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Associate Professor, Ph.D.

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EDUCATION

Ph.D. Industrial Engineering with a minor in Management of Information Systems, Texas Tech University, 1996-1999

M.S. Mechanical Engineering, Tianjin University, P.R. China, 1987-1990

B.S. Mechanical Engineering, Hebei University of Science and Technology, P.R. China, 1980-1984

WORK EXPERIENCE

Professor, Department of Systems Science and Industrial Engineering, SUNY-Binghamton, 2007-2015

Associate Professor, Department of Systems Science and Industrial Engineering, SUNY-Binghamton, 2007-2015

Assistant Professor, Department of Systems Science and Industrial Engineering, SUNY-Binghamton, 2001- 2006

Assistant Professor, Department of Mechanical and Industrial Engineering, Texas A&M University-Kingsville (TAMUK), Kingsville, 1999-2001

Research Assistant, Department of Industrial Engineering, Texas Tech University, 1996-1999

Production Supervisor, Motorola Electronics Ltd. Tianjin, China, 1995-1996

Instructor/Editor, (Journal of) Hebei University of Science and Technology, 1990-1995

Research Expertise/Interests:

Real-time Reliability Prediction, Smart Sensor Array Systems, Yield and Reliability Enhancement for Flexible Electronics and Solar Cell, Fuel Cell Reliability.

Publications

Published/Accepted Journal Papers:

1. Shan S., Zhao W., Luo J., Yin J. Switzer J. C., Joeseeph P., Lu S., Poliks M., and Zhong C. J., "Flexibility Characteristics of Polyethylene Terephthalate Chemiresistor Coated with a Nanoparticle Thin Film Assembly", *J. Mater. Chem. C*, 2, pp.1893-1903, 2014.
2. Alqudah S., Dong Y., Gajic O., Lu H. and Lu S., "System Analysis and Process Redesign for Quality Improvement of Sepsis Resuscitation", Accepted by *International Journal of Collaborative Enterprise (IJCENT)*, 2014.
3. Peng, C. Y., Dhakal, T. P., Garner S., Cimo P., Lu S., Westgate C. R., **Fabrication of Cu₂ZnSnS₄ Solar Cell on a Flexible Glass Substrate.** *Thin Solid Films*, Vol. 562 (1), pp 574-577, 2014.

