| SSIE 537 Industrial and Systems Engineering in Healthcare* | Fall '08, '09, '10 |

▪ **Graduate Courses Developed/Introduced**

- | | |
|--|-------------------------------------|
| SSIE 533 Human Factors in Engineering & Design* | Spring '04, '05, '06, '10, Fall '07 |
| SSIE 633 Advanced Human Factors Engineering* | Spring '08, '11 |
| SSIE 534X Human Factors Engineering in Healthcare* | Spring '09 |
| SSIE 637X Advanced Health Systems Engineering* | (In Process) |

▪ **Undergraduate Courses Developed/Introduced**

- | | |
|---------------------------|---|
| ISE 231 Human Factors | Spring '05, '06, '07, '08, '09, '10, Fall '10 |
| ISE 231 Human Factors Lab | Fall '10 |

▪ **Undergraduate Courses Taught**

- | | |
|--|------------------------|
| ISE 320 Operations Research | Spring '07 |
| ISE 211 Engineering Economics | Fall '04, '05, and '06 |
| IE 340 Systems and Flows (<i>Clemson University</i>) | Spring '02, Summer '02 |
| IE 384 Engineering Economic Analysis (<i>Clemson University</i>) | Fall '02, Spring '03 |

▪ **Independent Studies Directed**

- Digital Human Modeling
- Human Factors in Workflow Models
- Decision Modeling in Healthcare
- Digital Human Modeling in Healthcare
- Multi-Agent Systems Simulation in Healthcare (co-directed with Dr. Sangwon Yoon)

GRADUATE STUDENT ADVISING

Doctoral Students (1 Graduated, 12 Current)

- Muhanad Hirzallah (Spring 2010). An Integrated Method for Quality Improvement for Research Administrative Processes.
- Emad Al-Momani (Expected: Fall 2010). Statistical Modeling of Crack Growth in Electronics Assembly.
- Abhinesh Bhuvanesh (Expected: Fall 2010). Virtual and Augmented Reality for Surface Mount Technology (SMT) Placement Machine Setup and Operation: Training Research and Development.
- Michael Cornell (Expected: Spring 2011). A Human-Centered Approach for Improving Firearm Safety Using Digital Humans.
- Balagobal Gopakumar (Expected: Spring 2011). Healthcare Delivery Systems Research and Development.
- Shaghayegh Norouzzadeh (Expected: Fall 2011).
- Moh'd R. El-Sharo (Expected: Spring 2012).
- Tarun Mohan Lal (Expected: Spring 2012).
- Steve Vijayan (Expected: Spring 2012).
- Raghu Minnal (Expected: Spring 2014).
- Hesham Al-Momani (Expected: Spring 2013).
- Osama Almeanazel (Expected: Fall 2012).
- Silei Shan (Expected Spring 2013).

Master's Students (24 Graduated, 6 Current)

