Kornel F. Ehmann, Ph.D.

Northwestern University
Department of Mechanical Engineering
Evanston, Illinois 60208-3111
Phone: (847) 491-3263
FAX: (847) 491-3915
E-mail: k-ehmann@northwestern.edu

EDUCATION:

March	1970 B.S.	University of Belgrade, Yugoslavia Mechanical Engineering
June	1974 M.S.	University of Belgrade, Yugoslavia Mechanical Engineering
December	1979 Ph.D.	University of Wisconsin-Madison Mechanical Engineering ***Thesis:*** "Machine Tool System Identification and Forecasting Control of Chatter," S.M. Wu Advisor

POSITIONS HELD:

2008	Visiting Professor University of Belgrade Belgrade, Serbia
2006	Adjunct Chair Professor Chung Yuan Christian University Chung-Li, Taiwan
2004`	Adjunct Professor Department of Mechanical and Industrial Engineering University of Illinois at Urbana/Champaign
2004 `	Distinguished Honorary Professor Department of Mechanical Engineering Indian Institute of Technology (IIT), Kanpur, India
1990	Professor Department of Mechanical Engineering Northwestern University, Evanston, Illinois
1985 - 1990	Associate Professor Department of Mechanical Engineering Northwestern University, Evanston, Illinois
1981 - 1985	Assistant Professor Department of Mechanical Engineering University of Wisconsin-Madison, Madison, Wisconsin

1980 - 1981	Research Associate Department of Mechanical Engineering University of Wisconsin-Madison, Madison, Wisconsin
1977 - 1979	Research Assistant Department of Mechanical Engineering University of Wisconsin-Madison, Madison, Wisconsin
1970 - 1976	Assistant Lecturer Department of Mechanical Engineering University of Belgrade, Yugoslavia

HONORS AND AWARDS:

- Distinguished Visiting Fellow, The Royal Academy of Engineering (at Cardiff University) (2009)
- Visiting Professor, Institut fuer Werkzeugmaschienen und Fabrikbetrieb (IWF), Technische Universitaet - Berlin, (2009)
- Visiting Professor, University of Belgrade, Serbia (2008)
- James N. and Nancy J. Farley Professor in Manufacturing and Entrepreneurship
- Adjunct Professor, Department of Mechanical Science and Engineering, University of Illinois at Urbana/Champaign
- Distinguished Honorary Professor, Department of Mechanical Engineering, Indian Institute of Technology (IIT), Kanpur, India
- Adjunct Chair Professor, Chung Yuan Christian University, Chung-Li, Taiwan
- Fellow of ASME (American Society of Mechanical Engineers)
- Fellow of SME (Society of Manufacturing Engineers)
- Past President of NAMRI/SME (North American Manufacturing Research Institution of SME)
- Past Chair of the Manufacturing Engineering Division of ASME
- Technical Editor: Trans. ASME – J. of Manufacturing Science and Engineering
- Editorial Board: SME Journal of Manufacturing Processes
- Editorial Board: Int. Journal of Machine Tools and Manufacture
- 2008 SME Gold Medal
- 2009 ASME/MED Outstanding Service Award
- 2010 NAMRI/SME Kornel Ehmann Outstanding Lifetime Service Award
- 2012 ASME: Blackall Machine Tool and Gage Award
- 2012 ASME: Milton C. Shaw Manufacturing Research Medal
- 2013 Editor in Chief: Manufacturing Letters, SME/Elsevier
- 2016 Fellow - International Society for Nanomanufacturing (ISNM)
- 2018 SME Education Award
- 2018 Hideo Hanafusa Outstanding Investigator Award (American Society of Mechanical Engineers (ASME) and the Institute of Systems, Control and Information Engineers (ISCIE) in Japan)
- 2019 ASME Kornel F. Ehmann Manufacturing Medal
- 2020 Best Reviewer Award, 2020, Journal of Materials Processing Technology
- 2021 SME Frederick W. Taylor Research Medal

ACADEMIC EXPERIENCE AND SERVICE:

A. TEACHING:

Courses Developed:

University of Wisconsin-Madison:

1980 ME 601 Computer Aided Manufacturing
1981 ME 729 Stochastic Approach to Machine Tool Dynamics and Control
1982 ME 601 Robotics
1983 ME 439 Introduction to Robotics
1983 ME 739 Advanced Automation and Robotics
1984 ME 903 Stochastic Analysis of Machining Accuracy

Northwestern University

1986 ME C40-2 Computer Integrated Manufacturing - CAD/CAM
1987 ME D39 Computer Control in Manufacturing
1988 ME D43 Theory of Metal Cutting
1990 ME B40 Introduction to Design and Manufacturing
1996 ME C40-3 Computer Integrated Manufacturing – Mfg. Automation
2001 ME 395 Mechanical Systems Design (w/ Henry Stoll)
2006 ME 395 Micromanufacturing (w/ Jian Cao)

Courses Taught: University of Wisconsin-Madison:

ME 310 Manufacturing Processes
ME 410 Advanced Manufacturing Processes
ME 428 Numerical Control

Northwestern University

ME B01 Mechanics I
ME B02 Mechanics II
CE B12 Mechanics
ME C40 Introduction to Manufacturing Processes
ME C15 Theory of Machines - Machine Design
ME C91 Fundamentals of Control Systems
ME D95 Computer Control in Manufacturing
ME 240 Introduction to Mechanical Design & Manufacturing
ME 340 Computer Integrated Manufacturing
- 1 Manufacturing Processes
- 2 CAD/CAM
- 3 Manufacturing Automation
ME 395 Mechanical Systems Design
ME 443 Metal Cutting
ME 495 Micromanufacturing
ME 395 Vehicle Dynamics

B. RESEARCH:

Areas of Interest:

Micro/meso-scale manufacturing; CAM--Computer Aided Manufacturing; Robotics; Machine Tool Dynamics and Control; Metal Cutting Operations; Adaptive Control; Precision Engineering; Engineered Surfaces;

Students Supervised Who Have Received Degrees:

M.S. Students

1. Z. Djordjevic, **An Experimental Study on the Grinding of Twist Drill Flutes** (1982).
2. J. C. Su, **Static Analysis of Turbine Blade** (1982).
3. T. Z. Jou, **On-Line Computer Evaluation of Surface Topography** (1982).
4. H. Kasat, **On-Line Tool Life Performance Monitoring of a Single Point Cutting Tool** (1983)
5. R. A. Schwartz, **Casting Temperature Control in an Automated Die Cast Work Cell with Considerations Toward Improving Robot Performance** (1984).
6. F. Keshmiri, **Development of an End-Effector for Riveting** (1984).
7. B. T. Wu, **Volumetric Analysis as Applied to Robotic Systems** (1985).
8. R. Recker, **Feasibility Study of Pitch Error Compensation in Precision Screw Cutting** (1985).
9. J. J. Kotowski, **Kinematic Error Analysis of Robotic Manipulators** (1986).
10. S. J. Lym, **A Study of Novel Laundry Technology Concepts** (1987).
11. R. K. Kim, **Optimal Cutting Conditions in Turning Operations** (1987).
12. G. Mathew, **Design and Analysis of a Micropositioning Device** (1988).
13. C. Y. Yeh, **Error Simulation for a Multi-axis Machine** (1988).
14. M. Stanley, **The Improvement of Milled Surface Characteristics Using Tertiary Motions of the Milling Cutter** (1988).
15. T. Perzentka, **Digitization of Three Dimensional Surfaces Using a Laser** (1989).
16. D. Q. Feng, **Design of a Tool Actuator for a Piezoelectric Crystal Actuated Piston Machining System** (1989).
17. H.M.S. Wang, **Vibration Control in a High-speed Gantry Type CNC Machine** (1989).
18. M. S. Hong, **Practical Implementation of Tertiary Cutter Motions for the Improvement of 3-D Sculptured Surface Characteristics in Milling** (1989).
19. A. Iqball, **Dynamic Analysis of a Twist Drill Using Finite Element Techniques** (1990).
20. D. F. Chang, **Predicting Important Variables in Face Milling Operations,** (1990).
21. A. M. Ignatonis, **Development of an Automatic Roller Positioning System for Newspaper Presses** (1990).
22. A. Artola, **Design of a Manually Controlled Drill Point Grinder**, (1991).
23. J.-Y. Wang, **A Program for Position and Angular Measurements by a Laser Interferometer,** (1992).
24. H.-Y. Chyan, **Feasibility of Eigenstructure Assignment for the Control of a Linear Feed Drive**, (1992).
25. S.-M. Wang, **Volumetric Error Compensation for Multi-Axis Machines**, (1992).
26. Weishen Chen, **Performance Analysis of Micro-Hole Drilling**, (1994).

27. Sheng-Hung Wang, **Whirling Vibration in Drilling During Initial Penetration**, (1994).
28. Tsung-Chen Lu, **A Numerical Simulation Model for the Face Milling Operation**, (1994).
29. James Patrick Bohan, Jr., **Proposal for an Automatic Control System Generator for Manufacturing Machines Based on Modular, Open Architecture Technologies**, (1994).
30. Yi-Cheng Chang, **The Application of Fractal Geometry in Surface Characterization**, (1994).
31. Chien-Ming Chen, **A Multiple-Degree-of-freedom Error Motion Measurement System**, (1994).
32. Chicheng J. Wang, **Surface Topography Control in Single Point Cutting**, (1994).
33. Sriram V. Karipneni, **Analysis of Tool-changing Systems and Redesign of an Existing Unit**, 1995.
34. Parameswaran Iyer, **Experimental Analysis of Skidding and Wandering Motion during Initial Penetration of the Drill**, (1996).
35. Kekin V. Seth, **A CNC Helical Micro-Drill Point Grinder**, (1996).
36. Steven Johnson, **A Study into Replicating Chatter on Laboratory Mill Stands utilizing Experimental Modal Analysis**, (1998).
37. Sachin Ganglani, **Design and Implementation of a Helical Drill Point Grinder**, (2001).
38. Ramesh Subrahmanian, **Development of a Meso-Scale Machine Tool (mMT) for Micro-Machining**, (2002).
39. Ismael Rodriguez, **Stability and Chatter in Rolling with a Non-Uniform Roll Radius**, (2003).
40. Adrish Majumdar, **An Investigation of the Effect of Process Parameters on the Meso-Scale Orthogonal Turning of Brass**, (2005).
41. Erick Haro, **An Experimental Investigation of the Orthogonal Micro-Turning of Cartridge Brass**, (2005).
42. Kellan P. O'Connor, **Design of a Part-Clamping Device for a Miniature Machine Tool**, (2006).
43. Milos Coric, **Automatic Wig Manufacturing System** (2006).
44. Erich Bertsche**, Slot Machining of Ceramic Matrix Composites Using Rotary Ultrasonic Machining**, (2009)
45. Velasquez Tim Pagaduan, Feasibility of Laser Surface Texturing for Friction Reduction in Surgical Blades, (2012).
46. Yunho Yang, **Computer Controlled Additive Patterning of Polymeric Nanofibers in Near-Field Electrospinning**, (2013).
47. Y. Xiong, **Investigation of Residual Stress Induced by Laser Shot Peening on 304L Stainless Steel and its Application for Dental Scaler Enhancement**, (5/2014)
48. Jiachen Xu, **A Novel Method of Evaluating the Tensile and Compressive Behavior of Thin Metal Sheet Using a Transparent Device** (5/2015)
49. Satya Mohanty, **Electrical Micro Manipulation of Jet Trajectory for Water Jet Based Micro-manufacturing**, (3/2015) (w/ J. Cao)
50. Lingxuan Su, **Material Characterization with Digital Image Correlation: Metal Forming Limit and Mechanical Test for Woven Composite** (12/2015) (w/ J. Cao)
51. Fratta Gabriela, **Exploration of Electrohydrodynamic Deposition Methods for the Creation of Micro Surface Textures**, (2016) (w/ J. Cao)
52. Haiguang Liao, **Experimental and Data-driven Modeling Investigation of Mg-RE (GZ151K) Alloy Selective Laser Melting (SLM)** (w/ J. Cao)

53. Sixuan Chen, **Thickness Prediction for Axisymmetric Parts Formed by Double-Sided Incremental Forming (DSIF) Process Using Data Fitting Method**, (2018)
54. Hanyu Zhu, **Exploration of Vibration-Assisted Manufacturing Processes**, (2018) (w/ J. Cao)
55. Wenjia Wang, **Thermal Properties Characterization of Carbon-fiber Reinforced Plastic Prepregs with Different Fabric Weaves**, (2018) (w/ J. Cao)
56. Yixiao Wang, Toolpath Planning in Additive Manufacturing (2021)

Ph.D. Students

1. K. J. Kim, **Mechanical Structure Modal Analysis by Dynamic Data System (DDS) Methodology** (1982) (with S. M. Wu)
2. T. Y. Ahn, **Dynamic Cutting Process Identification by Dynamic Data System Models** (1982) (with S. M. Wu)
3. K. H. Kim, **Forecasting Compensatory Control of Roundness in Cylindrical Grinding** (1982) (with S. M. Wu).
4. E. J. Moon, **Forecasting Compensatory Control of Machining Straightness** (1984) (with S. M. Wu).
5. Y. C. Shin, **Dynamic Analysis of the Machine Tool System** (1984) (with S. M. Wu).
6. S. H. Lee, **Trajectory Control in the World Coordinate System by an Adaptive Forecasting Algorithm** (1985) (with S. M. Wu).
7. T. R. Kim, **Dynamic Analysis of Tool-Holder Systems** (1985) (with S. M.Wu).
8. S. J. Lee, **The Influence of Drill Characteristics and Entry Mechanisms on Drilling Performance** (1985) (with S. M. Wu).
9. K. Kim, **Forecasting Compensatory Control of Cylindricity in Contour Boring Operations** (1985) (with S. M. Wu).
10. I. N. Tansel, **Three Dimensional Cutting Dynamics** (1986) (with S. M. Wu).
11. C. W. Park, **Forecasting Compensatory Control of Machining Flatness** (1986) (with S. M. Wu).
12. D. W. Cho, **A New Multi-Input Modal Analysis and Three Dimensional Cutting Dynamics Identification Method Applied to Milling Operations** (1986) (with S. M. Wu).
13. S. D. Fassois, **Fast Algorithms for ARMA Parameter Estimation** (1986).
14. J. T. Huang, **On-line Self Turning Adaptive Control for Industrial Robots** (1987).
15. A. S. C. Bose, **Adaptive Trajectory Planning for Industrial Robots** (1987).
16. K. H. Kim, **Milling Dynamics in a Closed-Loop System** (1987).
17. J. Cesarone, **Manipulator Collision Avoidance by Dynamic Programming** (1987).
18. S. Le, **Active Vibration Suppression for Robotic Manipulators** (1988).
19. B. Bahrololoumi, **Design of an Optical Sensor System for Adaptive Control of a Seam Tracking Robot** (1988).
20. S. J. You, **Synthesis and Generation of Milled and Polished Surfaces** (1989).
21. P. D. Lin, **Error Analysis, Measurement and Compensation of Multi-Axis Machines** (1989).
22. D. T. Parthimos, **Nonlinear Behavior of the Dynamic Cutting Process**, (1990).
23. J. H. Heo, **Eigensensitivity Synthesis and its Applications to Structural Dynamics Modification**, (1991).
24. M. N. Jalisi, **Microdrilling Mechanics and Performance**, (1991).
25. W. T. Kwon, **Tool Wear Analysis and Monitoring**, (1992).

26. S. J. Lym, **Development of a Modular Open Architecture Controller for Error Reduction in Manufacturing Machines**, (1992).
27. S. K. Kang, **Micro-Drill Geometry and Grinding**, (1993).
28. M. S. Hong, **Generation, Characterization and Synthesis of Engineering Surfaces,** (1994).
29. I. S. Yun, **Chatter in Rolling**, (1995).
30. S. M. Wang, **Volumetric Error Compensation for Multi-Axis Machines,** (1996).
31. C. H. Chiou**, A Computational Model for End Milling Operations**, (1997).
32. Heng-Chwan Chyan, **Curved Helical Drill Technology For Micro-Hole Drilling,** (1997).
33. A. J. Patel, **Error Analysis and Accuracy Enhancement of a Hexapod Machine,** (1998).
34. P. H. Hu, **Stability and Chatter in Rolling**, (1998).
35. K.Y. Kim, **Prediction and Characterization of the Machined Surface Topography in the Frequency Domain**, (2000).
36. H. Zhao, **Geometry and Mechanics of Spade Drilling Operations**, (2000).
37. Y. Gong, **Modeling and Simulation of Micro-drilling Dynamics**, (8/2001).
38. R. Sokol, **Entropic Control: Introducing Disorder to Elude Chatter**, (12/2003).
39. H. Sung, **High-Speed Fluid Bearing Micro-Spindles for Meso-scale Machine Tools (mMTs)**, (2/2007).
40. K. Malukhin, **Shape Memory Alloy Based Micro-Meso Scale Manipulator**, (??/2008)
41. H. Zhao, **Regenerative Chatter in Cold Rolling**, (??/2008)
42. H.S, Yoon, **Dynamics of the Micro-Machining Process**, (2009)
43. K. Pallav**, Laser Induced Plasma Micro-Machining (LIP-MM)**, (??//2013)
44. P. Han, **Mechanics of Soft Tissue Cutting in Needle Insertion**, (5/2014)
45. P. Guo, **Development of the Elliptical Vibration Texturing Process**, (6/2014)
46. I. Saxena, **Laser Induced Plasma Micro-Patterning (LIPMP)**, (10/2015)
47. C. Demeng, **Mechanics of Rock-Cutter Interactions during Rock Shearing Processes**, (5/2016)
48. Z. Zhang, **Incremental Sheet Forming Methods for Enhanced Process Performance and Material Properties**, (6/2018) w/J. Cao
49. E. Ndip-Agbor, **Rapid Analysis and Planning Tools for Flexible Manufacturing Processes in a Cyber-Physical Setting**, (4/2018) w/J. Cao
50. H. Ren, **Modeling and Control of the Double-Sided Incremental Forming Process**, (7/2018) w/J. Cao
51. S. Wolff, **Laser-matter Interactions in Directed Energy Deposition**, (8/2018) w/J. Cao
52. W. Zhang, **Fundamentals of Thermoforming Processes of Carbon Fiber Reinforced Plastic (CFRP) Parts**, (3/2019) w/J. Cao
53. N. Moser, **Deformation Mechanisms and Process Planning in Double Sided Incremental Forming**, (8/2019) w/J. Cao
54. Marco Giovannini, **Soft Tissue Cutting in Core Biopsy**, (11/2019) w/J. Cao
55. Y. Shi, **Curved Water Jet Guided Laser Micro-Manufacturing**, (11/2019) w/J. Cao
56. David Prichet, **Electrophoretically guided Micro Additive Manufacturing Process - EPµAM** (2/2020) w/J. Cao
57. Nicolas Camilo Martinez Prieto, **Electrohydrodynamically-Driven Micro-Additive Manufacturing Processes: Characterization and Control** (2/2020) w/J. Cao
58. Jennifer Bennett, **Tailored Mechanical and Geometric Properties in Directed Energy Deposition via Global Thermal Control** (4/2021) w/J. Cao
59. Mojtaba Mozaffar, **Physics-Informed Data-Driven Prediction and Design in Advanced Manufacturing Processes** (6/2021) w/J. Cao

Post-doctorates and Visiting Scholars Supervised:

