

## INVITED PRESENTATIONS AND SEMINARS

- Mears, L. (2016). “Best practices and pitfalls in US Germany research collaborations: Setting up a visiting scholar stream,” (invited talk) NSF-DFG Workshop on U.S.-Germany Collaborative Research in Advanced Manufacturing, TU-Darmstadt, February 10, 2016.
- Mears, L. (2015). “Automotive Industry: Research (R)evolution and new Educational Paradigms,” (invited presentation and panel session) Indian Institute of Technology - Bombay (IITB), December 9, 2015.
- Mears, L. (2015). “Digital Manufacturing: The Human Effect,” (invited presentation and panel session) Carnegie Mellon University, September 17, 2015.
- Mears, L., (2015). “Digital Manufacturing and Industrie 4,0: Future Directions,” (invited talk) *BMW AG*, Munich, July 14, 2015.
- Mears, L., (2015). “Manufacturing Plant Energy Optimization,” (invited talk) *BMW AG*, Munich, July 14, 2015.
- Mears, L., Summers, J., Mocko, G., Kurz, M. (2015). “Improving Assembly Systems Data and Decision-Making,” (invited talk) *BMW AG*, Munich, July 14, 2015.
- Mears, L., Apon, A., Venayagamoorthy, K. (2015). “Big Data: Big Opportunities without Big Costs,” (invited panelist) *BMW AG*, Munich, July 14, 2015.
- Mears, L., (2013). “Electrically-Assisted Forming of High-Strength Steels,” (invited talk) *Universitat de València*, October 2, 2013.
- Mears, L., (2013). “Model-Based Control and Automated Learning through Bayesian Updating: Applications Across the Time Scale,” (invited talk) *University of North Carolina-Charlotte*, June 6, 2013.
- Mears, L., Kuttolamadom, M., Jones J. (2013). “Manufacturing using Lightweight Metals,” (invited talk) *Southern Advanced Materials Research Exchange II*, Clemson University, February 28, 2013.
- Mears, L., (2012). “Model-Based Control of Machining Processes and Extension to Condition-Based Maintenance Systems,” (invited talk) *University of North Carolina-Charlotte*, May 7, 2012.
- Mears, L., Kuttolamadom, M., Jones J. (2012). “Lightweight Material Manufacturing Approaches for the Automotive Industry,” (invited talk) *Southern Advanced Materials Research Exchange*, Oak Ridge National Lab, Oak Ridge, TN, May 31, 2012.
- Mears, L. (2011), “Case Study to Predict Failure: An Integrated Condition-Based Monitoring System,” (invited talk), *Interactive Manufacturing Experience*, Las Vegas, NV, September 12-13, 2011.

## Laine Mears

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### INVITED PRESENTATIONS AND SEMINARS (continued)