- Sathish Thiruvengadachari (Fall 2006). Reliability Analysis of Human-Machine Systems: An Integrated Model-Based Approach. [*First Job: Systems Analyst, Marketing Research Company, Chicago, IL*]
- Michael Cornell (Spring 2007). A Systems Engineering and Ergonomic Evaluation of Safety and Operational Effectiveness in Traditional Firearms Design. [*Currently pursuing Ph.D.*]
- Kumar Sudarsanam (Spring 2007). Preventing WMSDs in Medical Sonographers Using Digital Humans: An Ergonomic Evaluation.
- Khaled M. Alshara (Fall 2007). Modeling and Optimization of the Process Mean in Serial Production Systems Subject to Accepting Sampling. [*First Job: Process Engineer, Sensata Technologies, Attleboro, MA*]
- Huan Zheng (Fall 2007). Virtual Reality Simulator for Training SMT Placement Machines Operators. [*First Job: Senior MIS Analyst, Card Services Team, Capital One*]
- Joseph Mari (August 2007; Co-Chair with S. Wang & S. Lam). Using Design for Six Sigma to Design an Equipment Depot at a Hospital. [*First Job: Management Engineer, Virtua Health, NJ*]
- Joshua Bosire (Fall 2007; Co-Chair with S. Wang & S. Lam). Designing an Integrated Surgical Care Delivery System. [*First Job: Management Engineer, Virtua Health, NJ*]
- Shashank Khandekar (Fall 2007; Co-Chair with S. Wang & S. Lam). Scheduling Low Acuity Patients in the Emergency Department. [*First Job: Management Engineer, Virtua Health, NJ*]
- Suvarna Sundaram (Summer 2008; Co-Chair with S. Wang). Developing a Staffing Model and Improving Work Practices of a Hospital Pharmacy System. [*First Job: Quality Analyst, Virginia Hospital at Charlottesville, VA*]
- Balagobal Gopakumar* (Spring 2008; Co-Chair with S. Wang). Operational Enhancements for Interventional Radiology Processes through Workflow Analysis and Simulation. [*Pursuing Ph.D.*]
- Balasubramanyan Devraju (Fall 2008). Integrated Effect of Noise and Illumination on Occupational Skill Performance Capability. [*First Job: Quality Control Manager, Kobayashi Healthcare of America, Inc.*]
- Nikunj Patel (Fall 2008). Continuous Improvement Using Six-Sigma DMAIC Process in the Wire Harness Industry. [*First Job: Industrial Engineer, d.e. Foxx & Associates, Inc., LLC, Cincinnati, OH*]
- Akiev Samson (Spring 2009). Digital Human Modeling for Ergonomics Assessment of Patient Lifting by Paramedics. [*First Job: Proprietor, San Air Tools, India*]
- Swati Salaskar (Fall 2009). Digital Human Modeling for Ergonomic Evaluation in a Surgical Environment.
- Sayli S. Naravane (Fall 2009). Effect of Industrial Noise on Occupational Skill Performance Capability. [*First Job: Production Engineer, Rosco Mirrors, Queens, NY*]

- Moh'd R. El-Sharo (Fall 2009). Predicting Hospital Admissions From Emergency Department Using Artificial Networks and Time Series Analysis. [*Pursuing Ph.D.*]
- Ankush Bhagat (Fall 2009). Mobile Intensive Care Unit Relocation Modeling Using Cluster Analysis and Linear Optimization. [*First Job: Healthcare Data Management Engineer, Adventist Health System, FL*]
- Nikita Solanki (Spring 2010). Working Towards a 'Green' Hospital Pharmacy: Waste Management and Inventory Management. [*First Job: Process Engineer, Baptist Hospital, Pensacola, FL*]
- Jayendran Subramanian (Spring 2010). AHP-PORT: An Analytical Hierarchy Process (AHP) Based Methodology for Prioritization of Requirements for Test (PORT) in Software Testing. [*First Job: Software Test Engineer, Commvault Systems, Oceanport, NJ*]
- Jitendran Subramanian (Spring 2010). A DMAIC-Based Approach for Systematic Testing of an Automated Prescription-Filling System. [*First Job: Data Analysis Engineer at Seagate Technology, Minnesota*]
- Sweta Bhattacharya (Spring 2010). The Impact of Robot Type, Arena Type, and Victim Level on Urban Search and Rescue Performance. [*First Job:*]
- Jingjing Liu (Spring 2010). A Markovian Approach to Determining the Optimum Process Mean with Dual Quality Characteristics Under 100% and Rectifying Inspection Plans.
- Zhenqi (Jessica) Wan (Spring 2010; Co-Advisor with S. Yoon). Analysis of Campus Evacuation Routing and Planning to Minimize Transportation Network Clearing Time.
- Anish Girme (Spring 2010). Human Factors Analysis of Robots in NIST's Black Arena Using USARSim.
- Juhi Salinkar (Summer 2010). Heuristic Scheduling Policies to Minimize Overall Waiting Time for Outpatient Healthcare Settings. [*First Job: Management Engineer, Montefiore Medical Center*]
- Sharon Olevano (Expected: Fall 2010; Part-Time Student).
- Silei Shan (Summer 2010). Analysis of Hospital Pharmacy Inventory Consolidation Decision Using Multi-Echelon Newsvendor Inventory Model. [*Pursuing Ph.D. at Binghamton University*]
- Diane Pierce (Expected: Fall 2010).
- Jonathan Oster (Expected Fall 2010).
- Wen Cao (Expected Summer 2011).
- Swathy H. Iyer (Expected Spring 2011).
- Preeti Ravindra (Expected Spring 2011).
- Takahiro Tanaka (Expected Summer 2011).