1. Zhen-Lie Zhang, Instructor, Jilin University, Changchun, PRC (1982-1984).
2. Jayaraman Raja, Postdoctoral Fellow, India (1984-1985).
3. Radovan Kovacevic, Associate Professor, University of Titograd, Yugoslavia (1984-1985).
4. Alexander Yanchevsky, Associate Professor, Lenningrad Electrical Engineering Institute, USSR (1985).
5. Lubos Gasparik, Assistant Professor, University of Zilina, Czechoslovakia (1986).
6. Cheng Lin, Professor, Hunan University, Changsha, PRC (1990-1991).
7. Zhen-Lie Zhang, Instructor, Jilin University, Changchun, PRC (1993-1994).
8. Mohamed Emad Seddik Soliman, Assistant Lecturer, Assiut University, Egypt, (1993-1994)
9. Michal Wieczorowski, Instructor, Politechnika Poznanska, Poznan, Poland (1994-1995).
10. In Suk Yun, Nortwestern University, Evanston, IL (1995-1996).
11. Tae-Yong Kim, Post Doctoral Research Fellow, Seoul National University, Seoul, Korea. (1996-1997).
12. A. C. Lee, Professor, National Chiao Tung University, Hsinchu, Taiwan (1996-1997).
13. Min-Sung Hong, Ajou University, Suwon, S. Korea (2000-2001).
14. Han UI Lee, Pohang Institute of Science and Technology (POSTECH) (2005).
15. Seung Kook Ro, Korea Institute of Materials and Machinery (KIMM) (2005).
16. Dae-Bong Choi, Korea Institute of Materials and Machinery (KIMM) (2006).
17. Mingxing Lin, Professor, School of Mechanical Engineering, Shandong University, P.R. China (2007-2008).
18. Kostyantin Malukhin, Northwestern University, (2008-2012).
19. Ping Zou, Professor, School of Mechanical Engineering and Automation, Northeastern University, Shenyang, China (2010 – 2011 & 2016).
20. Jaegu Kim, Korea Institute of Machinery and Materials (KIMM) (2010 – 2011),
21. Guangxian Shen, Professor, Honorary director of Rolling Mill Institute, Yanshan University, Qinhuangdao City, Hebei Province, P. R. China (2011 – 2012),
22. Qiang Zeng, Robotics Research Laboratory, School of Mechanical and Electrical Control Engineering, Beijing Jiaotong University, Beijing, P.R.C. (2011 –
23. Santu Kumar Giri, Central Mechanical Engineering Research Institute (CMERI), Durgapur, India (2012).
24. Chen Zhang, Nanjing University of Aeronautics and Astronautics (2012-2013)
25. Yunfeng Peng, Xiamen University, China (2013)
26. Guanghui Zhang, Harbin Institute of Technology (HIT), (2013)
27. Zhengying Lin, Fuzhou University, Fuzhou, Fujian, P.R. China, (2013)
28. Yun Ling, Visiting PhD student, Southeast University, P.R. China (2013)
29. Guoda Chen, Visiting PhD student, Harbin Institute of Technology, University, P.R. China (2013)
30. Wang Xingsheng, Visiting PhD student, Nanjing Agricultural University, P.R. China (2013)
31. Lu Yong, Visiting PhD student, Tsinghua University, P.R. China (2013)
32. Kang Min, Visiting Professor, Nanjing Agricultural University, P.R. China (2014)
33. Long Yuhong, Visiting PhD student, Guilin University, P.R. China (2014)
34. Giovanni Battista Silva, Visiting PhD student, Politecnico di Milano, Italy (2014)
35. Zhang Xuewei, Visiting PhD student, Northeastern University, P.R. China (2014)
36. He Yu, Visiting PhD student, Northeastern University, P.R. China (2014)
37. Xing Youqiang, Visiting PhD student, Shandong University, P.R. China (2014)
38. Lee Sung Cheul, Post Doc., Korea Institute of Machinery and Materials, Daejeon, Korea. (2014)
39. Zhu Wu-Le, Visiting PhD student, Zhejiang University, P.R. China (2014)
40. He Yu, Visiting PhD student, Northeastern University, P.R. China (2014)

41. Jing Xiubing, Visiting Professor, Tianjin University, Tianjin, China (2015)
42. Zhu Zhiwei, Visiting PhD student, The Hong Kong Polytechnic University (2015)
43. Wu Hao, Visiting PhD student, Northeastern University, P.R. China (2014)
44. Funazuka Tatsuya Visiting PhD student, Toyama University, Japan (2015)
45. Sasano Hoichi, Visiting Postdoctoral Fellow, National Institute for Materials Science, Japan (2015)
46. Yuan Yanjie, Visiting PhD student, Tianjin University, P.R. China (2016)
47. Kaliński Krzysztof J., Visiting Professor, Gdańsk University of Technology (2017)
48. Li Fengchun, Visiting PhD student, Tsinghua University, P.R. China (2017)
49. Li Fuhua, Visiting PhD student, Tsinghua University, P.R. China (2017)

Current Graduate Student Supervision:
(jointly with J. Cao)

Leem Dohyun	PHD 2017 Winter
Shuheng Liao	PHD 2018 Fall
Zilin Jiang	PHD 2016 Fall
Suman Bhandari	PHD 2017 Fall
Jiaxi Xie	PHD 2017 Fall

C. COMMITTEE SERVICE:

Departmental Committees:

University of Wisconsin-Madison:

1984 - 1985 Capital Equipment Committee
1982 - 1985 Chairman, Production Engineering Division Graduate Committee
1983 - 1984 Design Content Committee
1981 - 1983 Undergraduate Affairs Committee

Northwestern University:

1989	Curriculum Committee
1989	Renovation Committee
1990	Awards Committee
1991	Graduate Curriculum Committee
1993	Benchmarking Committee
1992 - 1993	Faculty Search Committee (Chair)
1993 - 1994	Faculty Search Committee (Member)
1994 - 1995	5-Year Planning Committee (Chair)
1995 - 1996	Undergraduate Curriculum Revision Committee
1997 - 2000	Machine Shop Committee
1998 - 2014	ME Department Executive Committee
1998	Awards Committee
2000	Space Allocation/Distribution Committee
2000	Graduate Curriculum Committee
2017	Faculty Search Committee

College Committees:

University of Wisconsin-Madison:

1982 - 1985 Chairman, Ad Hoc Committee Wisconsin Center for Advanced Automation and Robotics

Northwestern University:

1985 - 1989 Executive Committee of the Center for Manufacturing Engineering
1987 - 1990 Tech Relations with Industry Committee
1991 - 1992 Selection Committee for Assistant Dean & Director of CPD
1992 - 1994 Tenure and Promotion Committee
1992 - 1994 Acting Director, Center for Manufacturing Engineering
1993 - 1994 Committee on the Future
1994- Undergraduate Manufacturing Engineering Advisory Committee
1995 McCormick Manufacturing Institute Committee
1999 ABET - Intra-School Site Visit Team for Materials Science Department
1999 - 2001 Tenure and Promotion Committee

Outside Committees:

1987 - 1988 SME Transactions Editorial Subcommittee
1988 - 1990 Program Committee of the 1990 Japan-USA SFA
1988 - NAMRC Scientific Committee
1990 - 1991 MI'92 Organizing Committee
1990 - 1995 Executive Committee Production Engineering Division of ASME, (Division Chair, 1994 -1995).
1993 - 1994 NAMRC XXII Co-Chair, Organizing Committee (with W.R.D. Wilson)
1993 - 1994 First S.M. Wu Symposium on Manufacturing Science, Organizing Committee
1994 - 1995 Division Representative on the Manufacturing Technical Group Operating Board of ASME
1994 - 1995 Production Engineering Division of ASME, Nominating Committee, (Chair)
1994 - 1995 M. Eugene Merchant Manufacturing Medal of ASME/SME Board of Award, (Member)
1994 - 1996 International Program Committee Member - International Manufacturing Engineering Conference (IMEC) August 7-9, 1996, Storrs, Connecticut.
1994 - 1995 International Program Committee Member - The First World Congress on Intelligent Manufacturing, Mayaguez, Puerto Rico, February 1995.
1995 - 2001 Associate Technical Editor Trans. ASME, Journal of Engineering for Industry (12/94-12/00).
1995 - S. M. Wu Memorial Lecturer Selection Committee, University of Michigan, Ann- Arbor.
1996 - 1997 ASME: Manufacturing Technical Group Operating Board - Member at large.
1996 - 1997 International Program Committee Member - The Second World Congress on Intelligent Manufacturing, Budapest, Hungary, June 1997.
1997 - 1998 International Program Committee, The 4th International Seminar “Intelligent Manufacturing Systems - Theory and Practice”, Belgrade Yugoslavia.

1997 - 1998	Program Committee for the 1998 Japan-USA Symposium on Flexible Automation.
1997 -	International Editorial Board, Int. J. of Production Engineering and Computers.
1997 - 1999	ASME: Manufacturing Engineering Division, Technical Committee on Machine Tools (Chair)
1999	International Scientific Committee of the WSES International Conference on Mathematics and Computers in Mechanical Engineering, Florida Keys - Marathon, Florida, July 25-29, 1999.
1999 - 2006	NAMRI/SME Board of Directors (NAMRI/SME President 2005)
2000	International Organizing Committee, Mechatronics, The 7th Mechatronics Forum International Conference, 6th - 8th September 2000, Atlanta, GA.
2000 - 2003	ASME Manufacturing Engineering Division, Blackall & Ennor Awards Committee
2001 - 2007	Associate Technical Editor; SME, Journal of Manufacturing Processes
2002 - 2012	Technical Editor; ASME Journal of Manufacturing Science & Engineering
2003 -	Reviewing Committee – Int. J. Machine Tools and Manufacture
2004 - 2005	Board of Directors, President, NAMRI/SME
2004 - 2005	Panel Chair for the WTEC study on “Miniaturization of Manufacturing Technologies: The Microfactory-of-the-future”
2004 -	Editorial Board – International Journal of Precision Engineering and Manufacturing
2004	Co-organizer – US-Korea Workshop on Micromanufacturing, IMTS/Northwestern, 9th – 10th September 2004
2005	Workshop Leader – WTEC Workshop on Micromanufacturing, 21st – 22nd April 2005, Arlington, VA
2005	Organizer and Moderator – Panel on Micro Manufacturing – a WTEC Study, Thirty-third North American Manufacturing Research Conference, 24th-27th May 2005, New York, NY
2004-2006	Board Member, Global Technology Advisory Board, AMT-The Association for Manufacturing Technology, 2004-2005
2004 -	Advisor SME-Micromanufacturing Conference
2006	International Advisory Committee – Int. Forum on Systems and Mechatronics, 6th – 8th December 2006, Tainan, Taiwan.
2006 -	WTEC/NSF Panel on Advanced Manufacturing, Chair
2006 -	Advisory Board: Journal of Mechanics, Materials and Processing - The Japan Society of Mechanical Engineers
2006	Program Committee, 2006 International Symposium on Flexible Automation, Osaka, Japan
2006	Program Committee, International Forum on Systems and Mechatronics, 2006, Tainan, Taiwan
2006-	Advisory and Organizing Committee for the “International Conference on Micromanufacturing – ICOMM” (Founding Member)
2006	Co-Chair, “1st International Conference on Micromanufacturing – ICOMM” (with M. Culpepper, MIT) September 2006, UIUC
2008-2010	International Advisory Committee for the International Precision Assembly Seminar (IPAS'2008, 2010), Chamonix, France
2007-2008	Organizing Committee Member, International Conference on Smart Manufacturing Application (ICSMA), Gyeonggi-do, Korea
2008	Scientific Committee - “International Symposium on Manufacturing Systems and Technologies: ISMST 2008”.
2009	Committee of the “The Third International Conference on Quantum, Nano and Micro Technologies - ICQNM 2009

2008-2010	Member of Scientific Advisory Board for the Singapore Institute of Manufacturing Technology (SIMTECH)
2008	Co-chair/Organizer: 6th International Workshop on Microfactories – IWMF'2008, Northwestern University, Evanston, IL, October 5-8, 2008 (~ 75 participants) (With S.G. Kapoor – UIUC)
2008	Co-chair/Organizer: ASME/JSME Manufacturing Science and Engineering Conference, Northwestern University, Evanston, IL, October 7-11, 2008 (over 400 participants) (with J. Cao)
2009-2010	International Advisory Committee Member of ICoPE2010 and 13th ICPE International Conference on Precision Engineering, July 2010, Singapore
2009	Organizing Committee - 7th International Conference on Manufacturing Research (ICMR), Coventry, United Kingdom, September, 2009.
2008-2011	Advisory Board of the Journal of Solid Mechanics and Materials Engineering; The Japan Society of Mechanical Engineers
2010	U.S. Co-organizer of the Session "OS10: Precision Machinery System and Micro/Nano Technologies" at the 2010 International Symposium on Flexible Automation (ISFA-2010), July 12-14, 2010, Tokyo, Japan.
2009	Co-chair: 4M/ICOMM Conference (International Conference on Multi-Material Micro-Manufacture (4M)/International Conference on Micromanufacturing (ICOMM)), 23 – 25 September 2009, Forschungszentrum Karlsruhe, Karlsruhe, Germany
2010	Co-organizer: ICOMM/4M Conference, April 6-8, 2010, University of Wisconsin, Madison, WI
2010	Co-chair: 7th International Workshop on Microfactories – IWMF'2010, Korea Institute of Machinery & Materials (KIMM), Daejeon, Korea, October 5-8, 2010
2010	Co-chair: 6th International Conference on Micromanufacturing - ICOMM'2011, March 7-10, 2011, Tokyo Denki University, Tokyo, Japan
2011	Scientific Advisory Committee of the 4th International and 25th AIMTDR Conference, 2012.
2012	Co-chair and Organizer: 7th International Conference on Micromanufacturing - ICOMM'2012, March 7-10, 2012, Northwestern University, Evanston, IL, USA, March 11- 14, 2012
2012	Co-chair: 8th International Workshop on Microfactories – IWMF'2012, Tampere University of Technology, October 5-8, 2010, Tampere, Finland, June 18-21, 2012
2014 -	DMDII – Technical Lead for the Intelligent Machines Thrust
2014	Program Committee - 2014 International Symposium on Flexible Automation (ISFA 2014), Awaji-Island, Hyogo, Japan, July 14 - 16, 2014
2016	Co-chair - International Conference 4M/IWMF 2016 Technical University of Denmark (DTU), 13th - 15th September 2016
2016 -	Advisory Board - Design and Manufacturing Innovation Institute at UCI
2016	17th "Machining Innovations Conference for Aerospace Industry," Program Committee member.
2018 -	Editorial Board Member - Journal of Manufacturing and Materials Processing
2019	Program Committee - 19th Machining Innovations Conference for Aerospace Industry, November 27th and 28th 2019, Hannover Centre for Production Technology.
2019	Editorial Board Member – International Journal of Extreme Manufacturing (IJEM)

D. CONTINUING EDUCATION ACTIVITIES:

1984 - 1985 University of Wisconsin Extension (UWEX), Short Course, **Flexible Automation and Robotics** (with Professor B. Ravani)
1987 Northwestern University, Continuing Engrg. Education - Executive Briefings, **Effective Use of Robots in Manufacturing**
1988 - 1989 Northwestern University, Continuing Engrg. Education, CES-8943, **Design for Production**, (Course for Zenith Electronics)
1988 - 1993 Northwestern University, Tech. Corporate Partners Tech Consultant for Navistar and General Motors.
1992 - 1993 Northwestern University, Continuing Engrg. Education, **Design for Manufacture**, (Short Course; Team Member)
2009 - Indian Institute of Technology – Kanpur, **Micromanufacuring Processes and Automation,** (Three Day Short Course - Visionary Leadership in Manufacturing Program), January 6, 15-17, 2009 and September 2-4, 2009 (through Video-conferencing) (with Prof. S.G. Kapoor, UIUC)

PROFESSIONAL ACTIVITIES:

A. PROFESSIONAL AND HONORARY SOCIETIES:

ASME: Fellow
SME: Fellow
NAMRI: Senior Member
Sigma-Xi: Member
ASPE: Member
ISNM: Fellow

B. REVIEWER - PANELIST FOR:

Agencies:

1. National Science Foundation
2. Natural Sciences and Engineering Research Council of CANADA
3. Hong-Kong Science Foundation
4. Australian Research Council, Australia
5. King Fahd University of Petroleum & Minerals, Saudi Arabia
6. Board of the Austrian Science Fund, Austria
7. Indiana 21st Century Research and Technology Fund – Indiana Economic Development Corporation
8. VINNOVA (The Swedish Governmental Agency for Innovation Systems)
9. Serbia Innovation Fund

Journals:

1. ASME Transactions, Journal of Manufacturing Science and Engineering, formerly Journal of Engineering for Industry
2. ASME Transactions, Journal of Dynamics Systems, Measurements and Control
3. ASME Transactions, J. of Mechanisms, Transmissions and Automation in Design
4. ASME Transactions, Journal of Tribology

5. Proceedings of the Institution of Mechanical Engineers - Part K: Journal of Multi-body Dynamics
6. Proceedings of the Institution of Mechanical Engineers - Part N: Journal of Nanoengineering and Nanosystems
7. Proceedings of the Institution of Mechanical Engineers - Part B: Journal of Engineering Manufacture
8. Proceedings of the Institution of Mechanical Engineers - Part C: J. of Mechanical Engineering Science
9. SME Journal of Manufacturing Systems
10. SME Journal of Manufacturing Processes
11. International Journal of Machine Tools and Manufacture
12. International Journal of Structural Stability and Dynamics
13. International Journal of Nanomanufacturing
14. International Journal of Mechanics of Structures and Machines
15. International Journal of Robotics Research
16. International Journal of Precision Engineering and Manufacturing
17. IEEE Transactions on Systems, Man, and Cybernetics
18. IEEE Transactions on Control Systems Technology
19. IEEE Transactions on Robotics and Automation
20. Journal of Robotic Systems
21. Journal of Applied Physics
22. Journal of Vibration and Control
23. Journal of Materials Processing Technology
24. Journal of Sound and Vibration
25. European Journal of Control
26. Experimental Heat Transfer
27. Mechanism and Machine Theory
28. U.S. Civilian Research & Development Foundation (CRDF)
29. Journal of Experimental Heat Transfer
30. Meccanica, International Journal of the Italian Association of Theoretical and Applied Mechanics AIMATA
31. Surface & Coating Technology
32. Mechanical Systems and Signal Processing
33. Robotics and Computer Integrated Manufacturing
34. Engineering with Computers
35. Precision Engineering, Journal of the American Society for Precision Engineering
36. Journal of Engineering in Medicine
37. Journal of Advanced Manufacturing Technology

C. CONSULTING:

Alcoa, Davenport, Iowa; IBM, Endicott, New York; Johnson Wax, Racine, Wisconsin; Ford, Detroit, Michigan; Naval Research Laboratory, Washington, DC; Poly-Hi, Fort Wayne, Indiana; General Motors, Warren, Michigan; General Electric, Burlington, Vermont Ekstrom & Carlson, Rockford, Illinois; General Dynamics, Fort Worth, Texas; The Ingersoll Milling Machine Company, Rockford, Illinois; Tulon, Co., Gardena, California; Chrysler Co., Toledo, Ohio; Du Page Die Casting and Fabricating Co., Niles, Illinois; SpeedFam, Chandler, AZ; Lawrence Livermore National Laboratory, CA; American Tool Companies, Inc.; General Electric, Cincinnati, OH; Korea Institute of Machinery and Metals (KIMM); Baxter, Deerfield, IL; Etc.

PUBLICATIONS:

(Earlier publications appear under the name: ***Kornel F. Eman***)

A. BOOKS AND CHAPTERS:

1. S. H. Lee, J. Cesarone, K. F. Ehmann, 1988, “Trajectories,” "Encyclopedia of Robotics," R. C. Dorf and S. Y. Nof, eds., John Wiley, 3, 1796-1810, (Invited article).
2. K. F. Ehmann and W. R. D. Wilson (Editors), 1992, “Engineered Surfaces,” ASME: PED-Vol. 62 Proceedings of the Symposium on Engineered Surfaces at the ASME Winter Annual Meeting.
3. K. F. Ehmann (Editor), 1993, “Manufacturing Science and Engineering,” ASME: PED-Vol. 64, Proceedings of five Symposia at the ASME Winter Annual Meeting, New Orleans, Nov. 28 – Dec.3, 1993.
4. K.F. Ehmann, D. Bourell, M. Culpepper, T. Hodgson, T. Kurfess, M. Madou, K. Rajurkar, R. DeVor, 2006, “WTEC Panel Report on: International Assessment of Research and Development in Micromanufacturing,” (K.F. Ehmann Panel Chair), Springer (**??**)
5. K. F. Ehmann, R. E. DeVor, S. G. Kapoor, and J. Cao, 2008, “Design and Analysis of Micro/Meso-Scale Machine Tools (mMTs),” in “Smart Devices and Machines for Advanced Manufacturing,” Lihui Wang and Jeff Xi – Editors, Springer Verlag, (Invited article).
6. V. Saile, K. F. Ehmann, S. Dimov, 2010, (Editors), 2010, “4M/ICOMM – Proceedings of the Global Conference on Micro Manufacturing,” 23-25 September, 2010, Karlsruhe, Germany.
7. K .F. Ehmann, J. Cao (Section Editors), 2013, “Tribology in Manufacturing,” in “Encyclopedia of Tribology,” Y.W Chung and Q. Wang Editors, Springer Verlag.
8. Jian Cao, Kornel F. Ehmann and Shiv Kapoor, “Distributed Manufacturing,” Handbook of Science and Technology Convergence, DOI 10.1007/978-3-319-04033-2_28-1, Springer International Publishing, Switzerland 2015

B. PATENTS:

1. “Spade-type Drill Bit Having Helical Configuration,” I. Singh, K. F. Ehmann, No. 7140814, November 2006.
2. “Vibro-Mechanical Texturing,” A. Greco, K. F. Ehmann, Q. J. Wang, Reference: NU27159, Provisional Patent Application, May 2008.
3. Pallav, K., Han, P., Ehmann, K. F., Park, J-K., Ro, S-K., and Cao, J "Surgical Scalpel Blade with Multiple Micro-cutting Edges and Surface Textured Rake Face", provisional patent submitted, Feb. 23, 2011, No. 2011-033. “Micro-feature Based Surface Textured Biopsy Needles,” K. Pallav, P. Han, K. F. Ehmann, J. Cao (NU); J. W. Park, S. K. Ro, Reference: NU2011-032, February, 2011.
4. Cao, J., Zhou, R. and Ehmann, K “Desktop deformation-based micro surface texturing system”, US Patent No. 8,905,748 B2, December 9, 2014. Pallav, K., Malhotra, R., Saxena, I. Ehmann, K.F. and Cao, J “Laser Induced Plasma Micromachining (LIPMM)”, NU2012-189, January 4, 2013Disclosure filed.
5. Zeng, Q., Ehmann, K.F. and Cao, J. “Tri-pyramid Robot: a novel 3-DOF translational parallel manipulator”, No. 9,283,671 B2, March 15, 2016.
6. Mehta Viralkumar, Ma Xuan, Ehmann Kornel, Wang Q. Jane, Disclosure - Piston Surface Textures to Improve Lubrication Performance Hydraulic Devices, #16-1971. August 2016

7. Pallav, K., Malhotra, R., Saxena, I. Ehmann, K.F. and Cao, J “Laser Induced Plasma Micromachining (LIPMM)”, US Patent No. 9,455,127 B2, Sept. 27, 2016
8. Pallav, K., Han, P., Ehmann, K. F., Park, J-K., Ro, S-K., and Cao, J "Micro-feature based Surface Textured Biopsy Needles", provisional patent submitted, Feb. 23, 2011, No. 2011-032.
9. Cao, J., Zhou, R. and Ehmann, K. “Desktop deformation-based micro surface texturing system”, US Patent No. 9,688,015 B2, June 27, 2017, division of 8,905,748.
10. Cao, J., Zhou, R. and Ehmann, K “Desktop deformation-based micro surface texturing system”, US Patent No. 8,905,748 B2, December 9, 2014.
11. Yip-Wah Chung; Qian Wang; Kornel F Ehmann; Xingliang He; Yi Shi; Zhong Liu, “High-throughput waterjet-assisted dispersion strengthening of metallic surfaces at room temperature,” 2017-007-01
12. Park; Jong-Kweon (Daejeon, KR), Ro; Seung Kook (Daejeon, KR), Lee; Sung Cheul (Daejeon, KR), Kim; Byung-Sub (Daejeon, KR), Kim; Jaegu (Daejeon, KR), Ehmann; Kornel (Evanston, IL), Han; Peidong (Evanston, IL), Trocar, method for manufacturing the same, and method for continuously manufacturing the same, October 16, 2018, No. 10,098,660
13. Jennifer Bennett, Kornel Ehmann, Jian Cao, Systems and Methods for Global Thermal Control of Additive Manufacturing, Non-provisional NU 2017-207-02
14. Man-Kwan Ng, Qiang Zeng, Kornel F Ehmann, Jian Cao, “Incremental Rotary Rolling Mill and Method,” Application - NU2016-176-03
15. Huaging Ren, Jiaxi Xie, Shuheng Liao, Dohyun Leem, Jian Cao, Kornel F Ehmann, “In-Situ Springback Compensation In Incremental Sheet Forming,” Provisional - 2019-028-01

C. PUBLICATIONS:

1980.