- Mears, L. (2011), "Improving Cost of Ownership: A Planned Maintenance Approach," (invited talk), *Interactive Manufacturing Experience*, Las Vegas, NV, September 12, 2011.
- Mears, L. (2011), "Integration of a Predictive Maintenance System to the Machine Tool," (invited talk), *Okuma America Partners Group*, August 15, 2011.
- Mears, L. (2010), "Electrification of the Transportation Industry" Presentation followed by hosting of panel session, *ASME International Manufacturing Science and Engineering Conference (MSEC2010)*, Erie, PA, October 15, 2010.
- Mears, L. (2010) "Preparing for and writing proposals to NSF - with additional thought on the CAREER" (invited talk), *2010 NSF Proposal Writing Workshop*, Lincoln, NE, September 1-2, 2010.
- Mears, M.L. (2009) "Real-Time Prototyping and Deployment Controls for Automotive and Manufacturing Applications," (invited talk) *NI-Week*, Austin, TX, August 4, 2009.
- Mears, M.L. (2008) "Quality Integration in the Automotive Supply Chain," (invited talk) *Lang-Mekra Supplier Day*, Columbia, SC, September 16, 2008.
- Mears, M.L. (2008) "Simulation and Model-Based Machining to Support Titanium Use in the Commercial Automotive Industry," (invited talk) *National Center for Manufacturing Sciences (NCMS) Automotive Summit*, Ann Arbor, MI, July 23, 2008.
- Mears, M.L. (2008) "Energy-Based Precision Positioning and Its Application to Automotive Manufacturing," (invited talk) *Marquette University*, Milwaukee, WI, March 6, 2008.
- Mears, M.L. (2007) "Employment in the Automotive Industry," (invited talk) *Greenville Technical College*, Greenville, SC, November 29, 2007.
- Mears, M.L. (2007) "Training and Keeping the Technical Future of SC in Lightweight Composite Manufacturing," (invited talk) *South Carolina Composite Economic Cluster Conference*, Spartanburg, SC, November 11, 2007.
- Mears, M.L. (2007) "Precision Machining and Measurement with Adaptive Control and Online System Identification," (invited talk) *NI-Week*, Austin, TX, August 19, 2007.
- Mears, M.L. (2007) "Real-Time Identification of Sliding Friction Using LabVIEW FPGA," (invited talk) *Applied Control and Technology Consortium (ACTC) Automotive Control Workshop*, Auburn Hills, MI, March 19, 2007.
- Mears, M.L. (2006) "Opportunities in Automotive Education in South Carolina," (invited talk) *Concours d'Elegance Motoring Show Education Symposium*, Hilton Head, SC, November 4, 2006.
- Mears, M.L. (2005) "Control Design Utilizing LabVIEW Real-Time Deterministic Looping," (invited talk) *National Instruments Real-Time Symposium*, University of Alabama, Tuscaloosa, AL, June 2005.

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### INVITED PRESENTATIONS AND SEMINARS (continued)

- Mears, M.L. (2005) "Control Design Utilizing LabVIEW Real-Time Deterministic Looping," (invited talk) *National Instruments Real-Time Symposium*, Mississippi State University, Starkeville, MS, June 2005.
- Mears, L. (2005) "Cost Modeling of Positioning Systems for Manufacturing and Metrology," General Motors Scholar Final Presentation, *GM R&D*, Warren, MI, February 2005.
- Mears, M.L. (2005) "Control Design Utilizing LabVIEW Real-Time Deterministic Looping," (invited talk) *National Instruments Real-Time Symposium*, McGill University, Montreal, Quebec, February 2005.
- Mears, M.L. (2005) "Control Design Utilizing LabVIEW Real-Time Deterministic Looping," (invited talk) *National Instruments Real-Time Symposium*, University of Toronto, Ontario, February 2005.
- Mears, M.L. (2004) "Design of a Centering Control System for Precision Measurement of Bearing Rings," *Georgia Tech Industrial Advisory Board* presentation and poster session, Atlanta, October 20, 2004.
- Mears, M.L. (2001) "Flow Testing Cycle Time Reduction Using Statistical Approximation Techniques," *Unisia-JECS Engineering Summit*, Atsugi, Japan, September 21, 2001.

**PATENTS, PUBLICATIONS AND PRESENTATIONS**

**Books**

- B1. Salandro, W., Jones, J., Bunget, C., Mears, L., Roth, J.T. (2015), Electrically-Assisted Forming: Modeling and Control (Springer series in Advanced Manufacturing). ISBN 978-3-319-08878-5, London: Springer-Verlag, 355pp.

**Patents**

- P2. Salandro, W., Bunget, C., Mears, L., “Thermo-Mechanical Predictive Algorithm for Electrically-Assisted Manufacturing Process,” U.S. Provisional Patent No. 61/487447, filed 18May2011.
- P1. Mears, L. and Martens, T. (2014) “Microstructure-Enhanced Sinter Bonding of Metal Injection Molded (MIM) Parts to Solid Substrate,” U.S. Patent 8871355, filed 10Aug2010, and issued 28Oct2014.