* Outstanding Graduate Student Award

Dissertation Committee Member (8 Graduated; 11 Current)

- Kaustubh Nagarkar (Fall 2005). A Systems Approach to Ultra-Fine Pitch High-Intensity Flip Chip Interconnect Packaging.
- Santosh A. Kudtarkar (Fall 2007). Investigation of Ball Bond Integrity for 0.8 Mil (20 Microns) Diameter Gold Bonding Wire on Low K Die in Wire Bonding Technology.
- Gary George (Spring 2008). New Methods for Mathematical Modeling of Human Behavior in the Manual Tracking Task (*Served as Outside Examiner*).
- Guhan Subbarayan (August 2008). A Systematic Approach for the Selection of PB-Free Printed Circuit Board (PCB) Surface Finishes.
- Kirill B. Zaychik (Spring 2009). Intelligent Systems Approach for Automated Identification of Individual Control Behavior of A Human Operator (*Served as Outside Examiner*).
- Dan Sloat (Spring 2009). Indirect Collaborative Evolution for the Facilitation of Group Intelligence in Nursing Care Plan Development.
- Shanthi Muthuswamy (Spring 2009). Particle Swarm Optimization Algorithms for a Class of Generalized Traveling Salesman Problem.
- Fadi Alsaleem (Summer 2009). Hybrid MEMS Sensors and Switches for Mass and Acceleration Detection (*Served as Outside Examiner*).
- Rohan A. Kulkarni (Spring 2010). "Optimizing" Splicing Processes for Optoelectronics Assembly in an Electronics Manufacturing Service Provider's Environment.
- Srikanth Poranki (Spring 2010). A Framework to Evaluate Disruptive Potential of Emerging Technologies: A Case of Flexible Electronics.

- Amol Kane (Expected Fall 2010).
- Kaustubh Kalkundri (Spring 2010). Investigation of Electromigration Behavior in Lead-Free Flip Chip Solder Bumps.
- Abdullah Al-Yafwai (Fall 2010). Reliability of Electronic Packages Under Random Vibration Loading (*Served as Outside Examiner*).
- Khalid Al-Zoubi (Fall 2010). Experimental and Analytical Studies on the High Cycle Bending Fatigue of Thin Film Metal on PET Substrate for Flexible Electronics Applications.
- Lawrence Al-Fandi (Expected Fall 2010). A Novel Approach Using Lean and Simulation Modeling for Effective Green Transformation.
- Mulugeta Abteu (Summer 2010). Effect of Cooling Rate, Silver Composition and Solder Joint Size on the Reliability of Sn-Ag-CU Solder Joints.
- Zhe Xu (Expected Fall 2010).
- Denisse E. Yepez (Spring 2012). Roll-To-Roll Flexible Electronics Manufacturing: Photolithography Stitching and Overlay Capabilities.
- Mohammad Hamasha (Spring 2011).
- Awni Qasaimeh (Spring 2011).
- Pushkraj Tumne (Spring 2011).
- George Rumbe (Spring 2011).
- Dominic P. Ojala (Spring 2012).
- Joe Weiss (Fall 2011).
- Vikram Venkatadri (Spring 2011).
- Jinghu Lu (Fall 2011).
- Guruprasad Srinivasan (Fall 2011). Reliability evaluation of novel electronic packages.