1. K. F. Ehmann, S. M. Wu, 1980, "A Feasibility Study of On-Line Identification of Chatter in Turning Operations," Transactions of ASME: Journal of Engrg. for Industry, 102(4), 315-321.
2. K. F. Ehmann, S. M. Wu, 1980, "Forecasting Control of Machining Chatter," ASME: Computer Appl. in Mfg. Systems, W. R. DeVries, ed., PED - 2, 37-52.
3. K. F. Ehmann, S. M. Wu, 1980, "A Comparative Study of Classical Techniques and the Dynamic Data System (DDS) Approach for Machine Tool Structure Identification," Proc. 8th Annual North American Manufacturing Research Conference, Rolla, MO, 401-404.

1981.

4. K. F. Ehmann, S. M. Wu and P. Balakrishnan, 1981, "Analysis of Cutting Process Damping," Proc. 9th Annual North American Manufacturing Research Conference, University Park, PA, 247-249.
5. K. F. Ehmann, S. M. Wu, R. C. Gan, 1981, "Cutting Process Identification from Closed-Loop Operating Data," Proc. 9th Annual North American Manufacturing Research Conference, University Park, PA, 528-531.

1982.

6. K. J. Kim, K. F. Ehmann, S. M. Wu, 1982, "Modal Analysis of Mechanical Structures by Time Series Approach," Proc. 10th Annual North American Manufacturing Research Conference, McMaster Univ., Hamilton, Canada, 417-421.
7. M. Mendoza, S. M. Wu, K. F. Ehmann, 1982, "Development of a New Milling Cutter for Aluminum Honeycomb," Intl. Journal of Machine Tool Design and Research, 23(2/3), 81-91.
8. H. Sun, K. F. Ehmann, S. M. Wu, 1982, "Feasibility of Single Pass Boring Operations," Intl. Journal of Machine Tool Design and Research, 23(1), 53-59.
9. K. F. Ehmann, J. Hawkins and S. M. Wu), "Microcomputer Controlled 7-Axis Drill Point Grinder, Proc. of 14th Natl. SAMPE Tech. Conf., 14, 444-455, October, 1982.

1983.

10. K. F. Ehmann, S. M. Wu, 1983, "Upgrading Performance of Grinding Machines," Proc. 21st Annual Abrasive Engrg. Soc. Conf./Exhibit, Itasca, IL, 133-139.
11. K. J. Kim, K. F. Ehmann, S. M. Wu, 1983, "Modal Analysis of Machine Tool Structures Based on Experimental Data," Transactions of ASME: Journal of Engrg. for Industry, 105(5), 282-287.
12. S. Y. Tsai, K. F. Ehmann, S. M. Wu, 1983, "Chatter Suppression in Turning," Proc. 11th Annual North American Manufacturing Research Conference, Madison, WI, 399-402.
13. K. H. Kim, K. F. Ehmann, S. M. Wu, 1983, "Forecasting Compensatory Control of Spindle Error Motion in Cylindrical Grinding," ASME: Statistics in Mfg., S. G. Kapoor and M. R. Martinez, eds., PED, 9, 75-81.
14. K. F. Ehmann, S. M. Wu, 1983, "CAM-Another Viewpoint," Proc. 24th Machine Tool Design and Research Conference, Manchester, England.
15. E. Moon, K. F. Ehmann, S. M. Wu, 1983, "Simulation Study of Forecasting Compensatory Control of Machining Straightness," ASME: Control of Mfg. Processes & Robotic Systems, D. E. Hardt, W. J. Book, eds., Boston, MA, 47-53.

1984.

16. R. C. Gan, K. F. Ehmann, S. M. Wu, 1984, "An Extended FFT Algorithm for ARMA Spectral Estimation," IEEE Transactions on Acoustic Speech & Signal Processing, 32(1), 168-170.
17. K. F. Ehmann, 1984, "Identification and Control of Chatter in Turning," Proc. Computer-Based Factory Automation, 11th Conference on Production Research and Technology, Pittsburgh, PA, 413-417.
18. K. J. Kim, K. F. Ehmann, S. M. Wu, 1984, "Identification of Natural Frequencies and Damping Ratios of Machine Tool Structures by DDS," Intl. Journal of Machine Tool Design and Research, 24(3), 161-169.

19. Y. C. Shin, K. F. Ehmann, S. M. Wu, 1984, "Experimental Complex Modal Analysis of Machine Tool Structures," Computer Integrated Manufacturing and Robotics, M. C. Leu, M. R. Martinez, eds., New Orleans, LA, 243-258, 1984; Also in Transactions of ASME: Journal of Engrg. for Industry, 111(2), 116-124, 1989 (??).
20. E. Moon, K. F. Ehmann, S. M. Wu, 1984, "Implementation of Forecasting Compensatory Control for Machining Straightness," Computer Integrated Manufacturing and Robotics, M. C. Leu, M. R. Martinez, eds., New Orleans, LA, 231-241, 1984.
21. Z. L. Zhang, K. F. Ehmann, 1984, "On the Relationship Between Thermal EMF and Vibration in Turning," Proc. 12th Annual North American Manufacturing Research Conference, Houghton, MI, 359-362.
22. Y. C. Shin, K. F. Ehmann, S. M. Wu, 1984, "Identification of Complex Mode Shapes of Machine Tool Structures by the Dynamic Data System Method," Proc. 12th Annual North American Manufacturing Research Conference, Houghton, MI, 331-335.

1985.

23. T. Y. Ahn, K. F. Ehmann, S. M.Wu, 1985, "Identification of the Transfer Function of the Dynamic Cutting Processes--A Comparative Assessment," Intl. Journal of Machine Tool Design and Research, 25(1), 75-90.
24. K. F. Ehmann, (??), 1985, "Identification of Engineering Systems with the Recursive Multichannel Maximum Entropy Method," 12th Conference on Production Research and Technology, Madison, WI, 57-61.
25. S. Yang, K. F. Ehmann, S. M. Wu, 1985, "Analysis of Three-Dimensional Cutting Process Dynamics," Transactions of ASME: Journal of Engrg. for Industry, 107(4), 336-342.
26. T. Y. Ahn, K. F. Ehmann, S. M. Wu, 1985, "Cutting Dynamics Identification by Dynamic Data System (DDS) Modeling Approach," Transactions of ASME: Journal of Engrg. for Industry, 107(2), 91-94.
27. I. N. Tansel, K. F. Ehmann,1985, "Transfer Function of Cutting Dynamics in Three- Dimensional Cutting," Proc. 13th Annual North American Manufacturing Research Conference, Berkeley, CA, 476-481.
28. S. H. Lee, B. T. Wu, K. F. Ehmann, 1985, "Dynamic Assessment of the Trajectory Errors for Robots," Proc. 13th Annual North American Manufacturing Research Conference, Berkeley, CA, 546-550.

1986.

29. K. F. Ehmann, 1986, "A New Approach to Form Accuracy Control in Machining," International Journal of Production Research, 24 (4), 825-838 (1986), DOI: 10.1080/00207548608919769, also Toward the Factory of the Future, H. J. Bullinger and H. J. Warnecke, eds. (Proc. 8th International Conference on Production Research, Stuttgart, West Germany), Springer Verlag, 416-424 (1985) (**??**).

30. D. W. Cho, K. F. Ehmann, S. M. Wu, 1986, "Time Domain Approach to Multiple Input Modal Analysis," Proc. 14th Annual North American Manufacturing Research Conference, Minneapolis, MN, 471-478.
31. K. H. Kim, K. F. Ehmann, S. M. Wu, 1986, "Feasibility of Form Accuracy Identification and Control in Cylindrical Grinding," Intl. Journal of Machine Tool Design and Research, 26(3), 259-266.
32. Q. Zhou, O. Anlagan, K. F. Ehmann, 1986, "A New Method for Measuring and Compensating Pitch Error in the Manufacturing of Lead Screws," Intl. Journal of Machine Tool Design and Research, 26(4), 359-367.

1987.

33. T. Y. Ahn, K. F. Ehmann, S. M. Wu, 1987, "Determination of Inner and Outer Modulation Dynamics in Orthogonal Cutting," Transactions of ASME: Journal of Engrg. for Industry, 109(4), 275-280.
34. K. Kim, K. F. Ehmann, S. M. Wu, 1987, "Analysis of Alignment Errors in a Laser-Based In-Process Cylindricity Measurement System," Transactions of ASME: Journal of Engrg. for Industry, 109(4), 321-329.
35. (**??**), K. F. Ehmann, 1987, "A Linear Approach to Machine Tool Structural Dynamics Identification," ASME: Intelligent and Integrated Manufacturing Analysis and Synthesis, C. R. Liu, A. Requicha, S. Chandrasekar, eds., PED-Vol. 25, 167-180.
36. "In Process Control of Cylindricity in Boring Operations," Transactions of ASME: Journal of Engrg. for Industry, 109(4), 291-296 (with K. Kim and S. M. Wu) (1987).
37. D. W. Cho, K. F. Ehmann, S. M. Wu, 1987, "A New Time Domain Multiple Input Modal Analysis Method," Transactions of ASME: Journal of Engrg. for Industry, 109(4), 377-384.
38. S. J. Lee, K. F. Ehmann, S M. Wu, 1987, "An Analysis of the Drill Wandering Motion," Transactions of ASME: Journal of Engrg. for Industry, 109(4), 297-305.
39. K. F. Ehmann, S. M. Wu, 1987, "Present and Future Trends in Stochastic Analysis of Cutting and Structural Dynamics," Proc. 15th Annual North American Manufacturing Research Conference, Bethlehem, PA, 471-473.
40. K. H. Kim, K. F. Ehmann, S. M. Wu, 1987, "Development of a Forecasting Compensatory Control System for Cylindrical Grinding," Transactions of ASME: Journal of Engrg. for Industry, 109(4), 385-391.
41. B. T. Wu, K. F. Ehmann, 1987, "Analysis of Dynamic Tracking Errors of Robots," Proc. 9th International Conference on Production Research, Cincinnati, OH, 2, 1941-1946, 1987; also in Recent Developments in Production Research, A. Mital, ed. (1987).
42. A. S. C. Bose, K. F. Ehmann, S. M. Wu, 1987, "Adaptive Trajectory Planning for Industrial Robots," Proc. 5th International Conference on Systems Engineering, Dayton, OH, 173-176.
43. B. T. Wu, K. F. Ehmann, M. F. DeVries, 1987, "A Generalized Geometric Error Model for Multi-Axis Machines," Annals of CIRP, 36(1), 253-255.

44. S. D. Fassois, K. F. Ehmann, S. M. Wu, 1987, "A New Method for the Adaptive Control of Machine Tools," ASME: Quality, Design, Planning and Control, R. E. DeVor, S. G. Kapoor, eds., PED-Vol. 27, 7-21.

1988.

45. D. W. Cho, K. F. Ehmann, 1988, "Pattern Recognition for On-Line Chatter Detection," Mechanical Systems and Signal Processing, 2(3), 279-290.
46. C. W. Park, K. F. Ehmann, S. M. Wu, 1988, "An In-Process Flatness Error Measurement and Compensatory Control System," Transactions of ASME: Journal of Engrg. for Industry, 110(?), 263-270.
47. K. F. Ehmann, 1988, "Autoregressive Moving Average Models for Experimental Modal Analysis," Proc. of the International Conference on Machine Dynamics and Engineering Applications, Xi'an, PRC, B8-B14, 1988.
48. J. Cesarone, , K. F. Ehmann, 1988, "Manipulator Collision Avoidance by Dynamic Programming," Proc. 16th Annual North American Manufacturing Research Conference, Urbana-Champaign, IL, 328-335.
49. P. D. Lin, K. F. Ehmann, 1988, "Real-Time Compensation of Geometrical and Kinematic Errors of a Multiaxis Machine," Proc. USA-Japan Symposium on Flexible Automation, Minneapolis, MN, 2, 1069-1074.
50. S. D. Fassois, K. F. Ehmann, S. M. Wu, 1990, "Sensitivity Analysis of the Discrete-to-Continuous Dynamic System Transformation," Transactions of ASME: Journal of Dynamic Systems, Measurement and Control, 112(1), 1-9, (1990); also in Proc. USA-Japan Symposium on Flexible Automation, Minneapolis, MN., 2, 1103-1104, 1988.
51. C. W. Park, K. F. Ehmann, S. M. Wu), 1988, "Forecasting Compensatory Control (FCC) of Machining Flatness," Intl. Journal of Machine Tools and Manufacture, 28(1), 59-67.

1989.

52. S. D. Fassois, K. F. Ehmann, S. M. Wu), 1989, "A Suboptimum Maximum Likelihood Approach to Parametric Signal Analysis," Transactions of ASME: Journal of Dynamic Systems, Measurement and Control 111(2), 153-159, (1989); also presented at the 1988 JACC.
53. X. G. Yang, J. W. Chen, S. Z. Li, , K. F. Ehmann, 1989, "The Theoretical Stability Chart of Machine Tools - A Development of S. A. Tobias' Theory," Intl. Journal of Machine Tools and Manufacture, 29(2), 267-274.
54. Y. C. Shin, K. F. Ehmann, 1989, "A Unified Approach to the In-Process Identification of the Closed Loop Machining Dynamics in Turning," Transactions of the North American Manufacturing Research Institution of SME 1989, Columbus, OH, 235-242.
55. (S. H. Lee, K. F. Ehmann, S. M. Wu, 1989, "Trajectory Control in the World Coordinate System by an Adaptive Forecasting Algorithm," International Journal of Production Research, 27(3), 451-461.

56. J. Cesarone, K. F. Ehmann, 1989, "Mobile Robot Routing with Dynamic Programming," Journal of Manufacturing Systems, 8(4), 257-265.
57. S. J. You, K. F. Ehmann, 1989, "Scallop Removal in Die Finishing By Tertiary Cutter Motion," ASME: Computer Aided Design and Manufacture of Dies and Molds, K. Srinivasan and W. R. DeVries, eds., Chicago, IL, 29-44, (1988); also in Transactions of ASME: Journal of Engrg. for Industry, 111(3), 213-219.
58. S. J. Lym, K. F. Ehmann, 1989, "A Computationally Efficient Interpolator for Robotic Manipulators," Transactions of the North American Manufacturing Research Institution of SME 1989, Columbus, OH, 287-292.
59. T. R. Kim, K. F. Ehmann, S. M. Wu), 1989, "Identification of Joint Parameters for a Taper Joint," Transactions of ASME: Journal of Engrg. for Industry, 111(3), 282-287.
60. Y.C. Shin, K. Eman, S.M. Wu, 1989, "Experimental Complex Modal Analysis of Machine Tool Structures," Transactions of ASME: Journal of Engineering for Industry, 111, 116-124.
61. T. R. Kim, K. F. Ehmann, S. M. Wu, 1989, "Identification of Joint Structural Parameters between Substructures," Transactions of ASME: Journal of Engineering for Industry, 113(4), 419-424 (Nov 01, 1991) (6 pages), doi:10.1115/1.2899716
62. S. J. You, K. F. Ehmann, 1989, "Synthesis and Generation of Polished Surfaces," ASME: Mechanics of Deburring and Surface Finishing Processes, R. J. Stango and P. R. Fitzpatrick, eds., PED-Vol. 38, 41-62.
63. S. D. Fassois, K. F. Ehmann, S. M. Wu), 1989, "A Fast Algorithm for On-Line Machining Process Modeling and Adaptive Control," Transactions of ASME: Journal of Engrg. for Industry, 111(2), 133-139.

1990.

64. S. D. Fassois, K. F. Ehmann, S. M. Wu, 1990, "A Linear Time-Domain Method for Structural Dynamics Identification," Transactions of ASME: Journal of Vibration and Acoustics, 112(1), 98-112.
65. D. Parthimos, K. F. Ehmann, 1990, "The Phase Shift Between Successive Waves in Dynamic Metal Cutting," ASME: Modeling of Machine Tools: Accuracy, Dynamics, and Control, P.M. Ferreira, S. G. Kapoor and A. C. -Y. Wang eds., PED-Vol. 45, 101-120.
66. D. W. Cho, K. F. Ehmann, 1990, "In-Process Identification of the Milling Operation," Intl. Journal of Machine Tools and Manufacture, 30(3) 325-337.
67. S. J. You, K. F. Ehmann, 1990, "The Feasibility of a New Method for Scallop Removal in Die Milling," SAE: Recent Developments in Autobody Stamping Technology, SP-825, Detroit, MI, 109-118; Also in SAE Transactions, Vol. 99, Section 5: Journal of Materials and Manufacturing (1990), pp. 510-519.
68. M. S. Hong, K. F. Ehmann, 1990, "Practical Implementation of Tertiary Cutter Motions for the Improvement of 3-D Sculptured Surface Characteristics in Milling," Transactions of the North American Manufacturing Research Institution of SME 1990, 222-229, University Park, PA.

69. S. C. Bose, K. F. Ehmann,1989, "On-line Implementation of Self Tuning Adaptive Control for Industrial Robots," Proc. Int. Conf. on Microcomputer Applications, Los Angeles, 1989; Also in Microcomputer Applications, 9(2), 40-43, (1990).
70. K. F. Ehmann, M.F. DeVries, 1990, "Grinding Wheel Profile Definition for the Manufacture of Drill Flutes," Annals of CIRP, 39(1), 153-156.
71. S. D. Fassois , K. F. Ehmann, S. M. Wu, 1990, "Sensitivity Analysis of the Discrete-to-Continuous Dynamic System Transformation," Transactions of ASME: Journal of Dynamic Systems, Measurement and Control, 112(1), 1-9; Also in Proc. USA-Japan Symposium on Flexible Automation, Minneapolis, MN., 2, 1103-1104, (1988).
72. K. F. Ehmann, 1990, "Solution Principles for a New Generation of Precision Self-Correcting Multi-Axis Machines," USA-Yugoslav Workshop on Robotics and Artificial Intelligence in CIM, Belgrade, (1990); Also in Robotics and Computer Integrated Manufacturing, 7(3/4), 357-364, (1990).

1991.