**Refereed Journals**

- J52. Mehta, P., Kuttolamadom, M., Mears, L. (2016). “Mechanistic Force Model for Machining Process - Theory and Application of Bayesian Inference,” *International Journal of Advanced Manufacturing Technology*, Submitted.
- J51. Gill, A., Visotsky, D., Mears, L., Summers, J. (2016). “Cost Estimation Model for PAN-Based Carbon Fiber Manufacturing Process,” *ASME Journal of Manufacturing Science and Engineering*, Accepted.
- J50. Akhavan Niaki, F., Michel, M., Mears, L. (2016). “State of Health Monitoring in Machining: Extended Kalman Filter for Tool Wear Assessment in Turning of IN718 Hard-to-Machine Alloy,” *SME Journal of Manufacturing Processes*, doi:10.1016/j.jmapro.2016.06.015.
- J49. Özel, T., Kuttolamadom, M., Akhavan Niaki, F., Huang, Y., Kurfess, T., Liang, S., Mears, L., Schmid, S., Uluhan, D., Wang, J. (2016) “Review of the State-of-the-Art on Machining Tool Wear: Mechanisms, Metrology and Modeling,” *International Journal of Machine Tools and Manufacture*, Submitted.
- J48. Feng, L., Mears, L., Beaufort, C., Schulte, J. (2016) “Energy, economy, and environment analysis and optimization on manufacturing plant energy supply system,” *Energy Conversion and Management*, **117(1)**: 454-465, doi:10.1016/j.enconman.2016.03.031

**PUBLICATIONS AND PRESENTATIONS**

- J47. Akhavan Niaki, F., Ulutan, D., Mears, L. (2016). "Parameter Inference under Uncertainty in End-Milling  $\gamma'$ -Strengthened Difficult-to-Machine Alloy," *ASME Journal of Manufacturing Science and Engineering*, **138(1)**:061014, doi:10.1115/1.4033041
- J46. Kurz, M., Antani, K., Mears, L., Mayorga, M., Funk, K. (2016) "An Effective Integer Program for a General Assembly Line Balancing Problem with Parallel Workers and Additional Assignment Restrictions," *IIE Transactions*, Submitted.
- J45. Akhavan Niaki, F., Mears, L. (2016). "A Stochastic-Based Study on Fused Direct and Indirect Methods for Tracking Tool Flank Wear on Rene-108 Nickel-Based Alloy," *International Journal of Advanced Manufacturing Technology*, Accepted.
- J44. Rahman, S.M., Walker, I.D., Wang, Y., Mears, L., Pak, R., Remy, S. (2016), "Trust-Triggered Robot-Human Handovers Using Kinematic Redundancy in Human-Robot Collaborative Assembly in Manufacturing," *IEEE Transactions on Industrial Informatics*, Submitted.
- J43. Feng, L., Mears, L. (2016), "Energy Consumption Modeling and Analysis in the Automotive Manufacturing Plant," *ASME Journal of Manufacturing Science and Engineering: Special Issue on Sustainable Manufacturing*, Paper No. MANU-15-1622, In Press.
- J42. Ruszkiewicz, B., Mears, L. (2016), "Temperature-Controlled Forming of 7075-T6 Aluminum Using Linearly Decaying Direct Electric Current," *ASME Journal of Manufacturing Science and Engineering: Special Issue on Innovations in Materials Forming Processes*, Paper No. MANU-15-1615, Submitted.
- J41. Akhavan Niaki, F., Ulutan, D., Mears, L. (2015). "Stochastic Tool Wear Assessment in Milling Difficult to Machine Alloys," *International Journal of Mechatronics and Manufacturing Systems*, **8(3-4)**:134-159, doi:10.1504/IJMMS.2015.073090.
- J40. Akhavan Niaki, F., Feng, L., Ulutan, D., Mears, L. (2015). "A Wavelet Based Data-Driven Modeling for Tool Wear Assessment of Difficult to Machine Materials," *International Journal of Mechatronics and Manufacturing Systems*, **9(2)**:97-121.
- J39. Akhavan Niaki, F., Ulutan, D., Mears, L. (2015). "Mixed Metropolis-Gibbs method for Bayesian Parameter Identification in Mechanistic Tool Wear Model," *ASME Journal of Manufacturing Science and Engineering*, Submitted.
- J38. Skovron, J., Mears, L., Ulutan, D., Detwiler, D., Paolini, D., Baemler, B., Claus, L. (2015). "Effect of Thermal Assistance on the Joint Quality of Al6063-T5A During Flow Drill Screwdriving," *ASME Journal of Manufacturing Science and Engineering*, **137(5)**:051019, doi: 10.1115/1.4031242.

