CURRICULUM VITAE

Joseph P. Domblesky, Ph.D.
Associate Professor of Mechanical Engineering
Marquette University
Milwaukee, Wisconsin

A. EDUCATION

- B.S., Industrial & Management Systems Engineering, 1983, Pennsylvania State University, University Park, PA.
- M.S., Industrial & Management Systems Engineering, 1987, Pennsylvania State University, Thesis: *Analysis of Chip Breaking Parameters in Turning*, Advisor: Paul H. Cohen
- Ph.D., Industrial & Systems Engineering, 1994, Ohio State University, Columbus, OH, Thesis: *Numerical and Experimental Modeling of Multiple Pass Radial Forging of Alloy 718*, Advisor: Rajiv Shivpuri

B. HONORS AND FELLOWSHIP

- Society of Manufacturing Engineers Fellowship, 1984
- Young Leaders Award; The Minerals, Materials, Metals Society (TMS), 1996
- Professional Engineer License (Wisconsin) Awarded, 2003

C. RESEARCH AND ACADEMIC EXPERIENCE

- Teaching Assistant, Manufacturing Processes (1982-1983), Pennsylvania State University – University Park, PA
- Research Assistant, Materials Joining (1984-1985), Pennsylvania State University – University Park, PA
- Research Assistant, Deformation Processing (1989-1994), Ohio State University – Columbus, OH
- Adjunct Professor, Department of Industrial Engineering (1994-1995), University of Toledo – Toledo, OH
- Assistant Professor, Department of Mechanical and Industrial Engineering (1996-2004), Marquette University – Milwaukee, WI
- Associate Professor, Department of Mechanical Engineering (2004-Present), Marquette University – Milwaukee, WI
- Instructor (5/13-7/13) – Internationalization Program, Beijing Jiaotong University, Beijing, China
- Visiting Professor, Department of Mechanical Engineering (2014-2015), Sogang University – Seoul, South Korea

- Visiting Professor, College of Materials Science & Technology (Summer 2016, Summer 2017, Summer 2018, Summer 2019), Nanjing University of Astronautics & Aeronautics – Nanjing, China

D. PROFESSIONAL EXPERIENCE

- Process Modeling Engineer, Walker Forge; (6/2006 -1/2007) Clintonville, WI
- Project Manager, Center for Tooling & Precision Components; (1993-1995) Toledo, OH
- Manufacturing Engineer/Tool Room Supervisor, McInerney Incorporated, (1988-1989); Grand Rapids, MI
- Manufacturing Engineer, BOC Powertrain - General Motors Corporation, (1985-1987) Lansing, MI
- Welding Engineer Intern, Oldsmobile Division - General Motors Corporation, (Summer 1984) Lansing, MI

E. REFEREED PAPERS (TWO OR MORE REVIEWERS)

1. Domblesky, J.P., and Shivpuri, R., "Development and Validation of a Finite Element Model for Multiple Pass Radial Forging", ***Journal of Materials Processing Technology***, Vol. 55, No. 3-4, December 1995, pp. 432-441.
2. Domblesky, J.P., Shivpuri, R., and Painter, B., "FEM Modeling of Radial Forging of Large Diameter Tubes", ***Journal of Materials Processing Technology***, Vol. 49, 1995, pp. 57-74.
3. Domblesky, J.P., and Shivpuri, R., "Grain Size Modeling and Prediction in Alloy 718 Billet", ***Journal of Engineering Materials Technology***, Vol. 119, April 1997, pp. 133-137.
4. Domblesky, J.P., "Analysis Of Die Failures In Cold Heading Using Finite Element Simulation", ***Wire Journal International***. Vol. 34, No. 8, August 2001, pp. 82-88.
5. Domblesky, J.P., Feng, F., "Finite Element Modeling Of External Thread Rolling", ***Wire Journal International***, Vol. 34, No. 10, October 2001, pp. 110115.
6. Domblesky, J.P., Feng, F., "A Parametric Study Of Process Parameters In External Thread Rolling", ***Journal of Materials Processing Technology***, Vol. 121, No. 2-3, Feb 2002, pp. 341-349.
7. Domblesky, J., and Zhao, L., "Fracture Criteria Evaluation and Finite Element Modeling of Plate Shearing", ***Journal of Engineering Manufacture – Part B***, Vol. 216, No. B1, 2002, pp. 25-34.
8. Dotson, J., Domblesky, J.P., and Henrey, C., "Experimental Investigation of External Thread Rolling, ***Wire Journal International***, Vol. 35, No. 11, November 2002, pp. 64-68.
9. Domblesky, J.P., and Feng, F., "2-D and 3-D Finite Element Models of External Thread Rolling", ***Journal of Engineering Manufacture - Part B***, Vol. 216, No. 4, 2002, pp. 519-529.