73. S. J. You, K. F. Ehmann, 1991, "Computer Synthesis of Three-Dimensional Surfaces," Wear, 145, 29-42.
74. J. H. Heo, K. F. Ehmann, 1001, "Vibrations of a Filamentary Brush in Contact with a Solid Roll," Transactions of the North American Manufacturing Research Institution of SME 1991, 204-210, Rolla, MO, 1991.
75. S. J. You, K. F. Ehmann, 1991, "Synthesis and Generation of Surfaces Milled by Ball Nose End Mills Under Tertiary Cutter Motion," Transactions of ASME: Journal of Engineering for Industry, 113(1), 17-24.
76. J. S. Heo, K. F. Ehmann, 1991, "A Method for Substructural Sensitivity Synthesis," Transactions of ASME: Journal of Vibration and Acoustics, 113(2), 201-208.
77. J. Cesarone, K. F. Ehmann, 1991, "Efficient Manipulator Collision Avoidance by Dynamic Programming," Robotics and Computer Integrated Manufacturing, 8(1), 35-44.
78. C. Lin, M. N. Jalisi, K. F. Ehmann, 1991, "Modeling and Experimental Analysis of Margin Forces in Microdrilling," ASME: Manufacturing Processes and Materials Challenges in Microelectronic Packaging, W.T. Chen, P. Engel, W.E. Jahsman, editors, AMD-Vol.-131/EEP-Vol. 1, 25-33.
79. C. Lin, K. F. Ehmann, 1991, "In-Process Measurement of Roundness and Cylindricity," (Invited paper), ASME: Sensors, Controls, and Quality Issues in Manufacturing, T. I. Liu, C. H. Menq, N. H. Chao, editors, PED-Vol. 55, 59-71.

1992.

80. S. K. Kang, C. Lin, K. F. Ehmann, 1992, "Planar Micro-Drill Point Design and Grinding Methods," Transactions of the North American Manufacturing Research Institution of SME, Vol. XX, pp. 173-179.

81. S. K. Kang, C. Lin, K. F. Ehmann, 1992, "Sensitivity Analysis and Tolerance Allocation for a Micro-Planar Drill Point Grinder," Annals of CIRP, Vol. 41(1), 361-365.
82. C. Lin and S. L. Kang, K. F. Ehmann, 1992, "Deep-Hole Microdrilling," Cutting Tool Engineering, 44(1), 51-54.
83. S. M. Wang, K. F. Ehmann, 1992, "Volumetric Error Compensation for Multi-Axis Machines," Proc.: 1992 IEEE International Conference on Systems, Man, and Cybernetics, Chicago, October 18-21, 183-188.

1993.

84. D. T. Parthimos, K. F. Ehmann, 1993, "A Model for the Stress Field Around the Shear Zone," Transactions of the North American Manufacturing Research Institution of SME 1993.
85. P. D. Lin, K. F. Ehmann, 1993, "Direct Volumetric Evaluation for Multi-Axis Machines," Intl. Journal of Machine Tools and Manufacture, 33(5), 675-693.
86. B. Bahr, K. F. Ehmann, 1993, "An Optical Sensor for Seam Tracking," International Journal of Microcomputer Applications, 12(2), 54-60.
87. P. C. Jones, K. F. Ehmann, 1993, "Training for Manufacturing," IEEE Spectrum, September 1993, 76-81.
88. S. K. Kang, C. Lin, K. F. Ehmann, 1993, "Comparative Analysis of Planar and Helical Micro-Drill Points," Transactions of the North American Manufacturing Research Institution of SME 1993, XXI, 189-196.
89. H. S. Kim, K. F. Ehmann, 1993, "A Cutting Force Model for Face Milling Operations," in print Intl. Journal of Machine Tools and Manufacture, 33 (5), 651-673.
90. W. T Kwon, K. F. Ehmann, 1993, "Feasibility of Tool Wear Monitoring by Discrete Cutting Dynamics Modeling," ASME: Manufacturing Science and Engineering, Edited by K. F. Ehmann (**??**), PED-Vol. 64. 225-233.

1994.

91. Z. Mei, S. Yang, H. Shi, S. Chang, K. F. Ehmann, 1994, "Active Suppression of Chatter by On-line Variation of the Rake and Clearance Angles - Principles and Experimental Investigations," Transactions of ASME: Journal of Engineering for Industry, 34(7) 981-990.
92. J. T. Huang, B. Bahr, K. F. Ehmann, 1994, "Sensory Guidance of Seam Tracking Robots," Journal of Robotic Systems, 11(1) pp. 67-76.
93. S. M. Wang, K. F. Ehmann, 1994, "Automated Evaluation of Volumetric Errors of a Multi-Axis Machine," Transactions of the North American Manufacturing Research Institution of SME 1994, XXII, 291-296.
94. S. M. Wang, K. F. Ehmann, 1994, "Compensation of Geometric and Quasi-Static Deformation Errors of a Multi-Axis machine," Transactions of the North American Manufacturing Research Institution of SME 1994, XXII, 283-289.

95. C. J. Wang, M. S. Hong, K. F. Ehmann, 1994, "Surface Topography Control in Single-Point Cutting," Proc. First S.M. Wu Symposium on Manufacturing Science, May 27-28, 1994, Evanston, IL, 1, 43-52.
96. Z. L. Zhang, K. F. Ehmann, 1994, "Influence of Cutting Conditions on the Chatter Frequency of a Machining System" Proc. First S.M. Wu Symposium on Manufacturing Science, May 27-28, 1994, Evanston, IL, 1, 153-159.
97. M. S. Hong, K. F. Ehmann, 1994, "A Generalized Model of the Surface Generation Process in Metal Cutting," Annals of CIRP, Vol. 43(1), 483-486.
98. C. Lin, M. N. Jalisi, K. F. Ehmann, 1994, "Experimental Analysis of Initial Penetration in Drilling," TMS & ASME: Materials Issues in Machining - II and the Physics of Machining Processes - II, Edited by D. A. Stephenson and R. Stevenson, 383-407.
99. W. S. Chen, K. F. Ehmann, 1994, "An Experimental Investigation on the Wear and Performance of Micro-Drills," ASME: Tribology In Manufacturing Processes, Edited by K. Dohda, S. Jahanmir, W.R.D. Wilson, CRTD-Vol. 30, Trib-Vol. 5, PED-Vol. 69, 145-157.
100. W. T. Kwon, K. F. Ehmann, 1994, "Tool Wear Monitoring by Using the Imaginary Part of the Transfer Function of the Cutting Dynamics," Intl. Journal of Machine Tools and Manufacture, 34(3), 393-406.

1995.

101. H. C. Chyan, W. S. Chen, K. F. Ehmann, 1995, "Development of Micro-Drill Technology," Proc. 1st International Machining and Grinding Conference, Dearborn, MI, September 12-14, 1995, MR95-173, 227-247.
102. S. M. Wang, K. F. Ehmann, 1995, "Error Model and Accuracy Analysis of a Six-DOF Stewart Platform," ASME: Mechatronics for Manufacturing, Edited by C.J . Li.
103. I. S. Yun, W. R. D Wilson, K. F. Ehmann, 1995, "Chatter in Rolling," Transactions of the North American Manufacturing Research Institution of SME 1995, XXIII, 13-19.
104. P. D. Lin, S. M. Wang, K. F. Ehmann, 1995, "Passive and Active Error Compensation of Multi-Axis Machines," Proc. First World Congress on Intelligent Manufacturing Processes and Systems, Mayaguez/San Juan, Puerto Rico, February 13-17, 2, 1105-1116.
105. A. C. Wijeyewickrema, L. M. Keer, K. F. Ehmann, 1995, “Drill Wandering Motion: Experiment and Analysis," International J. Mech. Sci., Vol. 37.
106. M. Wieczorowsky, A. Cellary, K. F. Ehmann, 1995, "Parametric Modeling of 3-D Surfaces," ASME: Manufacturing Science and Engineering, MED 3-2, 1203-1211.
107. M.S. Hong, K. F. Ehmann, 1995, "Generation of Engineered Surfaces by the Surface-Shaping System," Intl. Journal of Machine Tools and Manufacture, 35(9), 1269-1290.
108. M. S. Hong, K. F. Ehmann, 1995, "Three-Dimensional Surface Characterization by Two-Dimensional Autoregressive Models," Transactions of ASME: Journal of Tribology, 94-Trib-42, 117(3), 385-393.

109. S. J. Lym, K. F. Ehmann, 1995, "A Fast Interpolation Algorithm for Temporally Nonequidistant Waypoints," Transactions of ASME: Journal of Engineering for Industry, J 115(4), 500-507 (Nov 01, 1993) (8 pages), doi:10.1115/1.2901796.
110. "Helical Micro-Drill Point Design and Grinding," Transactions of ASME: Journal of Engineering for Industry, 117(3), pp. 277-287, (with C. Lin and S. K. Kang) (1995).
111. P. D. Lin, K. F. Ehmann, 1995, "Inverse Error Analysis for Multi-Axis Machines," Transactions of ASME: Journal of Engineering for Industry, 118(1), 88-94 (Feb 01, 1996) (7 pages), doi:10.1115/1.2803651
112. S. M. Wang, K. F. Ehmann, 1995, "Error Model of a Six-DOF Stewart Platform," MED Vol. 3-1, Manufacturing Science and Engineering, ASME 1995, pp. 519-530.
113. M. Wieczorowski, A. Cellary, K. F. Ehmann, 1995, “Trojwymiarowa Analiza Chropowatosci Powierzchni za Pomoca Autoregresji,” Proceedings: Metrologia W Technikach Wytwarzania Maszyn, VI Konferencji Naukowo-Technicznej, Rzeszow, Poland, pp. 43-54.

1996.

114. A. Cellary, M. Wieczorowski, K. F. Ehmann, 1996, "A Comparative Analysis of 2D and 3D Bearing Area Curves," Proc. Second S. M. Wu Symposium on Manufacturing Science - USA Venue, 196-200.
115. (**??**) K. F. Ehmann, 1996, "Development of Helical Micro-Drill Technology," Proc. NSF Design and Manufacturing Grantees Conference, Albuquerque, NM, January 3-5.
116. P. D. Lin, K. F. Ehmann, 1996, "Sensing of Motion Related Errors in Multi-Axis Machines," Transactions of ASME: Journal of Dynamic Systems, Measurement, and Control, 118(3), 425-433.
117. S. K. Kang, C. Lin, K. F. Ehmann, 1996, "A CAD Approach to Helical Groove Machining: Part 1 - Mathematical Model and Model Solution," Intl. Journal of Machine Tools and Manufacture, 36(1), 141-153.
118. S.M. Wang, K. F. Ehmann, 1996, “An Overview of Accuracy Analysis and Error Compensation for a Stewart Platform,” Proc. 26th International Conference of Production Engineering, Podgorica-Budva, Yugoslavia, September 17-20, 605-610.
119. M. S. Hong, K. F. Ehmann, 1996, "A Numerical Model for the Cutting Forces and the Surface Topography in Face Milling Operations," Proceedings of the Second S. M. Wu Symposium on Manufacturing Science - China Venue.

1997.

120. S. K. Kang, C. Lin, K. F. Ehmann, 1997, “A CAD Approach to Helical Groove Machining. Part 2: Numerical Evaluation and Sensitivity Analysis,” Int. J. Mach. Tools Manufact., 37(1), 101-107.

121. K. F. Ehmann, R. E. DeVor, E. C. DeMeter, D. Dornfeld, S. Kapoor, J. Ni, K. Rajurkar, Y. Shin, J. Sutherland, 1997, "A Framework for a Virtual Machine Tool (VMT)," Technical Papers of NAMRI/SME, 143-148.
122. H. C. Chyan, K. F. Ehmann, 1997, "Design and Analysis of Helical Drill Points," Transactions of NAMRI/SME, 135-140.
123. A. Patel, K. F. Ehmann, 1997, "Volumetric Error Analysis of a Stewart Platform Based Machine Tool," Annals of CIRP, 46(1), 287-290.
124. ,K. F. Ehmann, S. G. Kapoor, R. E. DeVor, I. Lazoglu, 1997, "Machining Process Modeling - A Review", Invited Paper, Transactions of ASME: J. of Manufacturing Science and Engineering, 119, 655-663.

1998.

125. I. S. Yun, W. R. D. Wilson, K. F. Ehmann, 1998, "Review of Chatter Studies in Cold Rolling," Int. J. of Machine Tools and Manufacture, 38, 1499-1530.
126. I. S. Yun, W. R. D. Wilson, K. F. Ehmann, 1998, "Chatter in the Strip Rolling Process, Part I: Dynamic Model of Rolling," Transactions of ASME: J. of Manufacturing Science and Engineering, 120(2), 330-336.
127. I. S. Yun, W. R. D. Wilson, K. F. Ehmann, 1998, "Chatter in the Strip Rolling Process, Part II: Dynamic Rolling Experiments," Transactions of ASME: J. of Manufacturing Science and Engineering, 120(2), 337-342.
128. I. S. Yun, W. R. D. Wilson, K. F. Ehmann, 1998, "Chatter in the Strip Rolling Process, Part III: Chatter Model" Trans ASME: J. of Manufacturing Science and Engineering, 120(2), 343-348 (with W.R.D. Wilson and I.S. Yun) (1998)
129. H. C. Chyan, K. F. Ehmann, 1998, "Development of Curved Helical Micro-Drill Point Technology for Micro-Hole Drilling," Mechatronics, 8(4), 337-358 (Invited).

1999.

130. S. M. Wang, K. F. Ehmann, 1999, "Measurement Methods for the Position Errors of a Multi-Axis Machine - Part I: Principle and Sensitivity Analysis," Int. J. of Machine Tools and Manufacture, 39(6), 951-964.
131. S. M. Wang, K. F. Ehmann, 1999, "Measurement Methods for the Position Errors of a Multi-Axis Machine - Part II: Applications and Experimental Results," Int. J. of Machine Tools and Manufacture, 39(9), 1485-1505.
132. P-H. Hu) , K. F. Ehmann, 1999, "Stability Analysis of Chatter on a Tandem Rolling Mill," Transactions of NAMRI/SME, 27, 61-66, 1999; Also in Journal of Manufacturing Processes, 2(4), 217-224, 2000.
133. W.S. Yun, D.W. Cho, K. F. Ehmann, 1999, "Determination of Constant 3D Cutting Force Coefficients and of Runout Parameters in End Milling," Transactions of NAMRI/SME, 27, 87-92.
134. M.S. Cheong, D.W., Cho, K. F. Ehmann, 1999, "Identification and Control for Micro-drilling Productivity Enhancement," Int. J. of Machine Tools and Manufacture, 39, 1539-1561.

135. H. C. Chyan, K. F. Ehmann, 1999, “Tapered-Web Helical Groove Machining,” Proc. Instn. Mech. Engnrs.: Journal of Engineering Manufacture, 213, Part B, 779-785.

2000.

137. R. E. DeVor, S. G. Kapoor, J. Ni, K. F. Ehmann, 2000, “Prediction of Hole Quality in Drilling,” Proc. NSF Grantees Conference 2000.
138. A. Patel, K. F. Ehmann, 2000, “Calibration of a Hexapod Machine Tool Using a Redundant Leg,” Int. J. of Machine Tools and Manufacture, 40, 489-512.
139. K. Kim, K. F. Ehmann, 2000, “The Frequency Content of Turned Surface Profiles,” Trans. NAMRI/SME, 28, 191-196.
140. P. H. Hu, K. F. Ehmann, 2000, “Stability Analysis of Chatter on a Tandem Rolling Mill,” Journal of Manufacturing Processes, 2(4), 217-224.
141. P. H. Hu, K. F. Ehmann, 2000, “A Dynamic Model of the Rolling Process – I. – Homogeneous Model,” International Journal of Machine Tools and Manufacture, 40(1), 1-19.
142. “A Dynamic Model of the Rolling Process – II. – Inhomogeneous Model,” International Journal of Machine Tools and Manufacture, 40(1), 21-31, (with P.H. Hu) (2000).

2001.

143. S. Ganglani, K. F. Ehmann, 2001, "Design and Implementation of a Helical Drill Point Grinder," Trans. of NAMRI/SME, 29, 295-302.
144. P. H. Hu, K. F. Ehmann, 2001, ”Fifth-Octave Mode Chatter in Rolling,” Proc. Inst. Mech. Eng. Part B: Journal of Engineering Manufacture, 215(6), 797-809.
145. H. C. Chyan, K. F. Ehmann, 2001, "Curved Helical Drill-points for Micro-hole Drilling," Proc. Instn Mech. Engrs Part B: Journal of Engineering Manufacture, 216, 61-75.
146. P. H. Hu, K. F. Ehmann, 2001, “Regenerative Effect in Rolling Chatter,” Journal of Manufacturing Processes, 3(2), 82-93.
147. Y. Gong, K. F. Ehmann, 2001, “Mechanistic Model for Dynamic Forces in Micro-Drilling,” Proc. Of 2001 IMECE, New York, NY, Nov. 11-16, MED-23302.

2002.

148. M. P. Vogler, X. Liu, S. G. Kapoor, R. E. DeVor, K. F. Ehmann, 2002, “Development of Meso-Scale Machine Tool (mMT) Systems,” Transactions of NAMRI/SME, 30, 653-661.
149. R. Subrahmanian, K. F. Ehmann, 2002, “Development of a Meso-scale Machine Tool (mMT) for Micro-machining,” Proc. Japan- USA Symposium on Flexible Automation, July 14-19, Hiroshima, Japan, 1, 163-169.

150. W. Hopp, K. F. Ehmann, 2002, “Manufacturing Engineering Education: A Unified Approach,” Transactions of the Committee of Manufacturing Engineering Chairs/Coordinators (COMEC), 1, 46-50; Also SME Technical Paper ED02-260.
151. H. Zhao, K. F. Ehmann, 2002, “Development and Performance Analysis of New Spade Bit Designs,” Int. J. Machine Tools and Manufacture, 42, 1403-1414.
152. J. H. Ko, W.-S. Yun, D. W. Cho, K. F. Ehmann, 2002, “Development of a Virtual Machining System, Part 1: Approximation of the Size Effect for Cutting Force Prediction” Int. Journal of Machine Tools & Manufacture, 42, 1595–1605.
153. J. H. Ko, W.-S. Yun, D. W. Cho, K. F. Ehmann, 2002, “Development of a Virtual Machining System, Part 2: Prediction and Analysis of a Machined Surface Error” International Journal of Machine Tools & Manufacture, 42, 1607–1615.
154. J. H. Ko, W.-S. Yun, D. W. Cho, K. F. Ehmann, 2002, “Development of a Virtual Machining System, Part 3: Cutting Process Simulation in Transient Cuts” International Journal of Machine Tools & Manufacture 42, 1617–1626.
155. K. F. Ehmann, 2002, “Micro/Meso-scale Mechanical Manufacturing – Opportunities and Challenges-“, Proceedings, JSME/ASME International Conference on Materials and Processing, *(Keynote presentation)* October 15-18, 2002, Honolulu, HI, 1, 6-13.
156. M. Vogler, X. Liu, R. E. DeVor, S. G. Kapoor, R. Subrahmanian, H. Sung**,** K. F. Ehmann, 2002, “Miniaturized Machine Tools for CNC-Based Micro/Meso-Scale Machining of 3D Features,” Proc. 3rd International Workshop on Microfactories, Minneapolis, MN, 45–48.

2003.

157. Y. Gong, C. Li, K. F. Ehmann, 2003, “Analysis of Mechanical Characteristics of Micro-Drills,” Journal of Materials Processing Technology, 141, 16-28.
158. H. Zhao, K. F. Ehmann, 2003, “Mechanistic Model for Spade Drills for Wood Drilling Operations, Part 1: Model Development,” Transactions ASME. J. of Manufacturing Science and Engineering, 125(2), 226-235.
159. H. Zhao, K. F. Ehmann, 2003, “Mechanistic Model for Spade Drills for Wood Drilling Operations, Part 2: Analysis of Spade Bit Geometry and Performance,” Transactions ASME. J. of Manufacturing Science and Engineering, 125(2), 236-244.
160. C.H. Chiou, M.S. Hong, K. F. Ehmann, 2003, “The Feasibility of Eigenstructure Assignment for Machining Chatter Control,” International Journal of Machine Tools & Manufacture, 43 (2003) 1603–1620.

2004.

161. C. H. Chiou, M. S. Hong, K. F. Ehmann**,** 2004, “Simulation of Machined Surface Topography in End Milling Processes Using a Shear-Plane Based Cutting Force Model,” Proc. Instn Mech. Engrs Part B: Journal of Engineering Manufacture, 218(12), 1767-1793.
162. N. Krishnan, J. Cao, S. Owusu-Ofori, K. F. Ehmann, 2004, “Microforming: Study of Grain Size and Friction Effects in the Extrusion of Micropins,” Proc. 4th

International Workshop on Microfactories, Shaghai, China, October 15-17, 2, 415-420.

2005.