4. Peng, C. Y., Dhakal, T. P., Garner S., Cimo P., Lu S., Westgate C. R., "Strained Growth of Aluminum-Doped Zinc Oxide on Flexible Glass Substrate and Degradation Studies under Cyclic Bending Conditions." *IEEE Transactions on Device and Materials Reliability*, Vol. 14 (1) pp 121-126, 2014,
5. Peng, C.Y., Hamasha, M., VanHart D., Lu, S., Westgate, C. R., "Electrical and Optical Degradation Studies on AZO Thin Films under Cyclic Bending Conditions," *IEEE Transactions on Device and Materials Reliability*, Vol. 13 (1), pp. 236-244, 2013.
6. Sudarsanam, H., Peng C. Y., Hamasha M. M., Lu S. and Westgate C. R., "Cost Effective Green Grid System (Grid-Tied Photovoltaic System): A Simulation-Based Optimization Study", *Journal of Management and Engineering Integration* Vol. 5, No.1, pp 49-55, 2012.
7. Hamasha, M. M., Alzoubi, K., Switzer III, J. C., Lu, S., Poliks, M., Westgate, C. R., "Reliability of Sputtered Aluminum Thin Film on Flexible Substrate under Cyclic Bending Fatigue Conditions", Accepted by *IEEE Transaction on Components, Packaging and Manufacturing Technology*, 2012
8. Hamasha, M. M., Dhakal, T., Alzoubi, K., Albahri, S., Qasaimeh, A., Lu, S., Westgate, C. R. "Stability of ITO Thin Film on Flexible Substrate under Thermal Aging and Thermal Cycling Conditions", *IEEE Journal of Display Technology*, Vol. 8, No. 7, pp. 383-388, 2012.
9. Alzoubi, K., Hamasha, M. M., Wang, L., Zhang, H., Yin, J., Luo J., Lu, S., Samakia, B., Zhong, C. J., Poliks, M., "Stability of Interdigitated Microelectrodes of Flexible Chemiresistor Sensor Arrays", *IEEE Journal of Display Technology*, Vol. 8, No. 7, pp. 377-383, 2012.
10. Dhakal, T., Hamasha, M. M., Nandur, A., Lu, S., Vanhart, D., Westgate, C. R., "Moisture Induced Surface Corrosion in AZO Thin Films Formed by Atomic Layer Deposition", *IEEE Transactions on Device and Materials Reliability* Vol. 12, No. 2, pp. 347-356, 2012.
11. J. Luo, L.Wang, X. Shi, J. Yin, E. Crew, S. Lu, L. M. Lesperance, "Nanoparticle-structured Thin Film Sensor Arrays for Breath Sensing", *Sensors and Actuators B*, Vol. 161, No.1, pp 845-854, 2012.
12. Hamasha, M. M., Alzoubi, K., Lu, S., Desu, S. B., "Durability Study on Sputtered Indium Tin Oxide Thin Film on Poly Ethylene Terephthalate Substrate", *Thin Solid Films*, Vol. 519, No. 18, pp. 6042-6047, 2011.
13. Hamasha, M. M., Alzoubi, K., Switzer III, J. C., Lu, S., Desu, S. B., Poliks, M., "A Study on Crack Propagation and Electrical Resistance Change of Sputtered Aluminum Thin Film on PET Substrate under Stretching", *Thin Solid Films*, Vol. 519 (22), pp. 7918-7924, 2011.
14. Hamasha, M. M., Alzoubi, K., Lu, S., "Behavior of ITO Thin Film on PET Substrate under Stretching", *IEEE Journal of Display Technology*. Vol. 7 (8), pp. 426-433, 2011.
15. Alzoubi, K., Hamasha, M. M., Lu, S., Samakia, B., "Bending Fatigue Study of Sputtered ITO on Flexible Substrate", *IEEE Journal of Display Technology*. Vol. 7, No. 11, pp. 593-600, 2011.
16. Xu Z. and Lu, S., "Multi-Objective Optimization of Sensor Array Using Genetic Algorithm". *Sensors and Actuators B*, Vol.160, pp 278- 286, 2011.
17. Alzoubi, K., Lu, S., Sammakia, B., Poliks, M., "Experimental Study of the High Cycle Fatigue of Thin Film Metal on Polyethylene Terephthalate for Flexible Electronics