10. Domblesky, J. and Zhao. L., “Assessment of a Finite Element Model for Plate Shearing”, ***Journal of Engineering Manufacture - Part B***, Vol. 216, No. 4, 2002, pp. 519-529.
11. Domblesky, J., Cariapa, V., and Evans, R., "Investigation of vibratory bowl finishing", ***International Journal of Production Research***, Vol. 41, No. 16, 2003, pp 3943-3953.
12. Domblesky, J., Evans, R., and Cariapa, V., "Material removal model for vibratory finishing", ***International Journal of Production Research***, Vol 42, No. 5, 2004, pp 1029-1041.
13. Domblesky, J., Kraft, F., Sims, B., and Druecke, B., “Welded Preforms for Forging”, ***Journal of Materials Processing Technology***, Vol. 171, No. 1, January 2006, pp. 141-149.
14. Domblesky, J.P., and Kraft, F.F., “Metallographic evaluation of welded forging preforms”, ***Journal of Materials Processing Technology***, Vol. 191, No. 1-3, August 2007, pp. 82-86.
15. Domblesky, J.P., James, T.P., and Widera, G.E.O., “A cutting rate model for Reciprocating Sawing”, ***Journal of Manufacturing Science & Engineering, Transactions of the ASME***, Vol. 130, No. 5, October 2008, pp. 0510151-0510157.
16. Junqiang Wang; Jianmin Han; Joseph P. Domblesky; Weijing Li; & Zhiyong Yang; “Residual Stress Reduction in Single Pass Welds Using Parallel Line Reheating”, ***Journal of Pressure Vessel Technology***, 2015; Vol. 138, No. 2, :021402-021402-9.
17. Seunghyeon Cheon, Hyunsoo Jeong, So Young Hwang, Seokmoo Hong, Joseph Domblesky, & Naksoo Kim, “Accelerated Life Testing to Predict Service Life and Reliability for an Appliance Door Hinge”, ***Procedia Manufacturing (North American Manufacturing Research Conference),*** Vol. 1, 2015, pp. 169-180.
18. Minyu Fan, Joseph Domblesky, Kai Jin, Liang Qin, Shengqiang Cui, Xunzhong Guo, Naksoo Kim, & Jie Tao, “Effect of original layer thicknesses on the interface bonding and mechanical properties of TiAl laminate composites”, ***Materials & Design***, Vol. 99, 2016, pp. 535-542.
19. Junqiang Wang; Jianmin Han; Joseph P. Domblesky; Weijing Li; & Zhiyong Yang; “Predicting Distortion in Butt Welded Plates Using an Equivalent Plane Stress Representation Based on Inherent Shrinkage Volume”, ***Journal of Manufacturing Science & Engineering,*** 2016; Vol. 138, No. 1:011012-011012-11.
20. Junqiang Wang, Jianmin Han, Joseph P. Domblesky, Zhiyong Yang, & Yingxin Zhao, “Development of a new combined heat source model for welding based on a polynomial curve fit of the experimental fusion line”, ***International Journal of Advanced Manufacturing Technology***, 2016, Vol. 87.
21. Luca Quagliato, Dongwook Kim, Nara Lee, Soyoung Hwang, Joseph Domblesky, & Naksoo Kim, “Run-out based crossed roller bearing life prediction by utilization of accelerated testing approach and FE numerical models”, ***International Journal of Mechanical Sciences***, Vol. 130, 2017, pp. 99-110.
22. Junqiang Wang; Jianmin Han; Joseph P. Domblesky; Zhiqiang Li; Yingxin Zhao; & Luyi Sun, “A Plane Stress Model to Predict Angular Distortion in Single Pass Butt Welded Plates With Weld Reinforcement”, ***Journal of Manufacturing Science & Engineering***, 2017; Vol. 139, No. 5:051012-051012-10.