MS Thesis/Project Committee Member (40 Graduated: 0 Current)

- Murali Srinivasan (August 2004). Continuous Improvement Philosophies for Manufacturing: A Comparative Study.
- Sashidhar Nivarthi (August 2004). Enhancing the Utilization of Two Suites of ORs.
- Akhil Singh (December 2004). Lean Manufacturing: Concepts, Strategies and Tools.
- Kinjal A. Munshi (January 2005). Integration of the Physical and Financial Supply Chain: Cash to Cash Cycle Time Metric.
- Sachin Pimple (May 2005). Process Development for Flexible Flip Chip Copper Column (F2C2) Interconnect Technology.
- Amit Shah (August 2005). Supply Chain Integration Through SCOR-Based RFID Systems.
- Rupasri R. Kadambi (November 2005). Analysis of Data Mining Techniques for Customer Segmentation and Predictive Modeling.
- Melissa Hudak (December 2005). Applying and Improving the Particle Swarm Optimization Algorithm on the Quadratic Assignment Problem.
- Atul Beedu (December 2005). Integrated Inventory Control to Manage Blanket Orders in a Contract Manufacturing Environment: A Case Study.
- Angela Kucera (May 2006). United Health Services Hospitals Internship: Payroll Analysis for Employee Time and Attendance.
- Zhongwu Liu (May 2006). Warranty Data Analysis.
- Prasad Nagula (October 2006). Redesigning the Patient Care Delivery Processes at an Emergency Department.
- Shailesh S. Khadapkar (December 2006). Condition Monitoring of a Gearbox.
- George Rumbe (August 2007). Performance Evaluation of Second Price Auction Using Monte Carlo Simulation.
- Vikram Sekar (April 2007). Minimizing the Make-Span in a High-Production Mix Shop-Floor Using Integer Programming.
- Siu Lung (Summer 2007). Effect of Thermal and Mechanical Factors on Single and Multi-Chip BGA Packages.
- Chen Zhang (Fall 2007). Statistical Process Control (SPC) Chart Classification by Classification and Regression Tree (CART)

- Robert Wochinger (Fall 2007). Using Neural Networks to Classify Handwritten Digits.
- Nuala Mabe (Fall 2007). Information Systems Application Development for PCB Registration Process Control.
- Jing Li (Fall 2007). Evaluation and Improvement of the Robustness of a PCB Pad in a Lead-Free Environment.
- Denisse E. Yepez (Spring 2008). Analysis of a Mechanical Hole-Punching Process to Create Registration on a Continuous Roll-to-Roll Flexible Electronics Substrate Using SPC Techniques.
- Parnav Kaluskar (Spring 2008). Inventory Management and Cost Reduction in the Pharmaceutical Industry.
- Dominic P. Ojala (Summer 2008). Options Pricing: A Comparative Analysis of Black-Scholes Model, Artificial Neural Networks (ANNs), and Adaptive Neuro-Fuzzy Inference System (ANFIS).
- Kapil Tijare (Summer 2008). Implementation of ABC Cost Model to Determine Offshore Production Costs.
- Dhruvil Parikh (Summer 2008). Comparison of Machine Group and Part Family Formation in Cellular Manufacturing: A Principal Component Analysis and Formal Concept Analysis Approach.
- Prasad Patil (Fall 2008). Option Pricing: A Study of Call Prices from Black-Scholes Method, Artificial Neural Networks (ANN), and Artificial Neuro-Fuzzy Interference System (ANFIS).
- Pushkraj Tumne (Fall 2008). Reliability Assessment of PB-Free Solder Joints.
- Gaurav Godbole (Spring 2009). Pad Cratering: Characterizing Crack Propagation and the Effects of Humidity and Reflow on Reliability.
- Harish Nair (Spring 2009). Predicting the Success of Mergers in the Banking Industry: A Classification Techniques Comparison Approach.
- Michelle Tepfenhart (Spring 2009). Supply Chain Optimization: Forecasting and Allocation of Constrained Supply in Non-Durable Goods Markets.
- Rohan Ashar (Spring 2009). Reducing Burn-In Time Through Statistical Analysis in an Electronics Manufacturing Environment.
- Gary Cheung (Summer 2009). A Discrete Stereotyped Particle Swarm Optimization Algorithm for Quadratic Assignment Problems.
- Sajit Nair (Summer 2009). Fixture Design and Manufacturing: A Case Study.
- Sulman Majeed (Summer 2009). Rework of Area Array Components.
- Thomas Sparks (Fall 2009). Using Process Capability and DOE to Identify the Critical Factors in an Automotive Screw Drive Operation.
- Vikram Venkatadri (Fall 2009). Quantitative Assessment of Long Term Aging Effects on The Mechanical Properties of Lead Free Solder Joints.
- Prashanth Balasubramanian (Fall 2009). Root Cause Analysis Based Approach for Improving Preventative/Corrective Maintenance.
- Joseph W. Therriault (Fall 2009). Microvoiding Activation Energy Assessment.
- Varun Kesavakumaran (Spring 2010). Underfill Selection Methodology for Component Underfilling Process.
- Kaustubh Gothey (Spring 2010). An Approach to Machine Group and Part Family Formation in Reconfigurable Manufacturing Systems.
- Yue Zhang (Summer 2010). Tolerance and Variation Stack-up Analysis: A Case Study of Cassette Inside Spacing.