- Applications,” *IEEE Transactions on Components, Packaging, and Manufacturing Technology*, vol. 1 (1), pp. 43-51, 2011.
18. Alzoubi K., Lu, S., Sammakia B., and Poliks M., “Factor Effect Study for the High Cyclic Bending Fatigue of Thin Films on PET Substrate for Flexible Displays Applications”, *IEEE Journal of Display Technology*, Vol. 7(6), pp.348-355, 2011.
 19. Xu Z., Shi X., Lu S., “Integrated Sensor Array Optimization with Statistical Evaluation”, *Sensors and Actuators B: Chemical*, Vol. 149 (1), pp. 239-144, 2010.
 20. Pable A., Lu S., Auerbach J., “Integrated Qualitative/Quantitative Techniques for Food Product Quality Planning”, *Journal of Food Quality*, Vol. 33 (1), pp. 112 – 129, 2010.
 21. L., Wang, J. Luo, Y. Jun, H. Zhang., Wu J., Shi X., C, Elizabeth, X. Zhe, Q. Deng, S. Lu, M. Poliks, B. Sammakia , C. Zhong, "Flexible Chemiresistor Sensors: Thin Film Assemblies of Nanoparticles on Polyethylene Terephthalate Substrate ", *J. Mater. Chem.*, Vol. 20, pp. 907-915, 2010.
 22. Z. Xu, X. Shi , L. Wang, J. Luo, C. Zhong, and S. Lu, “Classification of Unknown Vapor by Fuzzy ARMAP”, *Journal of Sensors and Actuators B, Sensors and Actuators B: Chemical*, Vol. 141 (2), pp. 458-464, 2009.
 23. T. Lin, S. Paul, S. Lu, and H. Lu, Prediction Model for MEMS Switch, *Journal of Microelectronics Reliability*, Vol. 49, pp. 59-65, 2009.
 24. X. Shi, J. Luo, M. Njoki, S. Lu, C.J. Zhong, "A Combinatorial Assessment of the Activity-Composition Correlation for Several Alloy Nanoparticle Catalysts", *Journal of Industrial & Engineering Chemistry Research*, Vol. 47, pp.: 4675-4682, 2008.
 25. Z. Chen, S. Lu, and S. Lam, “A Hybrid System for SPC Concurrent Pattern Recognition, *Journal of Advanced Engineering Informatics*, Vol.21/3, pp.303-310,2007.
 26. T. Lin, A. Menezes, F. Andros, D. G. McBride, S. Lu, and B. Sammakia, “Assembly of Copper Column Interconnect Flip Chip”, *IEEE Transactions on Electronics Packaging Manufacturing*, Vol. 30/3, pp.206-212, 2007.
 27. L. Wang, X. Shi, N. Kariuki, M. Schadt, G. Wang, J. Choi, J. Luo, S. Lu, C. J. Zhong, “Array of Molecularly-Mediated Thin Film Assemblies of Nanoparticles: Correlation of Vapor Sensing with Interparticle Spatial Properties,” *Journal of the American Chemical Society*, Vol.129/7, pp. 2161-2170, 2007.
 28. L. Wang, N. Kariuki, M. Schadt, D. Mott, J. Luo, X. Shi, C. Zhang, W. Hao, S. Lu, N. Kim, J. Q. Wang, C. J. Zhong, “Sensing Arrays Constructed from Nanoparticle Thin Films and Interdigitated Microelectrodes,” *Sensors*, Vol.6, pp. 667-679, 2006.
 29. S. Lu, Y.C. Tu, and H. Lu, “Predictive Condition-based Maintenance for Continuous Deteriorating Systems,” *Quality and Reliability Engineering International*, Vol. 22, pp. 1-11, 2006.
 30. X. Shi, L. Wang, N. Kariuki, J. Luo, C. J. Zhong, and S. Lu, “A Multi-Module Artificial Neural Network Approach to Pattern Recognition with Optimized Nanostructured Sensor Array,” *Journal of Sensors and Actuators, B.*, Vol.117, pp. 65-73, 2006.
 31. T. Lin, D.G. McBride, F. Andros, and S. Lu, “A Study on Molding Material for Flexible Flip Chip Connection,” *Journal of Surface Mount Technology*, Vol. 18/3, pp. 32-38, 2005.
 32. L. Han, X. Shi, W. Wu, F. L. Kirk, J. Luo, L. Wang, D. Mott, S. Lu, and C. J. Zhong, “Nanoparticle-Structured Sensing Array Materials and Pattern Recognition for VOC Detection,” *Journal of Sensors and Actuators B.*, Vol.106, pp. 431-441, 2005.
 33. A. Batra, P. Ramachandran, P. Sathyanarayanan, S. Lu and K. Srihari, “Reliability Enhancement of Electronic Packages by Design of Optimal Parameters,” *Microelectronics Reliability*, Vol. 44/7, pp. 1157-1163, 2004.

34. S. Lu, S. Lam, and W.Y. Cheng, "Yield Enhancement and Yield Modeling for Mass Reflow Process of 0201 Components," *Journal of Surface Mount Technology*, Vol. 17/4, pp. 11-16, 2004.
35. W. J. Kolarik, J. C. Woldstad, S. Lu, and H. Lu, "A Real-Time Approach to Human Performance Assessment with Fuzzy Logic," *IIE Transactions*, Vol. 36/5, pp. 457– 467, 2003.
36. H. Lu, W. J. Kolarik, and S. Lu, "Real-Time Performance Reliability Prediction," *IEEE Trans. on Reliability*, Vol. 50/4, pp. 353-357, 2002.
37. S. Lu, H. Lu, and W. J. Kolarik, "Multivariate Performance Reliability Prediction in Real-Time," *Journal of Reliability Engineering and System Safety*, Vol. 72/1, pp. 39- 45, 2001.