23. Lingqin Xia, Jianmin Han, Joseph P. Domblesky, Zhiyong Yang, & Weijing Li, "Study of Scanning Micro-arc Oxidation and Coating Development", ***Journal of Materials Engineering & Performance***, Vol. 26, No. 11, November 2017, pp. 5323-5332.
24. Shiyu Cui, Qiang Miao, Joseph P. Domblesky, Wenping Liang, & Youpeng Song, "Modeling of the temperature field in a porous thermal barrier coating", ***Ceramics International***, Vol. 45, Issue 10, July 2019, pp. 12635-12642.
25. Yingxin Zhao, Zhiyong Yang, Joseph P. Domblesky, Jianmin Han, & Xiaolong Liu, "Investigation of through thickness microstructure and mechanical properties in friction stir welded 7N01 aluminum alloy plate", ***Materials Science and Engineering: A***, Vol. 760, July 2019, pp. 316-327.
26. Zhizhong Wang, Jianmin Han, Joseph P. Domblesky, Zhiqiang Li, & Xiaolong Liu, "Crack propagation and microstructural transformation on the friction surface of a high-speed railway brake disc", ***Wear***, Vol. 428–429, 15 June 2019, pp. 45-54.
27. Xiaolong Liu, Erqing Chen, Fan Zeng, Tao Cong, Joseph P. Domblesky, "Mechanisms of interior crack initiation in very-high-cycle fatigue of high-strength alloys", ***Engineering Fracture Mechanics***, Vol. 212, 1 May 2019, pp. 153-163.
28. Tao Cong, Jianmin Han, Youshi Hong, Joseph P. Domblesky, & Xiaolong Liu, "Shattered rim and shelling of high-speed railway wheels in the very-high-cycle fatigue regime under rolling contact loading", ***Engineering Failure Analysis***, Vol. 97, March 2019, pp. 556-567.
29. Yingxin Zhao, Jianmin Han, Joseph P. Domblesky, Zhiyong Yang, & Xiaolong Liu, "Investigation of void formation in friction stir welding of 7N01 aluminum alloy"**,** ***Journal of Manufacturing Processes***, Vol. 37, January 2019, pp. 139-149.
30. Andrew Matcha, Joseph P. Domblesky, Justin Kurk, & David Nowak, "Investigation of Anisotropic Surface Topography on Metal Flow at Elevated Temperatures", Submitted to ***International Journal of Advanced Manufacturing Technology***.
31. Hao Lin, Joseph P. Domblesky, Lijia Yu, Luis S. Mora, Qiang Miao, & Wenping Liang, "Mechanical analysis and modeling of porous thermal barrier coatings", Submitted to ***Applied Surface Science.***

F. REFEREED CONFERENCE PAPERS (TWO OR MORE REVIEWERS)

1. Domblesky, J., Rice, J., Goldberg, J, and Nagurka, M, Paper #1569721913, 'Improving Student Learning Using an In-class Material Processing Design Project', Frontiers in Education Conference (FIE), October 2013, Oklahoma City, OK.
2. James, T.P., Sangar, A., and Domblesky, J., "A Prediction of Total Cutting Time When Crosscutting Rounds, Pipe, and Rectangular Bar with a Portable Bandsaw, ASME International Congress & Exposition, Paper IMECE2012-86179, November 2012, Houston, TX.
3. Domblesky, J., and James, T.P., "Study of Blade Wear in Reciprocating Sawing", Paper IMECE2010-38819, ASME International Congress & Exposition, November 2010, Vancouver, British Columbia.
4. Domblesky, J., and Harris, P., "Investigation of Fatigue Properties for Welded

Aluminum Forging Preforms", (Paper # MSEC ICMP2008 72139) ASME International Manufacturing Science and Engineering Conference, October 2008, Evanston, IL.

5. Cariapa, V., Park, H., Kim, J., Cheng, C., Domblesky, J., and Evaristo A., "Effect of abrasive content on media wear and material removal rate in a centrifugal disk mass finishing machine", Transactions of the North American Manufacturing Research Institution of SME, NAMRC 36, Vol. 36, 2008, pp 341-348.
6. Domblesky**,** J., Widera, G.E.O., and James, T., "Experimental investigation of reciprocating sawing", Transactions of the North American Manufacturing Research Institute of SME Transactions of the North American Manufacturing Research Institute of SME 2006 - Papers Presented at NAMRC 34, Vol. 34, 2006, pp. 531-538.
7. Domblesky, J., and Kraft, F., "Investigation of Welded Preforms for Use in Forging", Society of Automotive Engineers Aerotech Conference and Exposition, Fort Worth, TX, October 2005.
8. Domblesky, J.P., Rice, J.A., and Cariapa, V., "Closing Competency Gaps in Manufacturing Through Student Learning Factories - One Approach," presented at ASEE Conference 2001 in New Mexico and published in *2001 ASEE Conference Proceedings*.