163. C. H. Chiou, M. S. Hong, K. F. Ehmann, 2005, “Instantaneous Shear Plane Based Cutting Force Model For End Milling,” Journal of Materials Processing Technology, 170(1-2), 164-180.
164. X. Liu, R. E. DeVor, S. G. Kapoor, K. F. Ehmann, 2005, “The Mechanics of Machining at the Micro-Scale: Assessment of the Current State-of-the Science,” Transactions ASME Journal of Manufacturing Science and Engineering, 126, 666-678.
165. H. Zhao, K. F. Ehmann, 2005, “Topology of Spade Drills for Wood Drilling Operations - Part 1: Spade Drill Point Geometry Definition,” Transactions ASME Journal of Manufacturing Science and Engineering, 127(2), 298-309.
166. H. Zhao, K. F. Ehmann, 2005, “Topology of Spade Drills for Wood Drilling Operations - Part 2: Spade Drill Point Cutting Geometry Analysis,” Transactions ASME Journal of Manufacturing Science and Engineering, 127(2), 310-318.
167. Y. Gong, C. Lin, K. F. Ehmann, 2005, “Dynamics of Initial Penetration in Drilling: Part 1 – Mechanistic Model for Dynamic Forces,” ASME Journal of Manufacturing Science and Engineering, 127, 280-288.
168. Y. Gong, C. Lin, K. F. Ehmann, 2005, “Dynamics of Initial Penetration in Drilling: Part 2 – Motion Models for Drill Skidding and Wandering With Experimental Verification,” ASME Journal of Manufacturing Science and Engineering, 127, 289-297.
169. K. F. Ehmann, B. Allen, D. Bourell, M. Culpepper, R. E. DeVor, T. Hodgson, T. Kurfess, M. Madou, K. Rajurkar, 2005, “An International Assessment of Micro-manufacturing Technology,” Proc. Processing and Fabrication of Advanced Materials XIV with Frontiers in Materials Science 2005: Innovative Materials & Manufacturing Techniques, Eds.T.S. Srivatsan, R. A. Varin, R. Abbaschian, and S. Viswanathan, Materials Science & Technology 211-224.
170. C. Y. Tsai, C. K. Sung, P. D. Lin, K. F. Ehmann, 2005, "A New Camera Calibration Method and Its Applications," Proc. ICAM2005: International Conference on Advanced Manufacture Nov. 28 – Dec. Taipei, Taiwan, I011.
171. J. K Park, S. K. Ro, B. S. Kim, Y. H. Choi, D. W. Cho, S. Y. Chung, K. F. Ehmann, 2005, “Design of Micro Machining Systems for Micro/Meso Mechanical Components,” Proc. 1st Intelligent Microfactory System International Workshop, July 15-16, Jeju, Korea, 3-9, (in Korean).
172. K. Malukhin, K. F. Ehmann, 2005, “Monolithic Shape Memory Alloy Based Micro/Meso Manipulator: Manufacturing and Material Characterization,” Proceedings of NSF Design, Service and Manufacturing Research and Grantees Conference, Scottsdale, Arizona, 2005.

2006.

173. K. Malukhin, K. F. Ehmann, 2006, “Material Characterization of NiTi Based Shape Memory Alloys Fabricated by the Laser Direct Metal Deposition Process”, ASME Journal of Manufacturing Science and Engineering, 128(3), 691-696.
174. K. Malukhin, K. F. Ehmann, 2006, “Manufacturing of Shape Memory Alloy Based Monolithic Functional Structures with Shape Memory Effect Properties,” Transactions of NAMRI/SME 34, 261-268.
175. H. Lee, D. W. Cho, T. J. Ko, W. S. Yun, K. F. Ehmann, 2006, “Prediction of Cutting Forces in Micro-End-Milling Using the Cutting-Condition-Independent Cutting Force Coefficients,” Transactions of NAMRI/SME 34, 453-459.
176. K. Malukhin, K. F. Ehmann, 2006, “An Experimental Investigation of the Feasibility of ‘Self-Sensing’ Shape Memory Alloy Based Actuators,” Proc. 1st International Conference on Micromanufacturing (ICOMM), September 13-15, 2006, University of Illinois at Urbana-Champaign, 231-236.
177. P. H. Hu, H. Zhao, K. F. Ehmann, 2006, “Third-Octave-Mode Chatter in rolling. Part 1: Chatter Model,” Proc. Inst. Mech. Eng. Part B: Journal of Engineering Manufacture, 220, 1267-1277.
178. “Third-Octave-Mode Chatter in rolling. Part 2: Stability of a Single-Stand Mill,” Proc. Inst. Mech. Eng. Part B: Journal of Engineering Manufacture, 220, 1279-1292, (with P.H. Hu and H. Zhao) (2006).
179. P. H. Hu and H. Zhao, K. F. Ehmann, 2006, “Third-Octave-Mode Chatter in Rolling. Part 3: Stability of a Multi-Stand Mill,” Proc. Inst. Mech. Eng. Part B: Journal of Engineering Manufacture, 220,1293-1303.
180. H. Zhao, K. F. Ehmann, 2006, “Regenerative Chatter in High-Speed Tandem Rolling Mills,” Proceedings of the International Conference on Manufacturing Science and Engineering, Volume 2006, 2006, 9p, October 8-11, Yspilanti, MI.
181. K. Malukhin, K. F. Ehmann, 2006, “A Monolithic Shape Memory Alloy Based Micro/Meso Scale Manipulator,” Proc. 5th International Workshop on Microfactories, Besancon, France, October 25-27, IWMF06, Paper #11.
182. K. Malukhin, K. F. Ehmann, 2006, “Monolithic Shape Memory Alloy Based Micro/Meso Manipulator: Manufacturing and Material Characterization,” Proc. of 2006 NSF Design, Service, and Manufacturing Grantees and Research Conference, St. Louis, Missouri, July 24-27.
183. K. F. Ehmann, J. Beaman, J. Cao, T. Gutowski, S. Hollister, R. Rardin, E. Sachs, 2006, “Advanced Manufacturing Metastudy,” Proc. of 2006 NSF Design, Service, and Manufacturing Grantees and Research Conference, St. Louis, Missouri, July 24-27.
184. B. L. Kinsey, S. Parasiz, R. Onyancha, H. Espinosa, W. K. Liu, L. F. Mori, N. Krishnan M. Li, K. F. Ehmann, 2006, “Investigation of Deformation, Process Model, and Frictional Size Effects During Microforming,” Proc. of 2006 NSF Design, Service, and Manufacturing Grantees and Research Conference, St. Louis, Missouri, July 24-27.
185. H. S. Yoon, K. F. Ehmann, 2006, “Experimental Analysis of Dynamic Instabilities in Micro-Milling,” Proc. of 2006 ISFA 2006 International Symposium on Flexible Automation, Osaka, Japan, July 10-120202-a(S), 136-139 .

186. H. S. Yoon, H. Sung, K. F. Ehmann, 2006, "Recent Developments in Meso-scale Machine Tools (mMTs)," Proc. 2nd Int. Workshop on Microfactory Technology (IWMT 2006), July 6-7, Jeju, Korea, 13-20.

2007.

187. K. F. Ehmann, 2007, "A Synopsis of U.S. Micro-manufacturing Research and Development Activities and Trends," Proc. 3rd Int. Conf. on: Multi-Material Micro Manufacture (4M), October 3-5, Borovets, Bulgaria, pp. 7-13, 2007). (Invited Keynote Presentation).
188. K. Malukhin, K. F. Ehmann, 2007, "Model of Motion of an Actuator Based on a NiTi Shape Memory Alloy," Proc. 2nd International Conference on Micromanufacturing (ICOMM), September 11-13, Clemson University, pp. 247-251.
189. K. Malukhin, K. F. Ehmann, 2007, "Identification of Direct Metal Deposition (DMD) Process Parameters for Manufacturing Thin Wall Structures from Shape Memory Alloy (NiTi) Powder," Transactions of NAMRI/SME , 35, 481-488.
190. H. Sung, H. S. Yoon, K. F. Ehmann, 2007, "Development of a Micro-Spindle for Micro/Meso-Scale Machine Tool (mMT) Applications," Proc. 3rd Int. Workshop on Microfactory Technology (IWMT 2007), August 23-24, Jeju, Korea, 13-18.
191. M. S. Hong, H. S. Jung, H. S. Yoon, K. F. Ehmann, 2007, "Modeling and Simulation of the Micro Milling Process," Proc. of the 8th International Conference and Exhibition on Laser Metrology, Machine Tool, CMM & Robotic Performance - Lamdamap 2007, Cardiff University, Wales, June 25 – 28, pp. 299- 308.
192. N. Mahayotsanun, N. Krishnan, J. Cao, K. F. Ehmann, 2008, "Study of Strain Rates and Size Effects in the Microextrusion Process: Part I – Development of a Microextrusion Machine," Proc. 2nd International Conference on Micromanufacturing (ICOMM'07), September 11-13, Clemson University, pp. 63-67.
193. K. Malukhin, K. F. Ehmann, 2008, "Model of Motion of an Actuator Based on a NiTi Shape Memory Alloy," Proc. 2nd International Conference on Micromanufacturing (ICOMM'07), September 11-13, Clemson University, pp. 247-251.

2008.

195. H. U. Lee, D. W. Cho, K. F. Ehmann, 2008, "A Mechanistic Model of Cutting Forces in Micro-end-milling with Cutting-condition-independent Cutting Force Coefficients," ASME Journal of Manufacturing Science and Engineering, June 2008, Vol. 130, 031102, pp. 1 - 9.
196. K. Malukhin, K. F. Ehmann, 2007, "An Experimental Investigation of the Feasibility of "Self-Sensing" Shape Memory Alloy Based Actuators," ASME Journal of Manufacturing Science and Engineering, June 2008, Vol.130, 031109, pp. 1-10.

197. B. L. Kinsey, J. Cao, K. F. Ehmann, W. K. Liu, H. Espinosa, M. Li, 2008, "GOALI/Collaborative Research: Microforming Processes – Fundamental Studies and Developments, Proc. of 2008 NSF Engineering Research and Innovation Conference, Knoxville, Tenessee, January 10-12, 2008.
198. K. F. Ehmann, K. Malukhin, 2008, "Development of a Selective Laser Annealing Procedure for Heat Treatment of Shape Memory Alloy NiTi Structures," Proc. of 2008 NSF Engineering Research and Innovation Conference, Knoxville, Tenessee, January 10-12, 2008.
199. K. Malukhin, K. F. Ehmann, 2008, "Development of a Monolithic Shape Memory Alloy Manipulator", in IFIP International Federation for Information Processing, Vol. 260, Microassembly Technology and Applications, eds. Ratchev, S., Koelemeijer, S., (Boston: Springer), pp. 243-250. Proc. Fourth International Precision Assembly Seminar IPAS'2008, Chamonix, France, 10-13 February.
200. H. Sung, X. Neumeyer, K. F. Ehmann, 2008, "High-speed Fluid Bearings for Meso-scale Machine Tool (mMT) Spindle Applications," Proc. 6th International Workshop on Microfactories, Evanston, IL, October 5-8, IWMF08.
201. T. Davis, R. Zhou, K. Pallav, M. Beltran, J. Cao, K. F. Ehmann, Q. J. Wang, C. Xia, R. Talwar, R. Lederich, 2008, "Experimental Friction Study of Micro-Scale Laser-Textured Surfaces," Proc. 6th International Workshop on Microfactories, Evanston, IL, October 5-8, IWMF08.
202. K. Malukhin, K. F. Ehmann, 2008, "The Feasibility of a Monolithic Micro/Meso-scale Manipulator for Microfactory Applications," Proceedings of the 4th International Workshop on Microfactory Technology, July 10-11, Jeju, Korea.
203. X. Neymeyer, N. Contractor, K. F. Ehmann, 2008, "Collaboration Networks in Micromanufacturing," Proc. 3rd International Conference on Micromanufacturing (ICOMM'08), September 9-12, Carnegie Mellon University, Pittsburgh, PA, pp. 195-202.

2009.

204. H. S. Yoon, X. Neumeyer, K. F. Ehmann, 2009. "Advances toward the Development of a 3D Shaping Process and System with Tertiary Motion," Proc. 2009 NSF CMMI Engineering Research and Innovation Conference, Honolulu, June 22-25, 2009.
205. Y. W. Chung, J. Cao, Q. Jane Wang, K. F. Ehmann, T. Davis, 2009, "Building a State-of-the-Art Laser-Based Surface-Texturing Instrument," Proc. 2009 NSF CMMI Engineering Research and Innovation Conference, Honolulu, June 22-25, 2009.
206. H. S. Yoon, K. F. Ehmann, 2009, "A Slip-line Field Model for Orthogonal Micro-machining Processes," Proceedings of the 4M/ICOMM, The Global Conference on Micro Manufacturing, 23-25 September, Karlsruhe, Germany, pp. 329-332.
207. N. Mahayotsanun, H. C. Lee, T. J. Cheng, Y. Chuang, K. Y. Tu, Kornel Ehmann, Jian Cao, 2009, "Development of the high-speed micro-extrusion machine to investigate size, strain rate,and tribological effects," International Conferences on Multi-Material Micro Manufacture, 4M/International Conferences on Micro

Manufacturing, ICOMM 2009, Pages 383-386, Karlsruhe; Germany; 23 September 2009 through 25 September 2000.

208. A. J. Shih, J. Moore, K. McGill. P. W. McLaughlin, Q. Zhang, H. Zheng, K. F. Ehmann, 2009, "Biopsy Needle Cutting Edge Rake and Inclination Angles - Modeling of Plane Needles, Proc. 2009 NSF CMMI Engineering Research and Innovation Conference, Honolulu, June 22-25, 2009.
209. N. Mahayotsanun, H. C. Lee, T. J. Cheng, Y. Chuang, K. Y. Tu, K. F. Ehmann, J. Cao, 2009, "Development of the High-Speed Micro-Extrusion Machine to Investigate Size, Strain Rate, and Tribological Effects," Proceedings of the 4M/ICOMM, The Global Conference on Micro Manufacturing, 23-25 September, Karlsruhe, Germany, pp. 383-386.
210. A. Greco, Q. J. Wang, K. F. Ehmann, 2009, "Surface Micro-texturing through Tertiary Tool Motion," Proceedings of the 5th International Workshop on Microfactory Technology, August 20-21, Jeju, Korea.

2010.

211. A. Greco, S. Raphaelson, Q. J. Wang, C. Lin, K. F. Ehmann, 2009, "Surface Texturing of Tribological Interfaces Using the Vibromechanical Texturing Method," ASME Journal of Manufacturing Science and Engineering, 131 / 061005-1 - 061005-8.
212. P. Guo, K. Malukhin, K. Pallav, K. F. Ehmann, 2010, "The Geometry, Manufacture, and Performance of Biopsy Needle Tips," 5th International Conference on Micromanufacturing (ICOMM/4M'10), April 5-8, 2010, University of Wisconsin, Madison, WI, pp. (??),
213. K. Pallav, K. F. Ehmann, 2010, "Laser-Induced Plasma Micro-Machining," Proceedings of the 2010 ISFA 2010 -International Symposium on Flexible Automation, Tokyo, Japan July 12-14, 2010, pp (??),
214. K. Pallav, K. F. Ehmann, 2010, "Feasibility of Laser Induced Plasma Micro-machining (LIP-MM)," Proceedings of the International Precision Assembly Seminar, IPAS – 2010, Chamonix, France, February 14-17, S. Ratchev (Ed.): IPAS 2010, IFIP AICT 315, pp. 73–80, 2010. © IFIP International Federation for Information Processing 2010, (IFIP Advances in Information and Communication Technology. 2010; 315: 73-80.)
215. K. Pallav, J. Ramkumar, Nagahanumaiah, K. F. Ehmann, 2010, "Comparative Assessment of the Laser Induced Plasma Micro-Machining (LIP-MM) and the μ-EDM Process," Proceedings of the International Forum on Micro Manufacturing – IMFF'10, Gifu, Japan, October 20-23. pp…(??)
216. K. Pallav, K. F. Ehmann, 2010, "Laser-induced Plasma Micromanufacturing Process," Proceedings of the 2010 ASME International Manufacturing Science and Engineering Conference - MSEC2010, October 12-15, 2010, Erie, Pennsylvania, USA, Paper Number: MSEC2010-34242,
217. K. Pallav, J. Ramkumar, Nagahanumaiah, K. F. Ehmann, 2010, "Numerical Simulation of the Laser Induced Plasma Micro-machining Process (LIP-MM),"- 2010, Deajeon, Korea, October ……, 2010, (??)

218. N. Mahayotsanun, T. J. Cheng, Y. Chuang, K. Y. Tu, H. C. Le, J. Cao, K. F. Ehmann, 2010, “Effects of Grain Size and Strain Rate in Micro-Extrusion,” 5th International Conference on Micromanufacturing (ICOMM/4M’10), April 5-8, 2010, University of Wisconsin, Madison, WI, pp. (**??**)…,

2011.

219. J. Z. Moore, A. J. Shih, K. Malukhin, K. F. Ehmann, 2011, “Hollow Needle Tissue Insertion Force Model” CIRP Annals - Vol.60/1 and for presentation at the 2011 General Assembly in Budapest, Hungary. CIRP Annals - Manufacturing Technology 60 (2011) 157–160.
220. Q. Zeng, Y. Fang, K. F. Ehmann, 2011, “Topological Structural Synthesis of 4-DOF Serial-Parallel Hybrid Mechanisms,” Trans ASME: Journal of Mechanical Design, ASME September 2011, Vol. 133 / 091008-1.
221. J. H. Ko, K. C. Shaw, K. F. Ehmann, 2011, “Dynamic Modelling of the Cusp Error Reduction Phenomenon in High Speed Micro/meso-scale Milling Processes with Ultrasonic Vibration Assistance,” Proceedings of the 11th EUSPEN International Conference, Como, Italy, May 2011.
222. P. Han, K. Pallav, P. Guo, K. Ehmann, 2011, "Medical Needle Insertion: Effects of Needle Tip and Surface Texturing", Proc. of the 6th Intl. Conf. on MicroManufacturing (ICOMM), Tokyo, March 7-10, 2011, pp. 475-481. (ICOMM2011-48)
223. D. Werschmoeller, M. Kurz, D. Oberschmidt, X. Li, E. Uhlmann, K. Ehmann, 2011, “Feasibility of Temperature Measurements Close to the Cutting Edge of Single Crystal Diamond Tools by Thin Film Thermocouples,” Proc. of the 6th Intl. Conf. on MicroManufacturing (ICOMM), Tokyo, March 7-10, 2011, pp. 19-24.
224. R. Zhou, J. Cao, K. Ehmann, Y. Chuang, A. H. C. Lee, C-F. Wu, K-M. Huang, 2011, “A Novel Desktop Deformation-Based Micro Surface Texturing System,” Proc. of the 6th Intl. Conf. on MicroManufacturing (ICOMM), Tokyo, March 7-10, 2011, pp. 91-97
225. K. Pallav, P. Han, J. Ramkumar, N. Hanumaiah, K. F. Ehmann, 2011, “Comparative Assessment of the Laser Induced Micro-machining (LIP-MM) and the Micro-EDM Processes,” Proceedings of the ASME 2011International Manufacturing Science and Engineering Conference MSEC2011, June 13-17, 2011, Corvallis, Oregon, USA, Paper # MSEC2011-50260.
226. R. Zhou, J. Cao, K. F. Ehmann, C. Xu, 2011, “An Investigation of Deformation-based Micro Surface Texturing,” MSEC # MSEC2011-50273, Proceedings of the ASME 2011 International Manufacturing Science and Engineering Conference MSEC2011, June 13-17, 2011, Corvallis, Oregon, USA, Paper #MSEC2011-50273. Journal of Manufacturing Science and Engineering DECEMBER 2011, Vol. 133 / 061017-1, [DOI: 10.1115/1.4005459]
227. Q. Zeng, Y. Fang, K. Ehmann, 2011, “Design of a Novel 4-DOF Kinematotropic Hybrid Parallel Manipulator,” Trans. ASME: Journal of Mechanical Design DECEMBER 2011, Vol. 133 / 121006-1. [DOI: 10.1115/1.4005233]

228. P. Guo, K. F. Ehmann, 2011, “Development of a New Vibrator for Elliptical Vibration Texturing,” Proceedings of the ASME 2011 International Manufacturing Science and Engineering Conference MSEC2011, June 13-17, 2011, Corvallis, Oregon, USA.
229. D. Werschmoeller, K. F. Ehmann, X. Li, 2011, “Tool Embedded Thin Film Microsensors for Monitoring Thermal Phenomena at Tool-Workpiece Interface During Machining,” Journal of Manufacturing Science and Engineering, APRIL 2011, Vol. 133 / 021007-1/ 021007-8, [DOI: 10.1115/1.4003616]
230. K. Malukhin, K. F. Ehmann, "A Model of the Kinetics of the Temperature-Induced Phase Transformation in NiTi Alloys and its Experimental Verification," Journal of Intelligent Material Systems and Structures, 23(1) 35–44, 2011, DOI: 10.1177/1045389X11430728
231. D. Werschmoeller, X. Li, K. F. Ehmann, 2012, “Measurement of Transient Tool Internal Temperature Fields During Hard Turning by Insert-Embedded Thin Film Sensors,” ASME 2011 International Manufacturing Science and Engineering Conference, MSEC 2011. 2011; 2: 297-306.
232. D. Werschmoeller, X. Li, K. F. Ehmann, 2012, “Measurement of Transient Tool Internal Temperature Fields During Hard Turning by Insert-Embedded Thin Film Sensors,”. Journal of Manufacturing Science and Engineering DECEMBER 2012, Vol. 134 / 061004-1, DOI: 10.1115/1.4007621]
233. S.K. Ro, K. F. Ehmann,… (**??**)..