Publications in Fully Refereed Conferences:

1. C. Y. Peng, T. P. Dhakal, A. Emrani, S. Lu, C. R. Westgate, Stability of CZTS Thin Film Solar Cells upon Accelerated Thermal Cycling and Damp Heat Exposure, 40th IEEE Photovoltaic Specialist Conference, 2014.
2. C. Y. Peng, T. P. Dhakal, S. M. Garner, P. Cimo, S. Lu, C. R. Westgate, Flexible CZTS Solar Cells on Flexible Corning Glass Substrates, 40th IEEE Photovoltaic Specialist Conference, 2014.
3. C.Y. Peng, M. Hamasha, T. P. Dhakal, S. Lu, C. R. Westgate. Growth of Aluminum-Doped Zinc Oxide on Flexible Glass Substrates and Cyclic Bending Reliability Study., 2013 Flexible Electronics & Displays Conference, Feb 01, 2013, Phoenix, Arizona, USA.
4. Comparisons of the Mechanical Behaviors of Poly (3, 4-ethylenedioxythiophene) (PEDOT) and ITO on FlexibleSubstrates", Material Science Society Fall Meeting & Exhibit, Boston, Massachusetts, USA.
5. C.Y. Peng, H. Sudarsanam, M. Hamasha, S. Lu, T. P. Dhakal, C. R. Westgate. "Performance of Aluminum-Doped Zinc Oxide under Bending Fatigue Conditions." 8th annual conference Long Island Systems, Applications and Technology (LISAT), May 4, 2012, Long Island, New York, USA.
6. C.Y. Peng, M. Hamasha, D., Vanhart, S. Lu, C. R. Westgate Electrical and Optical Degradation Studies on AZO Thin Films underCyclic Bending Conditions, 2012 Electronics Packaging Symposium, Niskayuna, NY, USA.
7. Nair, H., S Lu, H. Lu, Predicting the Success of Mergers in the Banking Industry, IERC conference, San Juan, Puerto Rico, 2013.
8. Z. Song , B.T. Murray, B. Sammakia, S. Lu , Multi-objective optimization of temperature distributions using Artificial Neural Networks, Thermal and Thermomechanical Phenomena in Electronic Systems (ITherm), 2012 13th IEEE Intersociety Conference, pp1209 – 1218, 2012.
9. M. M. Hamasha, K. Alzoubi, T. Dhakal, A. Qasaimeh, S. Lu, C. R. Westgate, "Stability of Aluminum Thin Films on Flexible Substrate under Thermal and Isothermal Conditions", *ISMTA Conference and Exhibition*, October, 16-20, 2011; Fort Worth, TX, USA.
10. M. M. Hamasha, K. M. Alzoubi, J. C. Switzer III, S. Lu, C. R. Westgate, M. Poliks, "Crack Development and Electrical Resistance Degradation of Aluminum Thin Films