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**PUBLICATIONS AND PRESENTATIONS**

- J37. Mehta, P., Mears, L. (2015). "Adaptive control for multistage machining process scenario - bar turning with varying material properties," *International Journal of Advanced Manufacturing Technology*, **78(5-8)**: 1265-1273; doi: 10.1007/s00170-014-6739-x.
- J36. Skovron, J., Mears, L., Ulutan, D., Detwiler, D., Baemler, B., Claus, L. (2015). "Characterization of Flow Drill Screwing Process Parameters on Joint Quality," *SAE International Journal of Materials and Manufacturing*, **8(1)**:35-41; doi:10.4271/2014-01-2241.
- J35. Mears, L., Kurfess, T., Kuttolamadom, M., Mehta, P. (2014). "The Correlation of the Volumetric Wear Rate of Turning Tool Inserts with Carbide Grain Sizes," *ASME Journal of Manufacturing Science and Engineering*, **137**:011015-1 - 011015-8; doi:10.1115/1.4028129.
- J34. Mears, L., Kurfess, T., Kuttolamadom, M., Mehta, P. (2014). "Correlation of the Volumetric Tool Wear Rate of Carbide Milling Inserts with the Material Removal Rate of Ti-6Al-4V," *ASME Journal of Manufacturing Science and Engineering*, **137**:021021-1 - 021021-8; doi:10.1115/1.4028129.
- J33. Jones, J.J., L. Mears (2013). "Alternative Control of an Electrically Assisted Tensile Forming Process Using Current Modulation," *ASME Journal of Manufacturing Science and Engineering: Special issue on Thermally-Assisted Manufacturing*, **135(6)**:061004-061011; doi:10.1115/1.4025566
- J32. Mehta, P., Werner, A., Mears, L. (2013), "Condition based maintenance: Systems integration and intelligence using Bayesian classification and sensor fusion," *Journal of Intelligent Manufacturing*, **26(1)**:331-346, doi:10.1007/s10845-013-0787-1.
- J31. Jones, J.J., Mears, L. (2013). "Thermal Response Modeling of Sheet Metals in Uniaxial Tension During Electrically-Assisted Forming," *ASME Journal of Manufacturing Science and Engineering*, **135(2)**:021011-1 - 021011-11; doi:10.1115/1.4023366.
- J30. Martens, T., Mears, L. (2013), "Direct Sinter Bonding of Metal Injection-Molded Parts to Solid Substrate through Use of Deformable Surface Microfeatures," *ASME Journal of Micro- and Nano-Manufacturing*, **1(1)**: 011008 (9 pages); doi:10.1115/1.4023532.
- J29. Maier, J., Mears, M., Summers, J., (2013). "Design of an Apparatus to Detect Small Changes in Mass of Rotational Machine Components", *International Journal of Modern Engineering*. **13(2)**:5-16.
- J28. Bunget, C., Salandro, W., Mears, L. (2012), "Thermomechanical modeling sensitivity analysis of electrically assisted forming," *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*, **227(8)**:1089-1098.
- J27. Montes, C., Wong, C., Ziegert, J., Mears, L. (2012). "Vision-based tracking of a dynamic target with application to multi-axis position control," *Journal of Real-Time Image Processing*, doi: 10.1007/s11554-012-0260-y.