AWARDS AND HONORS

- Visiting Faculty Research Program Fellowship, Rome Air Force Research Laboratory (Summer 2009: 12 Weeks)
- NYS/UUP Individual Development Award, May 2009
- Listed in Who's Who in America (Marquis' Version – 63rd Edition 2009, Award Date October 2008)
- Listed in Who's Who in America (Marquis' Version – 62nd Edition 2008, Award Date October 2007)
- NYS/UUP Individual Development Award, October 2006

- Faculty Fellow, U.S. Air Force Summer Faculty Fellowship Program (Summer 2006: 12 Weeks)
- Who's Who in Engineering Education – WWEE (2005)
- Best Paper Award, Human Factors Engineering Track: Tetteh, E. G., Jiang, X., Mountjoy, D. N., Bowling, S. R., Gramopadhye, A. K., and Khasawneh, M. T., "*An Evaluation of Systematic Search Strategies on Inspection Performance Using a Job-Aiding Tool*," IIE Annual Conference and Exhibition 2004, Industrial Engineering Research Conference, Houston, Texas, May 15-19, 2004.
- Member, Alpha Epsilon Lambda (The Honor Society of Graduate & Professional School Students)
- Member, Alpha Pi Mu (Industrial Engineering Honor Society)
- Senator, Graduate Student Government – Representative of Industrial Engineering Department, Clemson University (Aug '01-Aug '03)
- Queen Rania Al-Abdullah's Award for Academic Excellence (January, 2000)

COLLOQUIUMS, SYMPOSIUMS, AND WORKSHOPS ATTENDED

- NSF Day, National Science Foundation (NSF) Workshop, Binghamton University, January 15, 2009.
- NSF CAREER Proposal Writing Workshop, Northwestern University, Evanston, IL, March 27-28, 2008.
- Workshop on Model Comparison and Model Validation, Air Force Research Laboratory (AFRL), Air Force Office of Scientific Research (AFOSR), September 8-9, 2006, Syracuse, New York.
- NSF CAREER Proposal Writing Workshop, Columbia University, New York, New York, May 24, 2005, The Thirty-Third Annual North American Manufacturing Research Conference (NAMRC 33).
- 3rd IIE New Faculty Colloquium, Industrial Engineering Research Conference, Atlanta, Georgia, May 14, 2005.
- Destination Discovery '05 Symposium: Across the Disciplines: Research Policies, Practice and Promise, State University of New York at Binghamton, Binghamton, NY, March 23-24, 2005.
- Funding Your Scholarly Work: A Workshop on Getting Grants, Albany NanoTech/School of NanoSciences and NanoEngineering, Albany, April 2-3, 2004.
- 2nd IIE New Faculty Colloquium, Industrial Engineering Research Conference, Houston, Texas, May 15, 2004.
- Mock National Science Foundation (NSF) Proposal Review, Industrial Engineering Research Conference, Houston, Texas, May 15, 2004.