- Deposited on Flexible Substrate under Cyclic Bending Fatigue Conditions”, *IMAPS Mid-Atlantic Microelectronics Conference*, June 23-24, 2011, Atlantic City, New Jersey, USA.
11. M. M. Hamasha, K. M. Alzoubi, J. C. Switzer III, E. M. Tiberio, S. Lu, C. R. Westgate, M. Poliks, “Stress Concentration and Crack Development of Deposited Titanium Oxides on Flexible Substrate for Solar Photovoltaic Applications”, *IMAPS Mid-Atlantic Microelectronics Conference*, June 23-24, 2011, Atlantic City, New Jersey, USA.
 12. A. Qasaimeh, P. Borgesen, and S. Lu, “Crack Behavior in Lead Free Solder Joints During Isothermal and Thermal Cycling”, *IMAPS-Atlantic City, NJ, USA*, 2011.
 13. A. Qasaimeh, S. Lu and P. Borgesen, “Crack Evolution and Rapid Life Assessment for Lead Free Solder Joints”, *Electronic Components and Technology Conference - ECTC*, pp. 1283-1290, 2011
 14. K. Alzoubi, M. M. Hamasha, J. Yin, H. Zhang, L. Wang, J. Luo, S. Lu, B. Samakia, C. Zhong, M. Poliks, “Stability of interdigitated microelectrodes of Flexible Sensor Arrays”, *2011 Flexible Electronics & Displays Conference Proceedings*, February, 7-10, 2011, Phoenix, Arizona, USA.
 15. M. M. Hamasha, T. Dhakal, K. Alzoubi, A. Qasaimeh, S. Lu, X. Liu, “Stability of ITO Thin Film on Flexible Substrate under Thermal Aging and Thermal Cycling Conditions”, *2011 Flexible Electronics & Displays Conference Proceedings*, February, 7-10, 2011, Phoenix, Arizona, USA.
 16. K. Alzoubi, M. M. Hamasha, S. Lu, B. Samakia, M. Poliks “Effect of Lamination on the Bending Fatigue Life of Copper Coated PET Substrate”, *Proceedings of SPIE*, January, 21-27, 2011, San Francisco, California, USA.
 17. E. Al-Momani, S. Lu, I. Rawabdeh, and R. Alqudah, “Applying a Hybrid Approach for Optimizing Sheet Metal Blanking Process”, *2010 Industrial Engineering Research Conference*, June 5 – June 9, 2010, Cancún, Mexico.
 18. K. Alzoubi, A. Qasaimeh, S. Lu, B. Sammakia, M. Poliks “Resistance Change Modeling of Sputtered Thin Films on Flexible Substrates under Fatigue Test”, *2010 Industrial Engineering Research Conference*, June 5 – June 9, 2010, Cancún, Mexico.
 19. S. Gondipalli, B. Sammakia, S. Lu, G. Refai-Ahmed, “Fin-shape Optimization of an Impingement-parallel Plate Heat Sink”, *ITHERM*, 2010.
 20. E. Al-Momani, S. Lu, I. Rawabdeh, and R. Alqudah, Applying a Hybrid Approach for Optimizing Sheet Metal Blanking Process, *2010 Industrial Engineering Research Conference*, June 5 – June 9, 2010, Cancún, Mexico.
 21. K. Alzoubi, A. Qasaimeh, S. Lu, B. Sammakia, M. Poliks “Resistance Change Modeling of Sputtered Thin Films on Flexible Substrates under Fatigue Test”, *2010 Industrial Engineering Research Conference*, June 5 – June 9, 2010, Cancún, Mexico.
 22. K. Alzoubi, S. Lu, B. Sammakia, M. Poliks, “Factors Effect Study for the High Cyclic Bending Fatigue of Thin Films on PET Substrate Using Design of Experiments Tools”, *9th Annual Flexible Electronics and Displays Conference*, February 1-4, 2010, Phoenix Arizona, USA.
 23. Z. Xu, S. Lu, J. Li, and L. Wang, "Artificial neural network potential energy surface for silver nanoparticles", *IEEE proceedings of 2010 Sixth International Conference on Natural Computation* 3, pp.1586-1589: 2010.
 24. Z. Xu, X. Shi, J. Li, S. Lu, and L. Wang, *IEEE proceedings of 2009 Fifth International Conference on Natural Computation* 1, pp86-90: "Artificial neural network method to construct potential energy surfaces for transition metal nanoparticles: Pt, Au, and Ag", 2009.