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**PUBLICATIONS AND PRESENTATIONS**

- J26. Morkos, B., Taiber, J., Summers, J., Mears, L., Fadel, G., Rilka, T. (2012). "Mobile devices within manufacturing environments: a BMW applicability study," *International Journal on Interactive Design and Manufacturing*. **6(2)**: 101-111; doi:10.1007/s12008-012-0148-x.
- J25. Jones, J.J., Mears, L., and Roth, J.T. (2012) "Electrically-Assisted Forming of Magnesium AZ31: Effect of Current Magnitude and Deformation Rate on Forgeability," *ASME Journal of Manufacturing Science and Engineering*. **134**: 034504-1 - 034504-7; doi:10.1115/1.4006547.
- J24. Kuttolamadom, M., Jones, J., Mears, L., Kurfess, T., Funk, K. (2012), "Life-Cycle Integration of Titanium Alloys into the Automotive Segment for Vehicle Light-Weighting: Part II - Component Life-Cycle Modeling and Cost Justification," *SAE International Journal of Materials and Manufacturing*, **5(1)**:260-269; doi:10.4271/2012-01-0785.
- J23. Jones, J., Kuttolamadom, M., Mears, L., Kurfess, T., Funk, K. (2012), " Life-Cycle Integration of Titanium Alloys into the Automotive Segment for Vehicle Light-Weighting: Part I - Component Redesign, Prototyping, and Validation," *SAE International Journal of Materials and Manufacturing*, **5(1)**:247-259; doi:10.4271/2012-01-0785.
- J22. Mears, L., Mehta, P., Kuttolamadom, M., Montes, C., Jones, J., Salandro, W., Werner, A. (2012), "Manufacturing Process Modeling and Application to Intelligent Control," *Journal of the South Carolina Academy of Science, Governor's special issue*, **10(1)**:13-18.
- J21. Kuttolamadom, M., Mears, L., Kurfess, T.R. (2012), "On the Volumetric Assessment of Tool Wear in Machining Inserts with Complex Geometries - Part 2: Experimental Investigation & Validation on Ti-6Al-4V," *ASME Journal of Manufacturing Science and Engineering*, **134(5)**: 051003-1 - 051003-9; doi:10.1115/1.4007294.
- J20. Kuttolamadom, M., Mears, L., Kurfess, T.R. (2012), "On the Volumetric Assessment of Tool Wear in Machining Inserts with Complex Geometries - Part 1: Need, Methodology & Standardization," *ASME Journal of Manufacturing Science and Engineering*, **134(5)**: 051002-1 - 051002-8; doi:10.1115/1.4007184.
- J19. Salandro, W., Bunget, C., Mears, L. (2012), "A Thermal-Based Approach for Determining Electroplastic Characteristics," *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*. **225(5)**: 775-788. (**Winner of the SAGE Best Paper Prize 2012 and IMECHE George Stephenson Gold Medal**)
- J18. Bunget, C., Salandro, W., Mears, L. (2011), "Several Factors Affecting the Electroplastic Effect During an Electrically-Assisted Forming Process," *ASME Journal of Manufacturing Science and Engineering Special Issue on Forming Technologies*, **133(6)**:064503-1 - 064503-5; doi:10.1115/1.4004950.