2012

234. K. Malukhin, H. Sung, K. F. Ehmann, 2012, “A Shape Memory Alloy Based Tool Clamping Device,” J. of Materials Processing Technology, 212 (2012) 735– 744
235. P. Guo, K. F. Ehmann, 2012, “A Surface Generation Model for the Elliptical Vibration Texturing Process,” ICOMM 2012, Proc. of the 7th International Conference on MicroManufacturing, Northwestern University, IL, USA, March 12-14, 2012, pp……. (+IJMTM) (**??**)
236. K. Pallav, X. Li, P. Han, Nagahanumaiah, K. Ehmann, 2012, “Experimental Investigations of the Transient Temperature Response in Micro-EDM,” Proc. of the 7th International Conference on MicroManufacturing, Northwestern University, IL, USA, March 12-14, 2012, pp…(**??**)…..
237. Gyungho Khim, Seung Kook Ro, Jong Kweon Park, Kornel Ehmann, 2012, “A Three-Axis Translation Stage Using Opposing Wedges with Error Compensation,” “ , March 2012, Volume 13, Issue 3, pp. 401-406
238. P. Guo, K. F. Ehmann, 2012, “Sequential Drive of Micro Piezo Actuator Stacks,” Proc. of the Int. Workshop on Microfactories, Tampere, Finland, June 20-23, 2012.
239. Q. Zeng, K. F. Ehmann, 2012, “A Novel Design of Parallel Compliant Micro-Motion Stages with Kinematotropic Properties,” Transactions of the North American Manufacturing Research Institution of SME, NAMRC, Notre Dame, IN, U.S.A., 40, pp. 324-332
240. L. Li, B. Li, X. Li, K. F. Ehmann, 2012, “Experimental Investigation of Hard Turning Mechanisms by PCBN Tooling Embedded Micro Thin Film

Thermocouples," J. Manuf. Sci. Eng 135(4), 041012 (Jul 17, 2013) (12 pages), Paper No: MANU-12-1187; doi: 10.1115/1.4023722, also Proceedings of the ASME 2012 International Manufacturing Science and Engineering Conference MSEC2012, University of Notre Dame, June 4-8, 2012.

241. P. Han, K. Pallav, K. F. Ehmann, 2012, "Force Model for Needle-Tissue Interaction," Proceedings of the ASME 2012 International Manufacturing Science and Engineering Conference MSEC2012, University of Notre Dame, June 4-8, 2012. (MSEC2012-7257)
242. D. Che, P. Guo, K. F. Ehmann, 2012, "Design and Analysis of Helical Needle Tip Grinding Process," Proceedings of the ASME 2012 International Manufacturing Science and Engineering Conference, MSEC2012, June 4-8, 2012, Notre Dame, Indiana, USA, MSEC2012-7274
243. P. Han, J. Kim, K. Pallav, K. F. Ehmann, 2012, "Laser Surface Texturing of Medical Needles for Friction Reduction," ICOMM 2012, Proc. of the 7th International Conference on MicroManufacturing, Northwestern University, IL, USA, March 12-14, (ICOMM2012-91)
244. E. Bertsche, K. F. Ehmann, K. Malukhin, 2012, "An Analytical Model of Rotary Ultrasonic Milling," Int J Adv Manuf Technol., DOI 10.1007/s00170-012-4292-z
245. E. Bertsche, K. F. Ehmann, K. Malukhin, 2012, "Ultrasonic Slot Machining of a Silicon Carbide Matrix Composite," Int J Adv Manuf Technol, DOI 10.1007/s00170-012-4394-7.
246. L. Li, B. Li, K. F. Ehmann, X. Li, 2012, "Cutting Temperature Monitoring in Hard Turning by PCBN Inserts with Embedded Micro Sensor Arrays," Proc, of the 9th International Conference on Multi-Material Micro Manufacturing (4M), Vienna, Austria, 9-11 October, 2012, pp. 47-50, 2012
247. G. Ping, K. F. Ehmann, 2012, "An Analysis of the Surface Generation Mechanics of the Elliptical Vibration Texturing Process," International Journal of Machine Tools and Manufacture, 64 (2013) 85–95
248. P. Han, J. Kim, K. F. Ehmann. J. Cao, "Laser Surface Texturing of Medical Needles for Friction Control," Proceedings of the 1st International Conference on Design and Processes, for Medical Devices – Ceretti et al. PROMED, pp. 155-159, ISBN: 978 88 6608 058 9
249. Q. Zeng, K. F. Ehmann, 2012, "Error Modeling of a Parallel Wedge Precision Positioning Stage," Trans ASME: J. of Manufacturing Science and Engineering, December 2012, Vol. 134 / 061005-1/061005-14
250. Han, Peidong; Che, Demeng; Pallav, Kumar, Ehmann, Kornel; Models of the cutting edge geometry of medical needles with applications to needle design, International Journal of Mechanical Sciences, 65 (2012) 157–167
251. Malukhin, Kostyantyn, Ehmann, Kornel; A generalized analytical model of the cutting angles of a biopsy needle tip, Journal of Manufacturing Science and Engineering, Transactions of the ASME, DECEMBER 2012, Vol. 134 / 061001-1/ 061001-13.
252. Che, D., Han, P., Guo, P., and Ehmann, Issues in polycrystalline diamond compact cutter-rock interaction from a metal machining point of view-part I: Temperature, stresses, and forces, Journal of Manufacturing Science and

Engineering, Transactions of the ASME, DECEMBER 2012, Vol. 134 / 064001-1/ 064001-10, [DOI: 10.1115/1.4007468]

253. Che, D., Han, P., Guo, P., and Ehmann, Issues in polycrystalline diamond compact cutter-rock interaction from a metal machining point of view-part II: Bit performance and rock cutting mechanics, Journal of Manufacturing Science and Engineering, Transactions of the ASME, DECEMBER 2012, Vol. 134 / 064002-1/064002-13, [DOI: 10.1115/1.4007623]
254. Werschmoeller, Dirk; Li, Xiaochun, Ehmann, Kornel, Measurement of transient tool-internal temperature fields during hard turning by insert-embedded thin film sensors, Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2012, 134(6), 061004 (Nov 01, 2012) (9 pages), doi:10.1115/1.4007621
255. Devor, R.E.; Kapoor, S.G.; Cao, J.; Ehmann, K.F., Transforming the landscape of manufacturing: Distributed manufacturing based on desktop manufacturing (DM) 2, Journal of Manufacturing Science and Engineering, Transactions of the ASME, August 2012, Vol. 134 / 041004-1/041004-11, 2012

2013

256. Ishan Saxena, Rajiv Malhotra, Kornel Ehmann, Jian Cao, 'Laser-induced plasma micro-machining (LIPMM) for enhanced productivity and flexibility in laser-based micro-machining processes', CIRP Annals Manufacturing Technology, Vol 62, pp. 211-214, 2013.
257. Ehmann, Kornel F.; Slavkovic, Nikola R.; Milutinovic, Dragan S.; Kokotovic, Branko M.; Glavonjic, Milos M., Cartesian compliance identification and analysis of an articulated machining robot, FME Transactions, (**??**)
258. Guo, P. and Ehmann, K. F., 2013, "An Analysis of the Surface Generation Mechanics of the Elliptical Vibration Texturing Process," International Journal of Machine Tools and Manufacture, 64, pp. 85-95.
259. Han, P., Ehmann, K., “Study of the Effect of Cannula Rotation on Tissue Cutting for Needle Biopsy”, Medical Engineering & Physics, 2013 Vol.35, No.11, pp.1584–1590.
260. Guo, P. and Ehmann, K. F., 2013, "Development of a Tertiary Motion Generator for Elliptical Vibration Texturing," Precision Engineering, 37(2), pp. 364-371.
261. Huyue Zhao, K. Ehmann, Stability Analysis of Chatter in Tandem Rolling Mills-Part 1: Single- and Multi-Stand Negative Damping Effect, Journal of Manufacturing Science and Engineering, Trans ASME., June 2013, Vol. 135 / 031001-1/ 031001-8
262. Huyue Zhao, K. Ehmann, Stability Analysis of Chatter in Tandem Rolling Mills-Part 2: The Regenerative Effect, Journal of Manufacturing Science and Engineering: Trans ASME, JUNE 2013, Vol. 135 / 031002-1/ 031002-11
263. Q. Jane Wang, Aaron Greco, Kornel Ehmann, Surface Texturing by Vibro Machining, Encyclopedia of Tribology, Volume 5, pp. 3505-3509, Springer 2013
264. Linwen Li, Bin, Li, Xiaochun Li, Kornel Ehmann, Experimental Investigation of Hard Turning Mechanisms by PCBN Tooling Embedded Micro Thin Film

Thermocouples, Journal of Manufacturing Science and Engineering: Trans ASME, AUGUST 2013, Vol. 135 / 041012-1/ 041012-12

265. J. H. Ko and K. F. Ehmann, "Investigation of the effect of tooling axial ultrasonic vibration assistance on meso-scale milled surfaces", European Society of Precision Engineering and Nanotechnology (EUSPEN), 27-May-2013 to 31-May-2013, Berlin, Germany, vol. 2, pp. 117-120
266. Linwen Li, Bin Li, Kornel F. Ehmann, Xiaochun Li, A thermo-mechanical model of dry orthogonal cutting and its experimental validation through embedded micro-scale thin film thermocouple arrays in PCBN tooling, International Journal of Machine Tools & Manufacture, 70 (2013) 70–87
267. Guo, P. and Ehmann, K. F., "Generation of Parallel Micro-Channels on Cylindrical Surfaces Using Elliptical Vibration Texturing," Proceedings of the 8th International Conference on MicroManufacturing (ICOMM"2013), Victoria, Canada, 25 - 28 March 2013.
268. Ishan Saxena, Rajiv Malhotra, Kornel Ehmann, Jian Cao, 'High-speed Fabrication of Microchannels using Line-based Laser Induced Plasma Micromachining (L-LIPMM), Proceedings of the 8th International Conference on MicroManufacturing (ICOMM"2013), No. 66, University of Victoria, Victoria BC, Canada, 25 - 28 March 2013.
269. Ishan Saxena, Rajiv Malhotra, Kornel Ehmann, Jian Cao, 'Line-based Laser Induced Plasma Micro-machining (L-LIPMM)', Proceedings of the 14th International Manufacturing Science and Engineering Conference, June 10 - 14, 2013, University of Wisconsin, Madison, WI, USA, pp. MSEC2013-1153
270. Che, D., and Ehmann, K., "Polycrystalline diamond turning of rock," 2013 ASME, 14th International Manufacturing Science and Engineering Conference, June 10-14, 2013, Madison, WI, p. MSEC2013-1127. DOI: 10.1115/MSEC2013-1127
271. Velasquez T., Han P., Cao J., Ehmann K., "Feasibility of Laser Surface Texturing for Friction Reduction in Surgical Blades, Proceedings of the ASME 2013 International Manufacturing Science and Engineering Conference (MSEC2013-1193)", Madison, Wisconsin, USA, June 10-14, 2013.
272. Han, P., Kim, J., Ehmann, K., and Cao, J., "Laser surface texturing of medical needles for friction control", International Journal of Mechatronics and Manufacturing Systems, 2013 Vol.6, No.3, pp.215 – 228.
273. Pallav K., Han P., Ramkurmar J., Hanumaiah N., Ehmann K., Comparative Assessment of the Laser Induced Plasma Micro-Machining (LIP-MM) and the Micro-EDM Processes, ASME Trans: Journal of Manufacturing Science and Engineering, 2013 doi:10.1115/1.4025391.
274. M-K. Ng, J. Magargee, J. Cao, K. Ehmann, Microrolling-Based Surface Texturing, Proc, of the 10th International Conference on Multi-Material Micro Manufacturing (4M), San Sebastian, Spain, 8-10 October, 2013, pp. 35-38, 2013
275. Guoda Chen, Yingchun Liang, Yazhou Sun, Kornel F. Ehmann. Study on the direct relation between machine error and machined form accuracy. Proceedings of the 13th Euspen International Conference, Volume 2, 2013: 176-180, Berlin, Germany.

276. Malhotra, R., Saxena, I., Ehmann, K.F. and Cao, J. (2013) “Laser-induced Plasma Micro-machining (LIPMM) for Enhanced Productivity and Flexibility in Laser-based Micro-machining Processes”, Annals of CIRP, Vol.62/1, pp. 211-214.
277. Guo, P., Lu, Y., Pei, P. and Ehmann, K. F., (2013), "Fast Generation of Micro-Channels on Cylindrical Surfaces by Elliptical Vibration Texturing," submitted to J. of Manufacturing Science and Engineering,
278. Zeng, Q., Ehmann, K. F., (2013), “Design of a 3-DOF Compliant Parallel Mechanism for Displacement Amplification,” ASME Int. Conf. on MSEC, June 10-14, Madison, WI, U.S.A.
279. Zeng, Q., Ehmann, K. F., (2013), “Design of Spatial Hybrid Loop Manipulators with Kinematotropic and Deployable Capabilities,” IFToMM, Mechanism and Machine Theory, 71, pp. 1-26.
280. Che, D., and Ehmann, K., 2013, "Analytical modeling of force responses in polycrystalline diamond face turning of rock," International Journal of Rock Mechanics and Mining Sciences (In revision)

2014

281. Q, Zeng, K, F. Ehmann, “Design of Parallel Hybrid-Loop Manipulators with Kinematotropic Property and Deployability,” Mechanism and Machine Theory, 71 (2014) 1–26
282. C. Zhang, Y. Li, K. Ehmann, “Ultrasonic Elliptical Vibration-assisted Micro-groove Turning,” Proc. 9th International Conf. on Micromanufacturing, Singapore, March 25-28, 2014, Singapore, Paper #43
283. Zeng, Qiang, Kornel F. Ehmann, and Jian Cao. "Tri-pyramid Robot: Design and kinematic analysis of a 3-DOF translational parallel manipulator," Robotics and Computer-Integrated Manufacturing, 30.6 (2014): 648-657.
284. Zeng, Qiang, Kornel F. Ehmann, and Jian Cao. "Tri-pyramid Robot: stiffness modeling of a new 3-DOF translational parallel manipulator." Robotica (2016) Volume 34, pp. 383–402, doi:10.1017/S0263574714001520
285. Qiang Zeng, Kornel F. Ehmann and Jian Cao, 2014, “Tri-pyramid Robot: A Novel Topological Structural Design and Kinematic Modeling of a 3-DOF Translational Parallel Manipulator,” Elsevier, Robotics and Computer Integrated Manufacturing, Volume 30, Issue 6, December, 2014, Pages 648-657
286. S. Wolff, J. Cao, K. Ehmann, “Porosity Formation and Microstructure Characterization of LENS-processed 316L Stainless Steel,” Proc. 9th International Conf. on Micromanufacturing, Nanyang Technological University, Singapore, March 25-28, 2014, Singapore, Paper #106
287. S. Wolff, H. Liou, J. Cao, K. Ehmann, O. Balogun, "Preliminary Study of the Influence of Process Parameters on the porosity of LENS-processed 316L Stainless Steel ", Proc. ISCIE/ASME, 2014 International Symposium on Flexible Automation, Awaji-Island, Hyogo, Japan, (2014)
288. Che, D., and Ehmann, K., 2014, "Experimental study of force responses in polycrystalline diamond face turning of rock," International Journal of Rock

Mechanics and Mining Science, 72, pp. 80-91. DOI: 10.1016/j.ijrmms.2014.08.014
289. Che, D., Han, P., Peng, B., and Ehmann, K., “Finite element study on chip formation and force response in two-dimensional orthogonal cutting of rock,” 2014 ASME International Manufacturing Science and Engineering Conference, Detroit, MI, p. MSEC2014-3952. DOI: 10.1115/MSEC2014-3952
290. K. Pallav, I. Saxena, K. Ehmann, “Comparative Assessment of the Laser Induced Plasma Micro-machining (LIP-MM) and the Ultra-short Pulsed Laser Ablation Processes," J. Micro Nano-Manuf. 2(3), 031001 (Jul 08, 2014) (9 pages) Paper No: JMNM-13-1077; doi: 10.1115/1.4027738
291. Y. Yang, C. Yarka, J. Cao, K. Ehmann, “Feasibility of Using Copper(II)Oxide for Additive Manufacturing,” International Journal of Precision Engineering and Manufacturing, Vol. 15, No. 9, pp. 1-5, September 2014 / 1
292. Y. Lu, P. Guo, P. Pei. K. Ehmann. “Experimental Studies of Wettability Control on Cylindrical Surfaces by Elliptical Vibration Texturing,” Int. J. Adv. Manuf Technol, DOI 10.1007/s00170-014-6384-4
293. C. Zhang, K. Ehmann, Y. Li, P. Guo, “Ultrasonic Elliptical Vibration-assisted Micro-groove Turning,” Key Engineering Materials Vol. 625 (2015) pp 603-606, doi:10.4028/www.scientific.net/KEM.625.603
294. Guanghui Zhang & Kornel F. Ehmann, “Dynamic design methodology of high speed micro-spindles for micro/meso-scale machine tools,” Int J Adv Manuf Technology, DOI 10.1007/s00170-014-5887-3
295. I. Saxena, X. Li, K. Ehmann, “Comparative Assessment of the Transient Temperature Response during Single-discharge Machining by Micro-EDM and LIP-MM Processes,” Proc. 9th International Conf. on Micromanufacturing, Singapore, March 25-28, 2014, Singapore, Paper #37
296. M-K. Ng, I. Saxena K. Ehmann, J. Cao, “Improving Surface Hydrophobic Performance by Micro-Rolling Based Texturing,” Proc. 9th International Conf. on Micromanufacturing, Singapore, March 25-28, 2014, Singapore, Paper #102
297. G. Ping; Y. Lu, D. Che, K. Ehmann, “Experimental Studies of Wettability Control on Cylindrical Surfaces Machined by Elliptical Vibration Texturing,” Proc. 9th International Conf. on Micromanufacturing, Singapore, March 25-28, 2014, Singapore, Paper #113
298. I. Saxena, K. Ehmann, J. Cao, “Productivity Enhancement in Laser Induced Plasma Micromachining by altering the Salinity of the Dielectric Media,” Proc. 9th International Conf. on Micromanufacturing, Singapore, March 25-28, 2014, Singapore, Paper #93
299. G. Chen, Y. Liang, K. Ehmann, Y. Sun, Q. Bai, “Fourier transform based dynamic error modeling method for ultra-precision machine tool,” 7th Int. Symp. on Advanced Optical Manufacturing and Testing Technologies: Advanced Optical Manufacturing Technologies, edited by Li Yang, Eric Ruch, Shengyi Li, Proc. of SPIE Vol. 9281, 928102, (2014)
300. I. Saxena, J. Cao, K.F. Ehmann, “High Throughput Microfabrication using Laser Induced Plasma in Saline Aqueous Medium, “JMPT, (accepted) 2014
301. Saxena K. Ehmann, J. Cao, “Laser-Induced Plasma in Aqueous Media: Numerical Simulation and Experimental Validation of Spatial and Temporal

Profiles," Journal of Applied Optics, (accepted) 2014 Vol. 53, No. 35 / APPLIED OPTICS, pp. 8283-8394 .
302. Cao, Jian; Guo, Ping; Lu, Yong; Ehmann, Kornel F.: Generation of hierarchical micro-structures for anisotropic wetting by elliptical vibration cutting, CIRP Annals - Manufacturing Technology, 2014 CIRP Annals - Manufacturing Technology, Volume 63, Issue 1, 2014, Pages 553-556
303. Ehmann, Kornel; Saxena, Ishan, Multi-material capability of laser induced plasma micromachining, ASME 2014 International Manufacturing Science and Engineering Conference, MSEC 2014 Collocated with the JSME 2014 International Conference on Materials and Processing and the 42nd North American Manufacturing Research Conference, 2014
304. Guo, Ping; Ehmann, Kornel F.; Lu, Yong; Pei, Pucheng, Experimental studies of wettability control on cylindrical surfaces by elliptical vibration texturing, International Journal of Advanced Manufacturing Technology, 2014
305. Jiang, T.; Peng, Y.; Ehmann, K.F., Research on single-point diamond fly-grooving of brittle materials, International Journal of Advanced Manufacturing Technology, 2014
306. Guo, Ping; Lu, Yong; Ehmann, Kornel F.; Pei, Pucheng, Fast generation of micro-channels on cylindrical surfaces by elliptical vibration texturing, Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2014
307. Guo, Ping; Ehmann, Kornel F.; Che, Demeng; Saxena, Ishan; Han, Peidong, "Machining of carbon fiber reinforced plastics/polymers: A literature review," Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2014
308. Che, D., and Ehmann, K., 2015, "Analytical modeling of heat transfer in polycrystalline diamond compact cutters in rock turning processes," ASME Journal of Manufacturing Science and Engineering. DOI: 10.1115/1.4029653. (In print)
309. K. Malukhin, K. Ehmann, "Model of a NiTi Shape Memory Alloy Actuator," Journal of Intelligent Materials Systems and Structures, DOI: 10.1177/1045389X14526955, 26 (4), pp. 386 – 399 (2015).
310. Saxena, R. Malhotra, K. Ehmann, J. Cao, "High-speed Fabrication of Micro-channels using Line-based Laser Induced Plasma Micromachining (L-LIPMM)," Trans ASME: J. of Micro and Nano-manufaturing, 2014
311. Che, D., Smith, J., and Ehmann, K., "Heat transfer in polycrystalline diamond compact cutters in rock turning," 2014 International Symposium on Flexible Automation, Awaji-Island, Hyogo, Japan, p. ISFA2014-36L.
312. Chen Zhang, Ping Guo, Kornel Ehmann, Yingguang Li, "Turning of Microgrooves both with and without Aid of Ultrasonic Elliptical Vibration," Journal: LMMP: Materials and Manufacturing Processes, 30(8):1-9, DOI: 10.1080/10426914.2015.1004692
313. Yancheng Wang, Weisi Li, Peidong Han, Marco Giovannini, Kornel Ehmann, Albert Shih, "Advances in Medical Needle Technologies – Geometry, Mechanics, Design and Manufacturing," Proceedings of the International Conference of Manufacturing Technology Engineers (ICMTE) 2014, 2014.9, 168