25. A. Mayyas, A. Qasaimeh, K. Alzoubi, S. Lu, "Machinability Modeling for Aluminum Composite Drilling Process". Proceedings of the 2009 Industrial Engineering Research Conference, May 30 - June 3, 2009, Miami, USA.
26. Alzoubi, K., Lu S., Sammakia B., Poliks M., "Experimental Study of the High Cyclic Bending Fatigue of Thin Film Metal on Polyethylene Terephthalate for Flexible Electronics Applications", Proceedings of the ASME 2009 InterPACK Conference IPACK2009, July 19-23, 2009, San Francisco, California, USA.
27. S. Lewis, M. Sundar, J. Jiang and S. Lu, "Cluster Analysis Method For Identification Of Failures in A Manufacturing Environment", Proceeding of IERC, 2009.
28. Z. Xu, M. Sundar, Xi. Shi, and S. Lu, "Sensor Array Optimization by Cluster Analysis and Genetic Algorithms, Proceeding of IERC, 2009.
29. A. Mayyas, A. Qasaimeh, K. Alzoubi and S. Lu, "Machinability Modeling for Aluminum Composite Drilling Process, Proceeding of IERC, 2009.
30. T. Lin, F. Andros, S. Lu, and B. Sammakia, "Process and Reliability of Copper Column Flexible Flip Chip Connection (F2C2)", Proceeding of 10th Electronics Packaging Technology Conference, 2008.
31. M. Terrones, H. Lu, and S. Lu, "A Study of Robot Arm Precise Positioning Using SVM Classification Algorithm", the 13th Annual International Conference on Industrial Engineering, 2008.
32. A. Joshi, N. Kulkarni, P. Samant and S. Lu, A Comparative Study of Multivariate Techniques and Support Vector Machines for Text Categorization, the 13th Annual International Conference on Industrial Engineering, 2008.
33. X. Shi, S. Lu, L. Wang, and C. J. Zhong, "Responses of Nanostructured Sensing Array to Mixed VOCs: Feature Extraction and Pattern Recognition Analysis", IEEE International Conference on Nanotechnology 2007 (IEEE-NANO 2007).
34. L. Wang, X. Shi, S. Mahs, J. Choi, K. Sarup, G. R. Wang, J. Luo, S. Lu, C.J. Zhong, "Iron Oxide Composite Nanoparticles and Sensing Properties," *MRS Proceeding: Nanoparticles and Nanostructures in Sensors and Catalysis*, Vol. 900E, 2006.
35. C. J. Zhong, S. Lu, L. Wang, X. Shi, M. Schadt, W. Hao and J. Luo, "Novel Sensing Array Nanomaterials: Molecularly-Mediated Assemblies of Nanoparticle," *Proceeding of Nanotech 2006*, Vol. 3, 2006.
36. X. Shi, S. Lu, L. Wang, J. Luo, C. J. Zhong, and G. H. Wang, "Feature Selection and ANN-based Pattern Recognition for VOC Detection," *Proceeding of Industrial Engineering Research Conference (IERC)*, 2006.
37. N. Kulkarni and S. Lu, "Process Characterization and Optimization of Mass Finishing Process," *Proceeding of Industrial Engineering Research Conference (IERC)*, 2006.
38. A. Batra, R. Murcko, S. Lu, and K. Srihari, "Optimization of Plated-through-hole (PTH) Process using Evolutionary Operation (EVOP)," *Proceeding of Industrial Engineering Research Conference (IERC)*, 2005.
39. L. Kelly, S. Lam, and S. Lu, "Process Fermentation Process Modeling Data Preprocessing Strategies Using Neural Networks", *Proceeding of Industrial Engineering Research Conference (IERC)*, 2005.
40. S. Lu, Y.C. Tu, and H. Lu, "Predictive Conditional Based Maintenance Strategy Based on Real-time Performance Reliability Monitoring," *International Conference on Quality and Reliability*, P.R. China: Beijing, 2005.
41. S. Koppikar, H. Lu, and S. Lu, " Fuzzy Time Series Modeling in Demand Control and Forecasting," *Proceeding of Industrial Engineering Research Conference (IERC)*, 2004.

42. S. Lu, H. Lu, and X. Shi, Temporal and Spatial Variation Modeling For Six Sigma Manufacturing,” *Proceeding of Industrial Engineering Research Conference (IERC)*, 2004.
43. H. Lu, S. Zhang, and S. Lu, ‘On-Line Ham Auto-Grading By Knowledge-Based Color Image Recognition,” *Proceeding of Industrial Engineering Research Conference (IERC)*, 2004.
44. S. Lu, H. Lu, and X. Shi, “An Intelligent Integration Of SPC and EPC In Industrial Manufacturing Processes,” *Proceeding of 5th International Conference on Frontiers of Design and Manufacturing*, pp. 657-663, Dalian, China, July 2002.
45. W. Y. Chen, S. Lu, and S. Lam, “Yield Modeling for Mass Reflow Process of 0201 Components Using Neural Networks,” *ANNIE’ 2002 Proceedings*.
46. S. Lu, and H. Lu, “Intelligent Failure Prediction and Fault Diagnosis Systems,” *Proceeding of 4th International Conference on Frontiers of Design and Manufacturing*,” pp. 657-663, Hangzhou, China, 2000.
47. H. Lu, W. J. Kolarik, and S. Lu, “Real-Time Conditional Reliability Assessment with On-Line Data Acquisition,” *The Fourth International Conference on Electronic Measurement and Instruments*, CD, Harbin, China, 1999.
48. S. Lu, W. J. Kolarik, and J. C. Woldstad, “Human Reliability Performance Metrics and Modeling Strategies,” *Proceeding of Industrial Engineering Research Conference (IERC)*, 1999.
49. H. Lu, W. J. Kolarik, and S. Lu, “A Real-Time Reliability Monitoring Prototype,” *Proceeding of Industrial Engineering Research Conference (IERC)*, 1998.
50. W. M. Zhau and S. Lu, “Research on Surface Chemical Coloring and Protection Technology for Aluminum Alloy Fasteners,” *Proceeding of the second China/Japan international Symposium on Fasteners*, Beijing, China, 1994.
51. S. Lu and Q. F. Wang, “Automatic Pattern-Plate Layout in Vertical Parting Cast,” *Third International Conference of Computer Application in Mechanical Engineering*, China, 1992.
52. J. C. Woldstad, W. J. Kolarik, and S. Lu, “Real-Time Human Performance Reliability Assessment,” *The Human Factors and Ergonomics Society/International Ergonomics Association, 2000 Meeting*, San Diego, CA, 2000.
53. W. J. Kolarik and S. Lu, “New Concepts in Human Reliability Models,” *IEEE SMC conference*, San Diego, 1998.
54. W. J. Kolarik, H. Lu, and S. Lu, Reliability Modeling in Real-Time, *Amarillo National Resource Center Researchers’ Conference*, Amarillo, TX, 1998.