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**PUBLICATIONS AND PRESENTATIONS**

- J17. Salandro, W., Bunget, C., Mears, L. (2011), "Electroplastic Modeling of Bending Stainless Steel Sheet Metal Using Energy Methods," *ASME Journal of Manufacturing Science and Engineering*, **133(4)**:041008-1 - 041008-10; doi:10.1115/1.4004589.
- J16. Bunget, C., Salandro, W., Mears, L. (2011), "Evaluation of Lubricants for Electrically-Assisted forming," *Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture*; **225**:1-11, doi:10.1177/0954405411401267.
- J15. Martens, T., Mears, L., Dotson, M., Sanger, P., Graham, M. (2011), "Use of Fused Deposition Modeling of Polyphenylsulfone for Centrifugal Casting of Polyurethane: Material, Surface and Process Considerations," *ASME Journal of Manufacturing Science and Engineering*, **133(5)**:051003-1 - 051003-10; doi:10.1115/1.4004848.
- J14. Kuttolamadom, M., Hamzehlouia, S., Mears, L. (2010), "Effect of Machining Feed on Surface Roughness in Cutting 6061 Aluminum," *SAE International Journal of Materials and Manufacturing*, **3(1)**:108-119.
- J13. McDonnell, D., Mayorga, M., Benson, L., Mears, L. (2010), "Stepping out of Academics: The effect of Authentic Learning Experiences on Attitudes of Industrial Engineering Students," *Journal of Applications and Practices in Engineering Education*, **1(2)**:79-98.
- J12. Bunget, C., Salandro, W., Mears, L., Roth, J.T., (2010) "Energy-Based Modeling of an Electrically-Assisted Forging Process," *Transactions of the North American Manufacturing Research Institute of SME*, **38(1)**:647-654.
- J11. Jones, J.J., Mears, L., Roth, J.T., (2010) "Empirical Modeling of the Stress-Strain Relationship for Upsetting Under Direct Electrical Current," *Transactions of the North American Manufacturing Research Institute of SME*, **38(1)**:451-458.
- J10. Roth, J., Djurdjanovic, D., Yang, X., Mears, L., Kurfess, T. (2009), "Quality and Inspection of Machining Operations: Tool Condition Monitoring," *ASME Journal of Manufacturing Science and Engineering*, **132(4)**:041015-1 - 041015-16; doi:10.1115/1.4002022.
- J09. Mears, L., Omar, M., Kurfess, T. (2009), "Automotive Engineering Curriculum Development: Case study for Clemson University," *Journal of Intelligent Manufacturing: Special Issue on Intelligent Manufacturing Systems* ISSN 0956-5515; doi:10.1007/s10845-009-0329-z.
- J08. Mears, L., Roth, J., Djurdjanovic, D., Yang, X., Kurfess, T. (2009), "Quality and Inspection of Machining Operations: CMM Integration to the Machine Tool," *ASME Journal of Manufacturing Science and Engineering*, **131(5)**:051006-1 - 051006-13; doi:10.1115/1.3184085.



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**PUBLICATIONS AND PRESENTATIONS**

- J07. Omar, M., Mears, L., Kiggans, R., Kurfess, T. (2009) "Organizational Learning in Automotive Manufacturing: A Strategic Choice," *Journal of Intelligent Manufacturing: Special Issue on Intelligent Manufacturing Systems*, ISSN 0956-5515; doi:10.1007/s10845-009-0330-6.
- J06. Montes, C.A., Ziegert, J.C., Mears, L. (2009), "Method to Measure Planar Displacement Using Centroid Calculation," *Transactions of the North American Manufacturing Research Institute of SME*, **37(1)**:525-532.
- J05. Mears, L., Kurfess, T. (2008), "Open-Loop Velocity Planning to Mitigate the Effect of Stiction in Pushing Positioning," *Transactions of the North American Manufacturing Research Institute of SME*, **36(1)**:301-308.
- J04. Grujicic, M., Sellappan, V., Mears, L., Seyr, N., Obieglo, A., Erdmann, M., Holzleitner, J. (2008), "Selection of the Spraying Technologies for Over-Coating of Metal Stampings with Thermoplastics for Use in Direct-Adhesion Polymer Metal Hybrid Load-Bearing Components," *Journal of Materials Processing Technology*, **198(1-3)**: 300-312.
- J03. Mears, L., Kurfess, T. (2007), "Impulsive-Actuation Part Positioning through Constrained Energy Balance Planning," *Transactions of the North American Manufacturing Research Institute of SME*, **35(1)**:521-528.
- J02. Mears, M. L., Kolarits, F., Thompson, M., & Kurfess, T. R. (2007). "Design of a Flexible Centering Tooling System," *International Journal of Computer Applications in Technology*, **28(1)**:52-62.
- J01. Mears, L., Kurfess, T. (2006), "Application of a Linear Center Identification Scheme to Deterministic Polar Positioning," *Transactions of the North American Manufacturing Research Institute of SME*, **34(1)**:619-625.