G. ABSTRACTS, NONRFEREED PAPERS AND SCIENTIFIC GROUP PUBLICATIONS

1. Domblesky, J.P., Jackman, L., Shivpuri, R., and Hendrick, B.B., "Prediction of Grain Size During Multiple Pass Radial Forging of Alloy 718", *International Symposium on Superalloys 718, 625, and 706*, The Minerals, Metals, and Materials Society, June 1994, pp. 263-272.
2. Domblesky, J.P., Mohamdein, M., Shivpuri, R., and Drab, R., "FEM Modeling of Multiple Pass Radial Forging of Alloy 718", *International Symposium on Superalloys 718, 625, and 706*, The Minerals, Metals, and Materials Society, June 1994, pp. 251-262.
3. Domblesky, J., Shivpuri, R., and Altan, T., "A Review of Radial Forging Technology including Preform Design or Process Optimization," Contractor Report ARCCB-CR-94004, US Army Armament Research Development and Engineering Center, 1994.
4. Domblesky, J. P., Komesaw, C., and White P.R., "Computer modeling of an aircraft engine stamping", Technical Paper - Society of Manufacturing Engineers. MF. (16pp), 1995.
5. Domblesky, J.P., Kraft, F., and Downing, C., "Numerical Modeling and Validation for Extremely High Extrusion Ratio Processes", *International Conference for Automotive Manufacturing*, Society of Automotive Engineers, SAE Technical Paper #971740, Detroit, MI, May 20, 1997.
6. Domblesky, J.P., and Geffre, M., "Joint Strength Produced by Laser Welding Under Simulated Space Conditions," presented and published in Proceedings of Wisconsin Space Grant Consortium, Milwaukee, WI, June 14-15, 2000.

7. Domblesky, J.P., and Foley, C., “A Model for Active and Interdisciplinary Learning in Upper Level Engineering Courses”, published in *2001 North Midwest Section ASEE Conference Proceedings*, September 27-29, 2001.
8. Domblesky, J.P., and Silman, T.A., “Investigation of FCAW in Space Welding,” presented and published in Proceedings of Wisconsin Space Grant Consortium, Whitewater, WI, August 15-16, 2002.
9. Domblesky, J.P., and Silman, T.A., “Incorporating Space Science in Engineering Courses,” presented and published in Proceedings of Wisconsin Space Grant Consortium, Whitewater, WI, August 15-16, 2002.
10. Domblesky, J., Silman, T., Evans, R., Druecke, B., and Cariapa, V., “Investigation of Selected Process Parameters in Vibratory Finishing”, *Proceedings of the International Conference on Advanced Materials & Processing Technologies (AMPT)*, Dublin, Ireland, July 2003, pp. 1315-1319.
11. Domblesky, J., “Welded Preforms for Forging”, Forging Industry Association Technology Conference and Exposition, Chicago, IL, November 2005.
12. Domblesky, J., and Kraft, F., “Metallographic Evaluation of Welded Preforms”, *International Conference on Advanced Materials and Processing Technologies*, August 2006, Las Vegas, NV.
13. Domblesky**,** J**.**, and Silman, T., “A Process Model for Surface Material Removal in Vibratory Bowls and Finishing Processes”, SUR/FIN Technical Conference, American Electroplaters and Surface Finishers Society, Milwaukee, WI, September 18-20, 2006.
14. Domblesky, J., and Silman, T., “Investigation of Workload Fluid Characteristics in Vibratory Finishing”, SUR/FIN Technical Conference, American Electroplaters and Surface Finishers Society, Cleveland, OH, September 18-20, 2007.
15. Domblesky, J., "Project Assisted Learning in Engineering - A Manufacturing Example", ASEE Upper Midwest Conference, October 2009, Marquette University, Milwaukee, WI.
16. Domblesky, J., and Nowak, D., “Effect of Machining Marks in Hot Forging”, Forging Industry Association (FIA) Technical Conference, Cleveland, Ohio, September 2012.
17. Domblesky, J., "Project Assisted Learning in Engineering - A Manufacturing Example", ASEE Upper Midwest Conference, October 2009, Marquette University, Milwaukee, WI.
18. Domblesky, J., and Kurk, J., “Experimental Study of Surface Topography in Hot Compression”, Forging Industry Association (FIA) Technical Conference, Columbus, Ohio September 2016.
19. Domblesky, J., and Kurk, J., “Press Upgrade and Analysis of Surface Topography in Hot Compression”, Forging Industry Association (FIA) Technical Conference, Los Angeles, California September 2018.