Posters

1. M. M. Hamasha, K. Alzoubi, S. Lu, and S. B. Desu, “A Study of Electrical Resistance and Crack Development of Sputtered Aluminum Thin Film on PET Substrate under Stretching”, Flexible Electronics Symposium, Binghamton University, Binghamton NY, August 17th, 2010.
2. M. M. Hamasha, K. Alzoubi, S. Lu, B. Sammakia, M. Poliks, S. B. Desu, “Experimental Study Of The High Cyclic Bending Fatigue Of Indium Tin Oxide On Flexible Substrate For Flexible Electronics Applications”, 9th Electronics Packaging Symposium, GE Global Research Center, Niskayuna, NY September, 2010.
3. M. M. Hamasha, K. Alzoubi, S. Lu, S. B. Desu, “A Study of Electrical Resistance and Crack Development of Sputtered Aluminum Thin Film on PET Substrate under

- Stretching”, Electronics Packaging Symposium, GE Global Research Center, Niskayuna, NY September, 9th 2010.
4. T. Dhakal, A. Nandur, R. Cristrain, M. M. Hamasha, S. Lu, S. B. Desu, R. Charles Westgate, “Growth Of Aluminum Doped ZnO Using ALD System as a Transparent Conducting Oxide For Solar Cells”, MRS Workshop Series, Photovoltaic materials and Manufacturing Issues, Denver CO, October 4-8, 2010.
 5. M. M. Hamasha, K. Alzoubi, T. Dhakal, A. Nandur, S. Lu, C. R. Westgate, “Reliability Tests Of Thin Films For Solar Cell Applications”, CASP industrial day, Binghamton University, Binghamton NY, November, 8th 2010.
 6. M. M. Hamasha, K. Alzoubi, S. Lu, B. Sammakia, M. Poliks, S. B. Desu, “Experimental Study Of The High Cyclic Bending Fatigue Of Indium Tin Oxide On Flexible Substrate For Flexible Electronics Applications”, CASP industrial day, Binghamton University, Binghamton NY, November, 8th 2010.
 7. T. Dhakal, A. Nandur, R. Cristrain, M. M. Hamasha, S. Lu, S. B. Desu, C. R. Westgate, “Growth Of Aluminum Doped ZnO Using ALD System as a Transparent Conducting Oxide For Solar Cells”, CASP industrial day, Binghamton University, Binghamton NY, November, 8th 2010.
 8. M. M. Hamasha, K. Alzoubi, T. Dhakal, A. Nandur, S. Lu, C. R. Westgate, “Reliability Tests Of Thin Films For Solar Cell Applications”, 10th Electronics Packaging Symposium, Innovative Technologies Complex, Vestal, NY, October 10, 2011.
 9. Oral presentation at the 236th ACS National Meeting, 2008:
 - a. Feature selection in pattern recognition of sensor array responses.
 - b. Sensing arrays constructed from nanoparticle-structured thin film assemblies.
 10. Poster presentation at the 236th ACS National Meeting, 2008.
 11. Application of statistical methods in catalyst screening.
 12. Signal recognition in enhancing sensor array selectivity.
 13. Characterization of alloy nanoparticle catalysts in fuel cells.
 14. Array of molecularly mediated thin film assemblies of nanoparticles: Correlation of vapor sensing with interparticle spatial properties.