**Refereed Conferences**

- C85. Feng, L., Mears, L., Schulte, J. (2015), "Key Variable Analysis and Identification on Energy Consumption of Automotive Manufacturing Plant," *Proceedings of 2016 IEEE Conference on Technologies for Sustainability (SusTech)*, Phoenix, Arizona, October 9 – 11, 2016, Accepted.
- C84. Rahman, S., Walker, I., Wang, Y., Mears, L., Pak, R., Remy, S. (2016), " Trust-Based Human-Robot Collaborative Assembly and Handovers in Flexible Manufacturing," *Proceedings of 2016 IEEE Conference on Automation Science and Engineering (IEEE CASE)*, Fort Worth, TX, USA, August 21-24, 2016, Paper #102.

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**PUBLICATIONS AND PRESENTATIONS**

- C83. Akhavan Niaki, F., Michel, M., Mears, L. (2016), "Extended Kalman Filter for Stochastic Tool Wear Assessment in Turning of INC718 Hard-to-Machine Alloy," *Proceedings of 2016 SME North American Manufacturing Research Conference (NAMRC44)*, Paper No. NAMRC44-23, Blacksburg, VA, USA, June 27 - July 1, 2016.
- C82. Pleta, A., Mears L. (2016), "Cutting Force Investigation of Trochoidal Milling in Nickel-Based Superalloy," *Proceedings of 2016 SME North American Manufacturing Research Conference (NAMRC44)*, Paper No. NAMRC44-128, Blacksburg, VA, USA, June 27 - July 1, 2016.
- C81. Khal, A., Ruskiewicz, B., Mears, L. (2016), "Springback Evaluation of 304 Stainless Steel in an Electrically Assisted Air Bending Operation," *Proceedings of 2016 ASME International Manufacturing Science and Engineering Conference (MSEC2016)*, Paper No. MSEC2016-8736, Blacksburg, VA, USA, June 27 - July 1, 2016.
- C80. Krugh, M., Mears, L. (2016), "Prediction of Defect Propensity for the Manual Assembly of Automotive Electrical Connectors," *Proceedings of 2016 SME North American Manufacturing Research Conference (NAMRC44)*, Paper No. NAMRC44-119, Blacksburg, VA, USA, June 27 - July 1, 2016.
- C79. Skovron, J., Ruskiewicz, B., Mears, L., Abke, T. (2016), "Effect of Electrical Augmentation on the Joining of Al6063-T5 Using Flow Drill Screws," *Proceedings of 2016 ASME International Manufacturing Science and Engineering Conference (MSEC2016)*, Paper No. MSEC2016-8578, Blacksburg, VA, USA, June 27 - July 1, 2016.
- C78. Ruskiewicz, B., Mears, L. (2016), "Temperature-Controlled Forming of 7075-T6 Aluminum Using Linearly Decaying Direct Electric Current," *Proceedings of 2016 ASME International Manufacturing Science and Engineering Conference (MSEC2016)*, Paper No. MSEC2016-8555, Blacksburg, VA, USA, June 27 - July 1, 2016.
- C77. Ruskiewicz, B., Mears, L. (2016), "Electrically-Assisted Compression of Tungsten Carbide and its Implications for Electrically-Assisted Machining," *Proceedings of 2016 ASME International Manufacturing Science and Engineering Conference (MSEC2016)*, Paper No. MSEC2016-8554, Blacksburg, VA, USA, June 27 - July 1, 2016.
- C76. Kuttolamadom, M., Mears, L. (2016), "Force and Temperature-Triggered Wear Mechanism Behavior Patterns of Carbide Tools When Turning Ti-6Al-4V," *Proceedings of 2016 ASME International Manufacturing Science and Engineering Conference (MSEC2016)*, Paper No. MSEC2016-8847, Blacksburg, VA, USA, June 27 - July 1, 2016.