SCIENTIFIC AND PROFESSIONAL SOCIETY MEMBERSHIPS

- Member, Institute of Industrial Engineers (IIE)
- Member, Human Factors and Ergonomics Society (HFES)
- Senior Member, American Society for Quality (ASQ)
- Member, American Society for Engineering Management (ASEM)
- Member, Jordan Engineers Association (JEA)

COMPUTER SKILLS

- Operating Systems : MS-DOS, UNIX, and Windows NT/XP/Vista
- Programming Languages : FORTRAN (Fortran Power Station Software)
- General Applications : Microsoft Office: MS Word, MS Excel & Internet
- Engineering Applications : ARENA, MATLAB, MOST, MannequinPro, ErgoMaster, Ergo2000, JACK-Human Performance Modeling Software
- Statistical Analysis : SAS, STATISTICA, MINITAB
- Web Design : MS Front Page, Macromedia Dreamweaver, HTML

INSTITUTIONAL AND PROFESSIONAL SERVICE/ACTIVITIES

Institutional

- *Faculty Member/Representative*, International Student Grant-in-Aid Fund Committee, State University of New York at Binghamton (Fall 2010 – present)
- *Chair*, Watson School's Distance Education Committee, State University of New York at Binghamton (Fall 2009 – present)
- *Faculty Advisor*, Institute for Industrial Engineers (IIE) Student Chapter, State University of New York at Binghamton (Fall 2009 – present)
- Watson School's Representative, Learning Environment Committee, State University of New York at Binghamton (March 2, 2009 – present)
- *Department Representative*, Engineers Week Planning, Watson School, State University of New York at Binghamton (November 2008 – present)
- *Member*, Watson School's Sciences Subcommittee, State University of New York at Binghamton (Fall 2008 – present)
- *Member*, Watson School's Communications Committee, State University of New York at Binghamton (September 11, 2007 – present)
- *Volunteer/Exhibitor*, The VirtuSphere Display/Demo, Binghamton University's Advocacy Day, Albany, NY (March 6, 2007)
- *Member*, Watson School's EngiNet Committee, State University of New York at Binghamton (July 1, 2005 – Summer 2009)
- *Member*, Watson School's Commencement Committee, State University of New York at Binghamton (September 1, 2003 – July, 2005)
- *Faculty Advisor*, American Society for Quality (ASQ) Student Chapter, State University of New York at Binghamton (February 1, 2004 – present)
- *Student Senator*, Industrial Engineering, Graduate Student Government, Clemson University (2001-03)

Departmental

- Department Representative, Represent SSIE Department Chair at the Council for Industrial Engineering Academic Department Heads Meeting, Industrial Engineering Research Conference (IERC), 2008 (Vancouver, Canada) and 2009 (Miami, FL)
- Member, Curriculum Subcommittee for Engineering Economics and Project Analysis and Control, Systems Science and Industrial Engineering Department, State University of New York at Binghamton (Spring 2009)
- Panelist, representing the SSIE Department in the Engineering Panel, WTSN 111 Exploring Engineering I Class, Spring 2009
- Website Coordinator, Systems Science and Industrial Engineering Department, State University of New York at Binghamton (Spring 2006 – present)
- Research Scientist Search Committee, Watson Institute for Systems Excellence, State University of New York at Binghamton, April-June 2009
- Research Manager Search Committee, Watson Institute for Systems Excellence, State University of New York at Binghamton, April-June 2009
- Administrative Manager Search Committee, Watson Institute for Systems Excellence, State University of New York at Binghamton, 2007
- Recruiting Graduate and Undergraduate Students (Domestic and International): 1) Visit International Universities; 2) Visit and Make Presentations at Local High Schools and Community Colleges; and 3) Correspond with International Applicants

Professional

- Founding Member, The Arabian Ergonomics Society
- External Reviewer/Evaluator, Industrial Technology – Quality Assurance Program at Broome Community College, Binghamton, New York (May, 2004)

Editorial

- Editorial Board, Journal of Management and Engineering Integration (2008-present)
- Editorial Board, International Journal of Industrial Ergonomics (*In process*)
- Editorial Board, International Journal of Experimental Design and Process Optimization (2009-present)
- Guest Co-Editor, Special Issue on 'Human Factors and Ergonomics in Healthcare Delivery', International Journal of Industrial Ergonomics (2009-2010)