H. CONTRIBUTIONS TO BOOKS IN PRESS

Chapters titled *Cold Deformation* and *Theory of Wire Drawing* to Appear in **The Ferrous Wire Handbook,** 54 page manuscript ed. By Dr. R. Shemenski and published by Wire Association International, Guilford, CT, 2008.

I. PAPERS IN PREPARATION

- Wolf, K., Domblesky, J.P., and Matcha, A., "Analysis of Anisotropic Tool Surfaces in Warm and Hot Forming" To be submitted to *Journal of Manufacturing Science & Engineering*
- Wang, K., Jin, K., Domblesky, J., & Tao, J., "Effect of Multi-wall Carbon Nanotubes on Fiber Metal Composite Reinforcement", To be submitted to *Carbon*

J. PAPERS PRESENTED AT SCIENTIFIC MEETINGS

1. Domblesky, J.P., "Prediction of Grain Size During Multiple Pass Radial Forging of Alloy 718", *International Symposium on Superalloys 718, 625, and 706*, The Minerals, Metals, and Materials Society, June 1994.
2. Domblesky, J.P., "Numerical Modeling and Validation for Extremely High Extrusion Ratio Processes", *International Conference for Automotive Manufacturing,* Society of Automotive Engineers, Detroit, MI, May 20, 1997.
3. Domblesky, J.P., "Joint Strength Produced by Laser Welding Under Simulated Space Conditions", *10th Annual Wisconsin Space Conference*, Milwaukee, WI, June 2000.
4. Domblesky, J.P., "A Model for Active and Interdisciplinary Learning in Upper Level Engineering Courses", presented at North Midwest ASEE Conference 2001 in Grand Forks, ND and published in *2001 North Midwest Section ASEE Conference Proceedings*.
5. Domblesky, J.P., "Investigation of Selected Process Parameters in Vibratory Finishing", *International Conference on Advanced Materials & Processing Technologies*, July 8-11, 2003, Dublin, Ireland.
6. Domblesky, J., "Welded Preforms for Forging", Forging Industry Association Technology Conference and Exposition, Chicago, IL, November 2005.
7. Domblesky, J., "Investigation of Welded Preforms for Use in Forging", Society of Automotive Engineers Aerotech Conference and Exposition Fort Worth, TX, October 2005.
8. Domblesky, J., "Experimental investigation of reciprocating sawing", Presented at NAMRC 34, Transactions of the North American Manufacturing Research Institute of SME, May 2006.
9. Domblesky, J., "A Process Model for Surface Material Removal in Vibratory Bowls and Finishing Processes", SUR/FIN Technical Conference, American Electroplaters and Surface Finishers Society, Milwaukee, WI, September 18-20, 2006.

10. Domblesky, J., Investigation of Fatigue Properties for Welded Aluminum Forging Preforms", ASME International Manufacturing Science and Engineering Conference, October 2008, Evanston, IL.

11. Domblesky, J., "Project Assisted Learning in Engineering - A Manufacturing Example", ASEE Upper Midwest Conference, October 2009, Marquette University, Milwaukee, WI.