**PUBLICATIONS AND PRESENTATIONS**

- C75. Krugh, M., Mears, L. (2016), "Statistical modeling of defect propensity in manual assembly as applied to automotive electrical connectors," *Proceedings of 6th CIRP Conference on Assembly Technologies and Systems (CATS)*, Gothenburg, Sweden, May 16-17, 2016.
- C74. Akhavan Niaki, F., Pleta, A., Mears, L. (2015), "Superalloy Machining Tool Wear: State Estimation and Alternative Path Planning for Mitigation," *Proceedings of International Conference on Precision, Meso, Micro and Nano Engineering (COPEN9)*, Mumbai, India, 10-12 December 2015.
- C73. Akhavan Niaki, F., Ulutan, D., Mears, L. (2015), "Wavelet Based Sensor Fusion for Tool Condition Monitoring of Hard to Machine Materials," *Proceedings of 2015 IEEE International Conference on Multisensor Fusion and Integration*, San Diego, California, 14-16 September 2015.
- C72. Walker, I., Wang, Y., Rahman, S., Pak, R., Remy, S., Mears, L. (2015), "Robot - Human Handovers Based on Trust", *Proceedings of the 2nd International Conference on Mathematics and Computers in Sciences and Industry (MSCI 2015)*, Paper no. 111646000005700000, pp. 119-124, doi 10.1109/MCSI.2015.50 Sliema, Malta, August 17-19, 2015.
- C71. Feng, L., Ulutan, D., and Mears, L. (2015), "Energy consumption modeling and analyses in automotive manufacturing final assembly process," *Proceedings of 2015 IEEE Conference on Technologies for Sustainability (SusTech)*, Ogden, Utah, July 30-August 1, 2015.
- C70. Akhavan Niaki, F., Ulutan, D., Mears, L. (2015), "In-Process Tool Flank Wear Estimation in Machining Gamma-Prime Strengthened Alloys Using Kalman Filter," *Proceedings of 43rd North American Manufacturing Research Conference (NAMRC43)*, Paper No. NAMRC43-0055, Charlotte, NC, USA, June 8-12, 2015.
- C69. Pleta, A., Ulutan, D., Mears, L. (2015), "An Investigation of Alternative Path Planning Strategies for Machining of Nickel-Based Superalloys," *Proceedings of 43rd North American Manufacturing Research Conference (NAMRC43)*, Paper No. NAMRC43-0114, Charlotte, NC, USA, June 8-12, 2015.
- C68. Ulutan, D., Pleta, A., Henderson, A., Mears, L. (2015), "Comparison and Cost Optimization of Solid Tool Life in End Milling Nickel-Based Superalloy," *Proceedings of 43rd North American Manufacturing Research Conference (NAMRC43)*, Paper No. NAMRC43-0108, Charlotte, NC, USA, June 8-12, 2015.
- C67. Akhavan Niaki, F., Ulutan, D., Mears, L. (2015), "Parameter Estimation using Markov Chain Monte Carlo Method in Mechanistic Modeling of Tool Wear During Milling," *Proceedings of 2015 ASME International Manufacturing Science and Engineering Conference (MSEC2015)*, Paper No. MSEC2015-9357, Charlotte, NC, USA, June 8-12, 2015.

**PUBLICATIONS AND PRESENTATIONS**

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