314. Satyabrata Mohanty, Kornel Ehmann, Jian Cao, “Manipulation of water jet trajectory by a non-uniform electric field in water jet material processing,” ASME J. Micro- and Nano-Manufacturing Journal of Micro- and Nano-Manufacturing, June 2016, Vol. 4 / 021003-1
315. Jiachen Xu, Maxwell Abecassis, Zixuan Zhang, Ping Guo, Jiaxing Huang, Kornel Ehmann and Jian Cao, “Accuracy Improvement of Nano-fiber Deposition by Near-Field Electrospinning,” IWMF2014, 9th International Workshop on Microfactories, October 5-8, 2014, Honolulu, Hawaii, U.S.A.
316. Y. Peng & T. Jiang & K. F. Ehmann, Research on single-point diamond fly-grooving of brittle materials, Int J Adv Manuf Technol (2014) 75:1577–1586, DOI 10.1007/s00170-014-6245-1

2015

317. Marco Giovannini, Newell Moser, Kornel Ehmann, Experimental and Analytical Study of Micro Serrations on Surgical Blades, Proceedings of the 13th International Nanochannels, Microchannel and MiniChannels Conference InterPACK2015&ICNMM2015, July 6-9, 2015, San Francisco, California, USA, InterPACKICNMM2015-48046
318. M. Giovannini, P. Han, K. Ehmann, J. Cao, ”Tissue cutting with bio-inspired biopsy punches with serrated edges accompanied by vibrational motions,” 10th Int. Conf. on Micromanufacturing (4M/ICOMM2015), March 31-April 2, Milano, Italy, 2015, doi: 10.3850/978-981-09-4609-8_10
319. Zhang, Z., Ren, H., Xu, R., Moser, N., Smith, J., Ndip-Agbor, E., Malhotra, R., Xia, Z.C., Ehmann, K.F. and Cao, J. (2015) “A Mixed Double-Sided Incremental Forming Toolpath Strategy for Improved Geometric Accuracy”, ASME Journal of Manufacturing Science and Engineering, Vol.137(5), 051007 (7 pages), doi: 10.1115/1.4031092
320. Ehmann, Kornel F.; Tanovic, Ljubodrag M.; Mladenovic, Goran M., Tool path generation for milling of free form surfaces with feedrate scheduling, FME Transactions, 2015
321. Ehmann, Kornel; Zhang, Chen; Li, Yingguang, Analysis of cutting forces in the ultrasonic elliptical vibration-assisted micro-groove turning process, International Journal of Advanced Manufacturing Technology, (2015) 78:139–152, DOI 10.1007/s00170-014-6628-3
322. Moser, N., Ndip-Agbor, E., Ren, H., Zhang, Z., Ehmann, K., & Cao, J. (2015). Challenges and process strategies concerning multi-pass double sided incremental forming. In Key Engineering Materials (Vol. 651-653, pp. 1122-1127). (Key Engineering Materials; Vol. 651-653). Trans Tech Publications Ltd. DOI: 10.4028/www.scientific.net/KEM.651-653.1122
323. Huaqing Ren, Newell Moser, Zixuan Zhang, Ebot Ndip-Agbor, Jacob Smith, Kornel F. Ehmann, Jian Cao, “Effects of Tool Positions in Accumulated Double-Sided Incremental Forming on Part Geometry,” Proceedings of the ASME 2016 11th International Manufacturing Science and Engineering Conference, MSEC 2016, Volume 1, 2016, ASME 2016 11th International Manufacturing Science

and Engineering Conference, MSEC 2016; Blacksburg; United States; 27 June 2016 through 1 July 2016; Code 123973

324. Marco Giovannini, Newell Moser, Xingsheng Wang, Kornel Ehmann, “Computational and Experimental Study of Vibrational Motions on Tissue Cutting for Solid Biopsy Needles,” Proceedings of the ASME 2015 International Manufacturing Science and Engineering Conference - MSEC2015, MSEC2015-9266, June 8-12, 2015, Charlotte, North Carolina, USA
325. Huaqing Ren, Newell Moser, Zixuan Zhang, Ebot Ndip-Agbor, Jacob Smith, Kornel F. Ehmann, Jian Cao, “Effects of Tool Positions in Accumulated Double-Sided Incremental Forming on Part Geometry,” Trans ASME: J. Manuf. Sci. Eng 137(5), 051008 (Sep 04, 2015) (8 pages), Paper. No: MANU-14-1703; doi: 10.1115/1.4030528
326. Martinez-Prieto, N., Abecassis, M., Xu, J., Guo, P., Cao, J., Ehmann, K., (2015) "Feasibility of Fiber-deposition Control by Secondary Electric Fields in Near-Field Electrospinning." Nicolas Martinez-Prieto; Maxwell Abecassis; Jiachen Xu; Ping Guo; Jian Cao; Kornel F. Ehmann, *J. Micro Nano-Manuf.* 2015; 3(4):041005-041005-6. JMNM-14-1056, doi: 10.1115/1.4031491
327. Zhu, W. -L., Xing, Y., Ehmann, K., Ju, B. -F., (2016) "Ultrasonic Elliptical Vibration Texturing of the Rake Face of Carbide Cutting Tools for Adhesion Reduction", International Journal of Advanced Manufacturing Technology (2016) 85:2669–2679
328. Saxena, I., Liu, J., Ehmann, K., Cao, J., "Periodic Surface Pattern Fabrication via Biprism Interference Micro-machining", Journal of Surface Topography Surf. Topogr.: Metrol. Prop. 3 (2015) 045006 doi:10.1088/2051-672X/3/4/045006
329. Ishan Saxena, Jintao Liu, Kornel Ehmann, Jian Cao, “Biprism Interference Micro-Patterning for Periodic Micro-Structure Generation,” 10th Int. Conf. on Micromanufacturing (ICOMM), March 30-April 2, Milano, Italy, 2015
330. Man-Kwan Ng, Lanyun Li, Zhaoyan Fan, Robert X. Gao, Edward F. Smith, III, Kornel F. Ehmann, Jian Cao, “Joining sheet metals by electrically-assisted roll bonding,” Annals of CIRP, 64 (2015) 273-276
331. Demeng Che, Jacob Smith, Kornel Ehmann, Finite Element Study of the Cutting Mechanics of the Three Dimensional Rock Turning Process, Proceedings of the ASME 2015 International Manufacturing Science and Engineering Conference, MSEC2015, June 8-12, 2015, Charlotte, North Carolina, USA, MSEC2015-9249, pp. V001T02A021; 10 pages, doi:10.1115/MSEC2015-9249
332. Kumar Pallav, Ishan Saxena, Kornel Ehmann, “Laser Induced Plasma Micro-Machining Process (LIP-MM) – Principles and Performance,” ASMA Trans; J. Micro Nano-Manuf. Sep 2015, 3(3): 031004 (8 pages) (2015)
333. Ping Guo, Kornel F. Ehmann, Fast Multiscale Surface Texturing Technique Using Elliptical Vibration Cutting, International Forum on MicroManufacturing & Biofabrication’15, (IFMM’15＆IFBF’15), May 18-21, 2015，Toyama, Japan
334. Satyabrata Mohanty, Kornel Ehmann, Jian Cao, “Numerical Analysis of the Effect of Non Uniform Electric Field on the Trajectory of Micro Water Jet,” ASME 2015 International Manufacturing Science and Engineering Conference, Volume 1: Processing, Charlotte, North Carolina, USA, June 8–12, 2015, Paper

No. MSEC2015-9445, pp. V001T02A012; 8 pages, doi:10.1115/MSEC2015-9445

335. Xingsheng Wang, Marco Giovannini, Youqiang Xing, Min Kang, Kornel Ehmann, Fabrication and tribological behaviors of corner-cube-like dimple arrays produced by laser surface texturing on medical needles, Tribology International, 92 (2015) 553–558
336. Shi G, Zhang C, Li Y, Ehmann KF, Song Y, et al. (2015) The Finite Element Analysis and Optimization of an Elliptical Vibration Assisted Cutting Device. J Appl Mech Eng 4: 170., doi:10.4172/2168-9873.1000170
337. Wolff, S., Cao, J., and K. Ehmann., (2015), Material Characterization of Titanium Alloys Processed by Directed Energy Deposition, RAPID Conference, Long Beach, CA.

2016

338. Zeng, Qiang, Kornel F. Ehmann, and Jian Cao. "Design of general kinematotropic mechanisms." Robotics and Computer-Integrated Manufacturing, 38 (2016): 67-81.
339. Youqiang Xing, Jianxin Deng, Xingsheng Wang, Kornel Ehmann, Jian Cao, “Experimental Assessment of Laser Textured Cutting Tools in Dry Cutting of Aluminum Alloys,” Journal of Manufacturing Science and Engineering (In print)
340. Zhiwei Zhu, Suet To, Gaobo Xiao, Kornel F. Ehmann, and Guoqing Zhang. “Rotary spatial vibration-assisted diamond cutting of brittle materials,” Precision Engineering, Volume 44, April 2016, Pages 211–219
341. Dragan S. Milutinovic, Ryuta Sato, Daisuke Matsuura, Kornel Ehmann, “Mechanism for active π - joint as an equivalent to the combination of revolute joint and proximal fixed length link,” Robotics and Computer Integrated Manufacturing, 37, pp 179-187, (2016)
342. Zhu, Zhiwei, To, Suet, Ehmann, Kornel, and Xiao, Gaobo, Wule Zhu, "A novel rotary spatial vibration assisted diamond milling servo for the generation of hierarchical micro/nano-structures", Journal of Micromechanics and Microengineering (In print)
343. Nicolas Martinez-Prieto, Xuan Dou, Jiaxing Huang, Jian Cao, Kornel Ehmann, “Direct-Writing of Flexible Structures using Velocity-Controlled Buckling in Near-Field Electrospinning,” 11th International Conference on Micro Manufacturing, Orange County, California, USA, March 2016, ICOMM 2016
344. David Pritchet, Kornel Ehmann, Jian Cao, Jiaxing Huang, “Additive Micro Manufacturing with Modulated Electric Fields: Design Challenges and Application Potential,” 11th International Conference on Micro Manufacturing Orange County, California, USA, March 2016, ICOMM-2016
345. Che, D., Zhang, W., Ehmann, K., “Rock-Cutter Interactions in Linear Rock Cutting,” Proceedings of the ASME 2016 11th International Manufacturing Science and Engineering Conference, June 27- July 1, 2016, Blacksburg, Virginia, USA, Paper No. MSEC2016-8510, pp. V001T02A071; 10 pages, doi:10.1115/MSEC2016-8510

346. Man-Kwan Ng, Ishan Saxena, Kornel F. Ehmann, Jian Cao, “Improving surface hydrophobicity by microrolling-based texturing” J. of Nano and Micro Manufacturing, Trans ASME, SEPTEMBER 2016, Vol. 4 / 031001-1, [DOI: 10.1115/1.4033680]
347. Zhang, X., Ehmann, K., Yu, T., Wang, W., (2015) "Cutting Forces in Micro-End-Milling Processes", International Journal of Machine Tools & Manufacture, 107 (2016) 21-40
348. Houichi Kitano, Kuniaki Dohda, Kornel F. Ehmann, “Integrated Adhesion Model in Dry Forming and Machining,” Proc. 7th International Conference on Tribology in Manufacturing Processes, February 28 to March 2, 2016, Phuket, Thailand
349. Moser, N., Zhang, Z., Ren, H., Ehmann, K., Cao, J., 2016, “An Investigation into the Mechanics of Double-Sided Incremental Forming using Finite Element Methods,” ESAFORM 2016: Proc of the 19th Int. ESAFORM Conf. on Mat. Forming, AIP Conf. Proc. 1769, 070021-1–070021-6; doi: 10.1063/1.4963474
350. Jennifer L. Bennett, Rory J. Dudas, Jian Cao, Kornel Ehmann and Gregory Hyatt, “Control of Heating and Cooling for Direct Laser Deposition Repair of Cast Iron Components,” Proceedings of ISFA2016, Cleveland, Ohio, U.S.A., 1 - 3 August, 2016, pp. 229-236
351. Moser, N., Pritchet, D., Ren, H., Ehmann, K., Cao, J., (2016) "An Efficient and General Finite Element Model for Double-Sided Incremental Forming ", ASME J. of Manuf. Sci. and Eng. (special issue for Materials Forming Processes), 138(9), 091007 (September 20, 2016), doi: 10.1115/1.4033483
352. Zhu, W. L., He, Y, Ehmann, K., Antonio J. Sánchez Egea, Wang X., and Ju, B. - F., Zhu, Z., (2015) "Theoretical and experimental investigation on Inclined Ultrasonic Elliptical Vibration Cutting of Alumina Ceramics", Journal of Manufacturing Science and Engineering, December 2016, Vol. 138 (12) / 121011-1, DOI: 10.1115/1.4033605
353. Yancheng Wang, Weisi Li, Peidong Han, Marco Giovannini, Kornel Ehmann, and Albert J. Shih, Contributions in medical needle technologies - Geometry, mechanics, design, and manufacturing, Machining Science and Technology, 2016, Vol. 20, No. 1, pp. 1-43.
354. Hyung Suk Yoon, Kornel F. Ehmann, “Dynamics and Stability of Micro-Cutting Operations,” International Journal of Mechanical Sciences, 115-116 (2016) 81-92.
355. Newell Moser, Zixuan Zhang, Huaqing Ren, Huan Zhang, Yi Shi, Ebot Ndip-Agbor, Bin Lu, Jun Chen, Kornel F. Ehmann, Jian Cao, “Effective forming strategy for double-sided incremental forming considering in-plane curvature and tool direction,” CIRP Annals – Manufacturing Technology, 65 (2016) 265-268
356. Xingsheng Wang, Peidong Han, Min Kang, Kornel Ehmann, Surface-blended texturing of medical needles for friction reduction using a picosecond laser, Appl. Phys. A (2016) 122:286, DOI 10.1007/s00339-016-9892-2
357. Xingsheng Wang, Peidong Han, Marco Giovannini, Kornel Ehmann, “Modeling of machined depth in laser surface texturing of medical needles,” Precision Engineering, 47 (2017) 10–18

358. David Pritchet, Jian Cao, Kornel Ehmann, Jiaxing Huang, Boltzmann law-based control of localized electrophoretic particle deposition and manipulation, Proc. International Conference on Manipulation, Automation and Robotics at Small Scales, 18-22 July 2016, Paris, France
359. Marco Giovannini, Kornel Ehmann, "Vibrational cutting of soft tissue with micro-serrated surgical scalpels," Procedia CIRP 45 (2016) 199 – 202, 3rd CIRP Conference on Surface Integrity (CIRP CSI), 8th -10th June 2016, Charlotte, NC, USA
360. Nicolas Martinez-Prieto, Jian Cao, Kornel Ehmann, Corner Deposition on Near-Field Electrospinning for Pin-To-Pin and Pin-To-Plate Electrode Configurations, Proc. 4M/IWMF, Copenhagen, September 13-15, 2016
361. Zixuan Zhang, Huan Zhang, Yi Shi, Newell Moser, Huaqing Ren, Kornel F. Ehmann, Jian Cao, "Springback Reduction in Incremental Sheet Forming by Annealing Method, Proc. NAMRC, June 27- July 1, 2016, Blacksburg, Virginia, USA, Procedia Manufacturing, Volume 5, 2016, Pages 696-706
362. Huaqing Ren, Newell Moser, Zixuan Zhang, Kornel F. Ehmann, Jian Cao, "Effect of Tool Deflection in Accumulated Double-Sided Incremental Forming Regarding Part Geometry," ASME 2016 11th International Manufacturing Science and Engineering Conference, June 27- July 1, 2016, Blacksburg, Virginia, USA, Paper No. MSEC2016-8839, pp. V001T02A069; 9 pages, doi:10.1115/MSEC2016-8839
363. Sarah Wolff, Taekyung Lee, Eric Faierson, Kornel Ehmann and Jian Cao, "Anisotropic Properties of Directed Energy Deposition (DED)-Processed Ti-6Al-4V," NAMRC 44, June 27 – July 1, 2016, Virginia Tech, Blacksburg, Virginia, USA – ALSO -- Journal of Manufacturing Processes 24 (2016) 397–405
364. Madhu S. K. Mutyala, Lianyi Chen, Ting Chiang Lin, Benjamin R. Maier, Beata Tyburska, Kumar Sridharan, Kornel Ehmann, and Xiaochun Li, "Surface Modification of Polycrystalline Diamond Compacts by Carbon Ion Irradiation," NAMRC 44, June 27 – July 1, 2016, Virginia Tech, Blacksburg, Virginia, USA. Procedia Manufacturing, Volume 5, 2016, Pages 634–643
365. Chen Zhang, Guilin Shi, Kornel F. Ehmann, "Modeling of Micro-Texture Topography On Cylindrical Surfaces Produced By Elliptical Vibration-Assisted Turning," The 5th International Conference on Nanomanufacturing (nanoMan2016), 15–17 August, 2016, Macau.
366. Ren, H., Moser, N., Zhang, Z., Ehmann, K., and Cao, J. (2016) "Effects of Tool Deflection in Accumulated Double-Sided Incremental Forming Regarding Part Geometry", MSEC 2016.
367. Kuniaki Dohda, Houichi Kitano, Mitjan Kalin, Kornel F. Ehmann, "Galling Growth Model in Metal Forming," International Cold Forging Group (ICFG) – 49th Plenary Meeting, September 4-7, 2016, Stuttgart, Germany.
368. Wu-Le Zhu, Zhiwei Zhu, Kornel F. Ehmann, and Bing-Feng Ju, Modeling and analysis of uncertainty in on-machine form characterization of diamond-machined optical surfaces, OSA journal: Measurement Science and Technology, Measurement Science and Technology, Volume 27, Number 12, doi:10.1088/0957-0233/27/12/125017

369. D. Che, W.L. Zhu, K. Ehmann, "Chipping and crushing mechanisms in orthogonal rock cutting" International Journal of Mechanical Sciences Corresponding, Volume 119, December 2016, Pages 224–236
370. Wu-Le Zhu, Youqiang Xing, Kornel F. Ehmann, Bing-Feng Ju, “Ultrasonic Elliptical Vibration Texturing of the Rake Face of Carbide Cutting Tools for Adhesion Reduction,” Int J Adv Manuf Technol (2016) 85:2669–2679, DOI 10.1007/s00170-015-8084-0
371. Wu-Le Zhu, Zhiwei Zhu, Yi Shi, Xiangfan Chen, Yu He, Kornel F. Ehmann, Bing-Feng Ju, “A novel piezoelectrically actuated 2-DoF compliant micro/nano-positioning stage with multi-level amplification,” Review of Scientific Instruments 87, 105006 (2016); doi: 10.1063/1.4965880
372. Zhiwei Zhu, Suet To, Kornel F Ehmann, Gaobo Xia and Wule Zhu, “A novel diamond micro-/nano-machining process for the generation of hierarchical micro-/nano-structures,” J. Micromech. Microeng. 26 (2016) 035009 (12pp) doi:10.1088/0960-1317/26/3/035009
373. Xuewei Zhang, Tianbiao Yu, Kornel F. Ehmann, Wanshan Wang, “Three-dimensional process stability prediction of thin-walled workpiece in milling operation,” Machining Science and Technology, 2016, Vol. 20, No. 3, 406-424
374. Xuewei Zhang, Kornel F. Ehmann, Tianbiao Yu, Wanshan Wang, Cutting forces in micro-end-milling processes, International Journal of Machine Tools & Manufacture 107 (2016), 21–40
375. Chen Zhang, Guilin Shi, Kornel F. Ehmann, Yingguang Li, Modeling and simulation of micro-groove topography on cylindrical surface by elliptical vibration-assisted turning, Int J Adv Manuf Technol (2016) 86:1407–1424, DOI 10.1007/s00170-015-8250-4
376. Chen Zhang a,⇑, Ping Guo b, Kornel F. Ehmann b, Yingguang Li Effects of ultrasonic vibrations in micro-groove turning, Ultrasonics, Volume 67, April 2016, Pages 30-40 https://doi.org/10.1016/j.ultras.2015.12.016