K. SCIENTIFIC MEETINGS ATTENDED

1. International Symposium on Superalloys 718, 625, and 706. Superalloy Processing. The Minerals, Metals, and Materials Society, June 1994. Pittsburgh, PA.
2. The Minerals, Materials, and Metals Society Annual Meeting. Materials Processing. Anaheim, CA. February 4-8, 1996.
3. 31st Edward Bergman Memorial Seminar. Metal Forming and Deformation Processing. Milwaukee, WI. May 5, 1997.
4. The Minerals, Materials, and Metals Society Fall Meeting. Materials Processing. Cincinnati, OH, October 11-15, 1997. Session Chairman: Aluminum Alloys.
5. Society of Automotive Engineers. International Automotive Manufacturing Conference. Detroit, MI. May 20-22, 1997.
6. Wire Association International Wire Technology 1999. Atlanta, GA.
7. Wire and Cable Technical Symposium. Wire and Cable Technology. June 5-7, 2000. Nashville, TN.
8. Wire and Cable Technical Symposium. Wire and Cable Technology. May 1416, 2001 Atlanta, GA
9. 2001 North Midwest Section ASEE Annual Conference. Entrepreneurship - Opportunities and Challenges; Innovations in Engineering Education. September 27-29, 2001, Grand Forks, North Dakota.
10. Wire and Cable Technical Symposium. Wire and Cable Technology. May 1719, 2003. Atlanta, GA. Session Chairman: Special Processes.
11. International Conference on Advanced Materials & Processing Technologies, July 8-11, 2003, Dublin, Ireland.
12. Forging Industry Association Technology Conference and Exposition, Chicago, IL, November 2005.
13. Society of Automotive Engineers Aerotech Conference and Exposition, Fort Worth, TX, October 2005. This presentation received an Excellence in Oral Presentation Award from SAE.
14. SUR/FIN Technical Conference, American Electroplaters and Surface Finishers Society, Milwaukee, WI, September 2006.
15. ASME International Manufacturing Science and Engineering Conference, October 2008, Evanston, IL.

16. ASEE Upper Midwest Conference, October 2009, Marquette University, Milwaukee, WI.

L. MEMBERSHIP IN LEARNED SOCIETIES

• Wire Association International	1998-2010
• American Society of Mechanical Engineers	2005-2007
• Society of Manufacturing Engineers	1996-2007
• Institute of Industrial Engineers	2000-2001
• ASM International	1993-1997
• The Minerals, Metals, and Materials Society	1993-1997

M. RESEARCH GRANTS AWARDED

2019-2021	Pending	MWERC - Advanced Die Casting Initiative Phase 2
2018-2020	$78,515	FIERF - Laboratory Testbed to Develop "Smart" Robotic Forge Press Tenders
2017	$33,000	MWERC – Advanced Die Casting Initiative Phase 1
2017	$5,000	Milwaukee SPE – Plastics Curriculum Development
2016-2017	$31,625	FIERF – Hydraulic Press Update & Experimental Investigation of Die Surface Friction
2015-2016	$18,035	FIERF – Heavy Duty Truck Lightweighting & Mass Reduction
2013-2014	$33,000	FIERF – Investigation of Temperature Measurement in Hot Forging
2011-2012	$23,000	FIERF – Feasibility of Reheating in Large Ring Rolling
2011-2015	$25,000	AIST – Ferrous Curriculum Development Grant
2010-2011	$15,000	FIERF – Investigation of Machining Marks in Die Tooling
2007	$2,000	NSF - Short Course Fellowship
2005-2006	$5,000	WSGC - Aerospace Manufacturing Initiative
2005-2006	$10,000	FIERF - Welded Forging Preforms
2003-2004	$15,000	FIERF – Pilot Study of Friction Welded Preforms
2003	$20,000	TRW Corp. – Flow Stress Modeling Nickel Alloys
2001-2002	$5,904	WSGC- Investigation of FCAW in Space Welding
2001-2002	$3,102	WSGC- Incorporating Space Science in Engineering Cou
2001	$13,500	Browne & Sharpe Corp.- Metrology in Manufacturing
1999-2003	$80,036	NSF - Re-engineering the Manufacturing Lab
1998-1999	$23,500	Milwaukee Electric Tool Corp.- Sawzall Project Phase I a
1997-1998	$3,500	Miller Electric – Development of a Welding Process Laboratory
1996	$3,000	Textron Corp.- Optimization of Wire Drawing Variable

N. SPECIAL CONTRIBUTIONS

Extracurricular Professional Society Participation:

- Panel Judge for The Minerals, Materials, and Metals Society Student Composite Material Design Competition, Cincinnati, OH. 1996.
- Member, TMS "Shaping & Forming", Materials Design & Mfg. Committee Division (MDMD). 1997
- Wire Association International
  Served on Ferrous Management Committee
  Served on Technical Committee
  Served on Education Committee
  Board of Directors Midwest Chapter Wire Association International (3 Year Term)