Journal Reviewer

- Applied Ergonomics (2007-present)
- Ergonomics (2006-present)
- Computers and Industrial Engineering (2006-present)
- International Journal of Computer Mathematics (2008)
- European Journal of Operational Research (2006-present)
- Assistive Technology, Rehabilitation Engineering and Assistive Technology Society (2006)
- International Journal of Industrial Ergonomics (2003-present)
- Journal of Management and Engineering Integration (2008-present)
- International Journal of Vehicle Design (2004/2005)
- Decision Support Systems (2005)
- Human Factors and Ergonomics in Manufacturing (2010)

Book Reviewer

- Prospectus and sample materials/chapters from proposed textbooks, John Wiley & Sons, Inc. (2005)
- Prospectus and sample materials/chapters from proposed textbooks, SAGE Publications, Inc. (2004)

Conference Reviewer

- Human Factors and Ergonomics Society Conference, CEDM, PP, HC, IE, and HPM Technical Groups (2003-present)
- Industrial Engineering Research Conference (IERC) (2001-present)
- International Conference on Industry, Engineering and Management Systems (IEMS) Conference (2006-present)
- Industrial Engineering and Engineering Management (IEEM) Conference (Singapore, December 8-11, 2008)
- Industrial Engineering and Engineering Management (IEEM) Conference (Hong Kong, December 8-11, 2008)

Conference Track Chair

- Human-Computer Interaction, International Conference on Industry, Engineering and Management Systems (IEMS) Conference, March 8-11, 2010, Cocoa Beach, Florida
- Human-Computer Interaction, International Conference on Industry, Engineering and Management Systems (IEMS) Conference, March 8-11, 2009, Cocoa Beach, Florida
- Human Factors and Ergonomics Track, Industrial Engineering Research Conference (IERC), Vancouver, Canada, May 17-21, 2008
- Human-Computer Interaction, International Conference on Industry, Engineering and Management Systems (IEMS) Conference, March 10-12, 2008, Cocoa Beach, Florida
- Human-Computer Interaction, International Conference on Industry, Engineering and Management Systems (IEMS) Conference, March 11-14, 2007, Cocoa Beach, Florida

Symposium Organization

- Healthcare Delivery: A Balance of Art and Science, A Mini-Symposium by the Watson Institute for Systems Excellence, Binghamton University, April 2010 (In Process)
- Watson Cancer/Tumor Modeling, A Seminar for Thomas J. Watson School of Engineering and Applied Science, Binghamton University, October 2, 2009 (Co-Chaired w/ Madhu Govindaraju)
- Watson Healthcare Summit, A Mini-Conference for Thomas J. Watson School of Engineering and Applied Science, Binghamton University, August 26, 2009 (Co-Chaired w/ Madhu Govindaraju)

- Industry-Academia Partnership for Industry-Based Research, A Mini-Symposium by the Watson Institute for Systems Excellence, Binghamton University, October 17, 2008

Conference Sessions Invited/Organized/Chaired/Moderator

- Invited Session Chair, Healthcare Operations Management, Industrial Engineering Research Conference, Miami, FL, May 30 – June 3, 2009 (invited)
- Session Moderator, Health Care Systems Track, Applied Solutions, Institute of Industrial Engineers (IIE) Annual Conference and Expo 2009, Miami, FL, May 30 – June 3, 2009 (invited)
- Session Moderator, Society for Health Systems (SHS) Conference and Expo 2009, Chicago, IL, April 1-4, 2009 (invited)
- “Human-Computer Interaction,” Industrial Engineering Research Conference, Nashville, TN, May 21-24, 2007 (invited)
- “Cognitive Engineering Research,” Industrial Engineering Research Conference (IERC), Atlanta, Georgia, May 15-19, 2005
- “Human Performance in Hybrid Inspection,” Industrial Engineering Research Conference, Houston, Texas, May 15-19, 2004
- “Optimal Process Design and Analysis,” Industrial Engineering Research Conference, Houston, Texas, May 15-19, 2004
- “Modeling of Humans in Complex and Dynamic Environments: The Use of Advanced Technology,” The 8th Annual International Conference on Industrial Engineering Theory, Applications and Practice, Las Vegas, Nevada, November 10-12, 2003 (invited)