Conference Activities

- Session Chair, Aluminum Mechanical Properties II, TMS Annual Meeting, 1996, La Jolla, CA
- Session Chair, Welding & Joining I, Advanced Materials & Processing Conference, Las Vegas, NV. August 2006
- Organizing Committee, NAMRC 2006, Milwaukee, WI. May 2006
- Session Chair, Sensors in Manufacturing, NAMRC 2006, Milwaukee, WI. May 2006
- Session Chair, Materials Forming, ASME International Manufacturing Science and Engineering Conference, October 2008, Evanston, IL

Industrial Outreach

- Instructor (2003- 20014) – Fundamentals of Forging. Sponsored by Forging Industry Association (Cleveland, OH). The workshop, intended for forging personnel and employees, covers a range of topics related to material behavior, deformation and process fundamentals related to the hot forging industry.
- Instructor and Organizer (1995- Present) – Die Stress Analysis for Metal Forming. The workshop, intended for forging personnel and employees, covers a range of topics related to material behavior, deformation and process, die design, applications, and finite element based process simulation for technical personnel in the metal forming industry.
- Instructor (2009) - Die Stress Master Level Class. The workshop, which was developed for EU forging engineers; covered material behavior, die failures, die design, and finite element based process modeling. Workshop was held in the United Kingdom and sponsored by the National Metals Technology Centre in Rotterham, England.
- Instructor (1999, 2010-2011), Fundamentals of Wire Drawing, Wire Association International
- Organizer and Instructor (2000), Process Modeling for Cold Heading and Wire Drawing Workshop, Atlanta, GA, Wire Association International.
- Instructor (2000), Fundamentals of Cold Forming Workshop, Troy, MI. Sponsored by Society of Manufacturing Engineers; Dearborn, MI.

- Instructor and Course Developer (1998), Fundamentals of Sheet Metal Forming, Sponsored by A.O. Smith Corporation for engineering personnel at Tower Automotive; Milwaukee, WI.

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Academic Contributions

- Developed a new course; Metal Forming (INEN 159/MSEN 279)
- Developed a Welding Processes Laboratory Facility (now located in the Academic Support Facility) for MEEN/INEN 143 and INEN 185 which included acquisition of modern materials joining power supplies and ancillary process equipment donated by Miller Equipment Corp. which is an OEM manufacturer located in Wisconsin.
- Developed Manufacturing Learning Factory Laboratory Facility (located in the Academic Support Facility) for MEEN/INEN 143 which included refurbishment of physical facility and acquisition of modern machine tools and instrumentation including: engine lathes, vertical drill presses, surface grinder, and vertical mills.
- Developed a 3 credit upper division elective course; Welding Engineering (MEEN 185 → MEEN 4485)
- Developed a 3 credit upper division elective course; Tool Design and Engineering (INEN 159)
- Society of Manufacturing Engineers Student Chapter #4 – Faculty Advisor
- Developed and taught Industrial Engineering Hands on Engineering Mini Course for Engineering Open House (2000-2001)
- Developed and taught Mechanical Engineering Hands on Engineering Mini Course (Manufacturing Engineering) for Engineering Open House (2008-2009)
- SAE Student Chapter Advisor – Baja (2015-2016), Aero (2017-Present)
- Developed new manufacturing education CAM lab which included lab scale CNC machine tools, metrology, and 3D printing machines. Lab is used to support class learning activities in MEEN 3443 (2019).

Grant/Proposal Reviews

- Grant Proposal Reviewer (August 2000), NSF CCLI-EMD, Arlington, VA
- Grant Proposal Reviewer, NSF/ATE (August 2002), Arlington, VA
- Grant Proposal Reviewer National Research Council (2001)
- Grant Proposal Reviewer Dept. of Education FIPSE, GAAN, MSEIP (2004-2010, 2019)
- Grant Proposal Reviewer, Civilian Research and Development Foundation, Arlington, VA (2004-2006)

Manuscripts Reviewed for Journals:

Institute of Industrial Engineers Transactions (IIE), Journal of Engineering For Industry, Advances in Mechanical Engineering, Journal of Materials Processing Technology, Journal of Mfg Processes, Materials Science and Engineering Part A, Journal of Manufacturing Systems, Journal of Manufacturing Science & Engineering, International Journal of Advanced Manufacturing Technology, Journal of Materials

Engineering and Performance, International Journal of Material Forming, International Journal of Pressure Vessels & Technology, International Journal of Machine Tools & Manufacture

O. DEPARTMENT AND UNIVERSITY COMMITTEES

University Level Service
University Faculty Senate 2014-Present
Committee on Committees & Elections* 2008-2013 (Committee Chair 2011-2013)
Financial Aid Committee* 2007-2010 (Committee Chair 2008-2010)

Department Level Service
Mechanical & Industrial Engineering - Secretary for the Faculty (1996-2003)
Industrial Engineering Curricula Committee (1996-2005)
Mechanical & Industrial Engineering Laboratory Committee (1998-2002)
Mechanical & Industrial Engineering Design Committee (1999-2000)
Mechanical and Industrial Engineering Design Committee (1999-2003)
Industrial Engineering Graduate Committee (2000-2001)
Mechanical & Industrial Engineering Graduate Committee (2001-2002)
Industrial Engineering ABET Committee (2002-2003)
Mechanical and Industrial Engineering Executive Committee (2004-2005)
Mechanical Engineering Undergraduate Committee (2007-2010)
Mechanical Engineering Undergraduate Committee (2014-Present)
Mechanical Engineering Graduate Committee (2017 – Present)

P. GRADUATE STUDENTS

- Ross Crowley, Doctor of Philosophy, Mechanical Engineering, **Thesis** In progress
- Kyle Wolf, Master of Science, Mechanical Engineering, **Thesis** In progress
- Andrew Matcha (6/19), Master of Science, Mechanical Engineering, **Thesis:** Investigation of Surface Topography Effects on Metal Flow of Aluminum and Steel During Hot Compression
- Edgar Espinoza (12/15): Master of Science, Mechanical Engineering, **Thesis:** Optimizing a Hammer Forging Progression for a Large Hand Tool
- Justin Kurk (12/15): Master of Science, Mechanical Engineering, **Thesis:** Investigation of surface topography effects on metal flow under lubricated hot compression of aluminum
- Dave Nowak (6/14): Master of Science, Mechanical Engineering, **Thesis:** Investigation of surface roughness and lay on metal flow in hot forging
- Shichao Hu (12/13) Master of Science, Mechanical Engineering, **Thesis**: Radial Axial Rolling of Large Rings
- W. Paul Harris (12/07): Master of Science, Mechanical Engineering, **Thesis**: Friction Welded Forging Preforms
- Thomas Silman (5/07) Master of Science, Mechanical Engineering, **Thesis**: Analysis of the Centrifugal Disk Finishing Process

- Robert Evans (5/03) Master of Science, Mechanical Engineering, **Thesis**: Fundamental Analysis of Vibratory Finishing
- Feng-Feng (5/99), Master of Science, Mechanical Engineering, **Thesis**: Numerical Modeling of the External Thread Rolling Process

- Robyn Knie (12/09) Master of Science, Mechanical Engineering, Non-Thesis Option
- Megan Shaefer (5/09) Master of Science, Mechanical Engineering, Non-Thesis Option
- Jeremy Wittig (5/09) Master of Science, Mechanical Engineering, Non-Thesis Option
- Gautam Ubale (12/08) Master of Science, Mechanical Engineering, Non-Thesis Option
- Antonio Vargas (12/03) Master of Science, Mechanical Engineering, Non-Thesis Option
- Christopher Stoll (5/05), Master of Science, Mechanical Engineering, Non-Thesis Option
- Michael Bates (8/03), Master of Science, Mechanical Engineering, Non-Thesis Option

UNDERGRADUATE RESEARCHERS SUPPORTED

Vanessa Martin-Weygrn, Spring 2017, FIERF Lightweighting Project
Ross Crowley, Spring 2017, FIERF Lightweighting Project
Jon Neumann, Spring 2010, FIERF Machining Marks Project
Charles Janicki, Summer 2005, AISI Curriculum Development Project
Benjamin Druecke, Summer 2003, FIERF Welded Metal Preforms Project
Melissa Gieffre, Summer 2001, Supported by WSGC Underwater Welding Project

VISITING RESEARCHERS/SCHOLARS SUPERVISED

Mr. Shiyu Cui, Ph.D Candidate, Nanjing University of Astronautics & Aeronautics:
January 1, 2017 - June 31, 2017

Q. CONSULTING ACTIVITIES

Available upon request