2017

377. Che, D., Zhang, W., Ehmann, K., “Chip Formation and Force Responses in Linear Rock Cutting: An Experimental Study,” Journal of Manufacturing Science and Engineering JANUARY 2017, Vol. 139 / 011011-1, DOI: 10.1115/1.4033905
378. Yun Ling, Kornel F. Ehmann, Aiguo Song, “Error Modeling of a Novel Flexible Lunar Sampler,” Proc. of the Institution of Mech. Eng., Part G: Journal of Aerospace Engineering, 2016, Volume: 231 issue: 7, page(s): 1269-1280,
379. Yu He, Ping Zou, Kornel F. Ehmann, Wu-Le Zhu, Youqiang Xing, Antonio Sánchez, “Ultrasonic elliptical vibration cutting of hard materials: simulation and experimental study", The International Journal of Advanced Manufacturing Technology, (2017) 91:363–374, DOI 10.1007/s00170-016-9716-8
380. Zhu W-L, He Y, and Ehmann K, “Modeling of the effect of phase shift on cutting performance in elliptical vibration cutting,” Int. J. of Advanced Manufacturing Technology (2017) 92:3103–3115, DOI 10.1007/s00170-017-0366-2
381. Wu-Le Zhu, Member, Zhiwei Zhu, Yu He, Kornel F. Ehmann, Bing-Feng Ju, and Shizhen Li, Development of a Novel 2D Vibration-assisted Compliant Cutting

System for Surface Texturing, IEEE/ASME Transactions on Mechatronics, Vol. 22, No. 4, August 2017, pp. 1796 – 1806, DOI: 10.1109/TMECH.2017.2693996
382. Zhiwei Zhu, Suet To, Kornel F. Ehmann, Xiaoqin Zhou, “Design, analysis, and realization of a novel piezoelectrically actuated rotary spatial vibration system for micro-/nano-machining,” IEEE/ASME Transactions on Mechatronics, Vol. 22, No. 3, pp. 1227-1237, June 2017
383. Yudong Zhou, Yanling Tian, Xiubing Jing, Kornel F. Ehmann, “A novel instantaneous uncut chip thickness model for mechanistic cutting force model in micro-end-milling,” Int J Adv Manuf Technol, Int J Adv Manuf Technol (2017) 93:2305–2319, DOI 10.1007/s00170-017-0638-x
384. David Pritchet, Kornel Ehmann and Jiaxing Huang, Preliminary investigation of particle mobility enhancement in electrophoretic deposition with modulated electric fields, Article number 8001921, 1st International Conference on Manipulation, Automation and Robotics at Small Scales, MARSS 2017; Montreal; Canada; 17 July 2017 through 21 July 2017;
385. Mihajlo Popovic, Ljubodrag Tanovic, Kornel Ehmann, 2017, Cutting forces prediction: The experimental identification of orthogonal cutting coefficients, FME Transactions, (2017) 45, 459-467
386. Nicolas Martinez-Prieto, Gabriela Fratta, Jian Cao and Kornel Ehmann Deposition of Bead Arrays With Variable Diameter by Self-Focusing of Electrohydrodynamic Jets, ASME 2017 12th International Manufacturing Science and Engineering Conference collocated with the JSME/ASME 2017, 6th International Conference on Materials and Processing, Volume 2: Additive Manufacturing; Materials, Los Angeles, California, USA, June 4–8, 2017, Paper No. MSEC2017-2893, pp. V002T01A027; doi:10.1115/MSEC2017-2893
387. Sungcheul Lee, Qiang Zeng, Kornel F. Ehmann, Error modeling for sensitivity analysis and calibration of the tri-pyramid parallel robot, Int J Adv Manuf Technol, (2017) 93:1319–1332, DOI 10.1007/s00170-017-0590-9
388. Beatrice Valoppia, Zixuan Zhang, Muyang Deng, Andrea Ghiotti, Stefania Bruschi, Kornel F. Ehmann, Jian Cao, On the Fracture Characterization in Double-Sided Incremental Forming of Ti6Al4V Sheets at Elevated Temperatures, 45th SME North American Manufacturing Research Conference, NAMRC 45, LA, USA, Procedia Manufacturing 10 (2017) 407 – 416
389. Rendi Kurniawan, Tae Jo Ko, Li Chang Ping, S. Thirumalai Kumaran, Gandjar Kiswanto, Ping Guo, and Kornel F. Ehmann, Development of a two-frequency, elliptical-vibration texturing device for surface texturing, Journal of Mechanical Science and Technology, 31 (7) (2017) 3465~3473, DOI 10.1007/s12206-017-0635-x
390. Jennifer Bennett, Sarah Wolff, Gregory Hyatt, Kornel Ehmann, Jian Cao, “Thermal Effect on Clad Dimension for Laser Deposited Inconel 718,” Journal of Manufacturing Processes, Volume 28, Part 3, August 2017, Pages 550-557, Also NAMRC-2017
391. Yi Shi, Huan Zhang, Kornel F. Ehmann, Jian Cao, “Manipulation of High-Pressure Micro Water Jet by Dielectrophoretic Force,” WCMNM-2017, World Congress on Micro and Nano Manufacturing, Kaohsiung, Taiwan, March 27-30, 2017

392. Nicolas Martinez-Prieto, Jian Cao, Kornel F. Ehmann, “Effect of Polymer Concentration and Solvent Composition on the Deposition of Bead-on-a-String Structures,” Proc. 2017 WCMNM, World Congress on Micro and Nano Manufacturing, Kaohsiung, Taiwan, March 27-30, 2017.
393. Chen Zhang, Guilin Shi, Kornel Ehmann, “Investigation of hybrid micro-texture fabrication in elliptical vibration-assisted cutting,” International Journal of Machine Tools and Manufacture, Volume 120, September 2017, Pages 72-84
394. Yanjie Yuan; Xiubing Jing; Kornel F. Ehmann; Dawei Zhang, "Surface Roughness Modeling in Micro End-Milling," Int J Adv Manuf Technol (2018) 95:1655–1664, https://doi.org/10.1007/s00170-017-1278-x
395. Marco Giovannini, Huaqing Ren, Xingsheng Wang, Kornel Ehmann, “Tissue cutting with microserrated biopsy punches,” Journal of Micro- and Nano-Manufacturing, ASME December 2017, Vol. 5 / 041004-1
396. Ebot Ndip-Agbor, Kornel Ehmann and Jian Cao Automated Flexible Forming Strategy for Geometries with Multiple Features in Double-Sided Incremental Forming, J. Manuf. Sci. Eng 140(3), 031004 (Dec 21, 2017) (10 pages), Paper No: MANU-17-1246; doi: 10.1115/1.4038511

2018

397. Yanjie Yuan, Xiubing Jing, Kornel F. Ehmann, Jian Cao, Huaizhong Li, Dawei Zhang, "Modeling of Cutting Forces in Micro End-Milling," Journal of Manufacturing Processes, 31 (2018) 844–858.
398. Wentao Yan, Stephen Lin, Orion L. Kafka, Yanping Lian, Cheng Yu, Zeliang Liu, Jinhui Yana, Sarah Wolff, Hao Wu, Kornel Ehmann, Jian Cao, Gregory J. Wagner, Wing Kam Liu, “Data-driven multi-scale multi-physics models to derive process-structure-property relationships for additive manufacturing,” Computational Mechanics, (2018) 61:521–541
399. Ping Zou, Yu He, Zhiwei Zhu, Wule Zhu, Kornel F Ehmann, “Design and application of a flexure-based oscillation mechanism for surface texturing,” Journal of Manufacturing Processes 32 (2018) 298–306
400. Houichi Kitano, Kuniaki Dohda, Mitjan Kalin, Kornel F. Ehmann, “Galling Growth Analysis in Metal Forming,” Manufacturing Letters, Volume 16, April 2018, Pages 32-35
401. Yi Shi, Jian Cao, Kornel F. Ehmann, “Response of High-Pressure Micro Water Jets to Static and Dynamic Non-Uniform Electric Fields,” ASME Trans: J. of Micro and Nano Manufacturing, Volume 6, Issue 2, June 2018, Article number 021006
402. K. Malukhin and K. Ehmann, 2018, "Mathematical Modelling and Virtual Reality Simulation of Surgical Tool Interaction with Soft Tissue: a Review and Prospective," ASME Journal of Engineering and Science in Medical Diagnostics and Therapy, 1(2), pp. 020802 - 020802-23. DOI: 10.1115/1.4039417, http://medicaldiagnostics.asmedigitalcollection.asme.org/article.aspx?articleid=2673788
403. Jennifer L Bennett, Orion L Kafka, Sarah J Wolff, Puikei Cheng, Cheng Yu, Gregory Hyatt, Kornel Ehmann, Jian Cao, “Cooling rate effect on tensile

strength of laser deposited Inconel 718," 46th SME North American Manufacturing Research Conference, NAMRC 46, Texas, USA, Procedia Manufacturing 26 (2018) 912–919

404. Yi Shi, Jian Cao, Kornel Ehmann, "Dieless Water Jet Incremental Micro-Forming," Proc. of the 2018 Manufacturing Science and Engineering Conference, MSEC2018, June 18-22, 2018, College Station, TX, USA, June 18–22, 2018, ASME 2018 13th International Manufacturing Science and Engineering Conference, Volume 4: Processes, ISBN: 978-0-7918-5138-8, Paper No. MSEC2018-6490, pp. V004T03A011; 8 pages, doi:10.1115/MSEC2018-6490
405. Yi Shi, Weizhao Zhang, Jian Cao, Kornel F. Ehmann, "Incremental Micro-Forming of Stainless Steel Foil by High-Speed Water Jet," Proceedings of 2018 ISFA, 2018 International Symposium on Flexible Automation, Kanazawa, Japan, 15 - 19 July, 2018.
406. Marco Giovannini, Xingsheng Wang, Jian Cao and Kornel Ehmann, Vibration-Assisted Slicing of Soft Tissue for Biopsy Procedures, J. Med. Devices 12(3), 031006 (Jul 24, 2018) (7 pages), Paper No: MED-17-1263; doi: 10.1115/1.4040635
407. Huaqing Ren, Fuhua Li, Newell Moser, Dohyun Leem, Tiemin Li, Kornel Ehmann, Jian Cao, General contact force control algorithm in double-sided incremental forming, CIRP Annals, Volume 67, Issue 1, 2018, Pages 381-384
408. Ebot Ndip-Agbor, Jian Cao, Kornel Ehmann, "Towards Smart Manufacturing Process Selection in Cyber-Physical Systems," Manufacturing Letters, Volume 17, August 2018, Pages 1-5
409. David Pritchet, Newell Moser, Kornel Ehmann, Jian Cao, Jiaxing Huang, "Quantifying Discretization Errors in Electrophoretically-guided Micro Additive Manufacturing," Micromachines, 2018 Sep; 9(9): 447; doi:10.3390/mi9090447
410. Marco Giovannini, Huaqing Ren, Jian Cao, Kornel Ehmann, "Study on design and cutting parameters of rotating needles for core biopsy," Journal of the Mechanical Behavior of Biomedical Materials, Volume 86, October 2018, pp. 43–54
411. Demeng Che, Weizhao Zhang, Zhiwei Zhu, Kornel Ehmann, "Rock Fails in Shearing as a Tuned Critical System," International Journal of Rock Mechanics and Mining Sciences, Volume 110, October 2018, Pages 133-139
412. Xiubing Jing, Yanjie Yuan; Huaizhong Li, Kornel F. Ehmann; Dawei Zhang, "Chatter detection based on wavelet coherence function in micro end-milling process," Proc IMechE Part B: J. Engineering Manufacture, DOI: 10.1177/0954405418808214, Volume: (2018) 233 issue: 9, page(s): 1934-1945
413. Fuhua Li, Yao Jiang, Tiemin Li, Kornel F. Ehmann, "Compensation of dynamic mechanical tracking errors in ball screw drives," Mechatronics Volume 55, November 2018, Pages 27-37
414. Xingsheng Wang, Chenbin Ma; Chengyu Li; Min Kang, Ph.D.; Kornel Ehmann, "Influence of pulse energy on machining characteristics in laser induced plasma micro-machining," Journal of Materials Processing Tech. Volume 262, December 2018, Pages 85-94
415. Nicolas Martinez-Prieto, Jian Cao, Kornel Ehmann, "Effect of DC Voltage

Polarity and AC Fields on Near-Field Electrospinning," Proc. WCMNM-2018, Portoroz, Slovenia, September, 2018, DOI: 10.3850/978-981-11-2728-1_78

2019.

416. Marco Giovannini, Jian Cao, Kornel Ehmann, "Design and models of helical needle geometries for core biopsies," Journal of the Mechanical Behavior of Biomedical Materials, Journal of the Mechanical Behavior of Biomedical Materials (2019) Volume 90, February 2019, Pages 113-124
417. Mozaffar, M., Paul, A., Al-Bahrani, R., Wolff, S., Choudhary, A., Agrawal, A., Ehmann, K. and Cao, J. (2019) "Data-Driven Prediction of the High-Dimensional Thermal History in Directed Energy Deposition Processes via Recurrent Neural Networks", Manufacturing Letters, (2019) Vol. 18, October 2018, Pages 35-39
418. Samantha Webster, Sarah Wolff, Jennifer Bennett, Tao Sun, Jian Cao and Kornel Ehmann, "Porosity Formation and Meltpool Geometry Analysis Using High-speed, in situ Imaging of Directed Energy Deposition," Microsc. Microanal. 25 (Suppl 2), 2019, 2556, doi:10.1017/S1431927619013515
419. Garcia, D.J., Mozaffar, M., Ren, H., Correa, J. E., Ehmann, K., Cao, J. and You, F. (2018) "Sustainable Manufacturing with Cyber-physical Discrete Manufacturing Networks: Overview and Modeling Framework", ASME J. of Manufacturing Science and Engineering, (2019) Feb 2019, 141(2): 021013
420. Nicolas Martinez-Prieto, Gabriela Fratta, Jian Cao, Kornel F. Ehmann, "Deposition of Variable Bead Diameter Arrays by Self-Focusing Electrohydrodynamic Jets," Journal of Micro- and Nano-Manufacturing, September 2018, Vol. 6 / 031003-1, [DOI: 10.1115/1.4040450]
421. Yanjie Yuan, Dawei Zhang, Xiubing Jing, Hanyu Zhu, Wule Zhu, Jian Cao, Kornel F. Ehmann, "Fabrication of Hierarchical Freeform Surfaces by 2D Compliant Vibration-assisted Cutting," International Journal of Mechanical Sciences, (2019) Volume 152, March 2019, Pages 454-464
422. Zilin Jiang; Qiang Zeng; Osman Anderoglu; Stuart Maloy; G. Robert Odette; Kornel F. Ehmann; Jian Cao "Characterization of 14YWT Oxide Dispersion Strengthened Structural Materials under Electrically-assisted Tension," Materials Science & Engineering: A, Vol. 745 (2019) 484–494
423. Yi Shi, Weizhao Zhang, Jian Cao, Kornel F Ehmann, "Experimental Study of Water Jet Incremental Micro-Forming with Supporting Dies" Journal of Materials Processing Technology, Volume 268, June 2019, Pages 117-131
424. Ebot Ndip-Agbor, Puikei Cheng, Newell Moser, Kornel Ehmann, Jian Cao, "Prediction of Rigid Body Motion in Multi-Pass Single Point Incremental Forming'" Journal of Materials Processing Tech., 269 (2019) 117–127
425. Huaqing Ren, Jiaxi Xie, Shuheng Liao, Dohyun Leem, Kornel Ehmann, Jian Cao, "In-situ springback compensation in incremental forming," CIRP Annals - Manufacturing Technology, 68 (2019) 317–320
426. Suman Bhandari, Mahantesh Murnal, Jian Cao and Kornel Ehmann, "Comparative Experimental Investigation of Micro-channel Fabrication in Ti Alloys by Laser Ablation and Laser-induced Plasma Micro-machining," NAMRC 47 Proceedings / Procedia Manufacturing 34 (2019) 418–423

427. Sarah J. Wolff, Zhengtao Gan, Stephen Lin, Jennifer L. Bennett, Wentao Yan, Gregory Hyat, Kornel F. Ehmann, Gregory J. Wagner, Wing Kam Liu, Jian Cao, ”Experimentally validated predictions of thermal history and microhardness in laser-deposited Inconel 718 on carbon steel,” Additive Manufacturing 27 (2019) 540–551
428. Yayun Liu, Jianxin Deng, Hongzhi Yue, Ran Duan, Xuemu Li, Kornel Ehmann, “Material removal behavior in processing green Al_2O_3 ceramics based on scratch and edge-indentation tests,” Ceramics International, Volume 45, Issue 9, 15 June 2019, Pages 12495-12508
429. Leem, Dohyun; Moser, Newell H.; Ren, Huaqing; Mozaffar, Mojtaba; Ehmann, Kornel F.; Cao, Jian, “Improving the Accuracy of Double-Sided Incremental Forming Simulations by Considering Kinematic Hardening and Machine Compliance,” Procedia Manufacturing 29 (2019) 88–95
430. Fengzhou Fang, et al., “Towards Atomic and Close-to-Atomic Scale Manufacturing,” Int. J. Extreme. Manuf. 1 (2019) 012001 (33pp).
431. Jennifer Bennett, Daniel Garcia, Sara Sedivy, Gregory Hyatt, Kornel Ehmann, Fengqi You, Jian Cao, “Repairing Automotive Dies with Directed Energy Deposition: Industrial Application and Life Cycle Analysis,” Journal of Manufacturing Science and Engineering, February, 2019, Vol. 141 / 021019-1
432. Fengchun Li, Tiemin Li, Qiang Zeng, Jian Cao, Kornel Ehmann, “A calibration method for overconstrained spatial translational parallel manipulators,” Robotics and Computer Integrated Manufacturing 57 (2019) 241–254
433. Yanjie Yuan, Dawei Zhang, Xiubing Jing, Jian Cao, Kornel Ehmann, “Micro Texture Fabrication by a Non-resonant Vibration Generator,” Journal of Manufacturing Processes, 45 (2019) 732–745
434. Yu He, Zhongming Zhou, Ping Zou, Xiaogang Gao, Kornel F. Ehmann, "Study of ultrasonic vibration assisted thread turning for Inconel 718 superalloy." Advances in Mechanical Engineering, 2019, Vol. 11(10) 1–12, doi.10.1177/1687814019883772
435. Xiubing Jing, Chengjuan Yang; Fujun Wang; Kornel F. Ehmann; Yanling Tian; Zihao Pu, “Fabrication of controllable wettability of crystal silicon surfaces by laser surface texturing and silanization,” Applied Surface Science, 497 (2019) 14380
436. Sarah J. Wolff, Hao Wu, Niranjan Parab, Cang Zhao, Kornel F. Ehmann, Tao 1 Sun, and Jian Cao, “In-situ high-speed X-ray imaging of piezo-driven directed energy deposition additive manufacturing,” Scientific Reports, (2019) 9:962 | DOI:10.1038/s41598-018-36678-5
437. M. Mozaffar, E. Ndip-Agbor, S. Lin, G.J. Wagner, K. Ehmann, J. Cao, “Acceleration Strategies for Explicit Finite Element Analysis of Metal Powder-Based Additive Manufacturing Processes using Graphical Processing Units", Computational Mechanics, 2019. DOI: 10.1007/s00466-019-01685-4
438. Fengchun Li, Tiemin Li, Yao Jiang, Haitong Wang, Kornel F Ehmann, “Explicit error modeling of dynamic thermal errors of heavy machine tool frames caused by ambient temperature fluctuations,” J. of Manufacturing Processes, Volume 48, December 2019, Pages 320-338

2020

439. Xingliang He, Miao Song, Yao Du, Yi Shi, Blake A. Johnson, Kornel F. Ehmann, Yip-Wah Chung, and Q. Jane. Wang, "Surface Hardening of Metals at Room Temperature by Nanoparticle-Laden Cavitating Waterjets," Journal of Materials Processing Tech. 275 (2020) 116316
440. Yanjie Yuan, Dawei Zhang; Xiubing Jing; Kornel F. Ehmann, “Freeform Surface Fabrication on Hardened Steel by Double Frequency Vibration Cutting,” Journal of Materials Processing Tech. 275 (2020) 116369
441. Hao Wu, Ping Zou, Wentao Yan, Jian Cao, Kornel Ehmann, “Micro Wave Patterns by Vibrating-Lens Assisted Laser Machining,” Journal of Materials Processing Technology, 277 (2020) 1164242
442. Yi Shi, Zilin Jiang, Jian Cao, Kornel F. Ehmann, ”Texturing of Metallic Surfaces for Superhydrophobicity by Water Jet Guided Laser Micro-Machining,” Applied Surface Science, 500 (2020) 144286
443. M. Mozaffar, R. Bostanabad, W. Chen, K. Ehmann, J. Cao, and M.A. Bessa, “Deep learning predicts path-dependent plasticity,” PNAS, (www.pnas.org/cgi/doi/10.1073/pnas.1911815116)
444. David Pritchet, Kornel Ehmann, Jian Cao, Jiaxing Huang, “Manipulation and localized deposition of particle groups with modulated electric fields,” Micromachines, 2020, 11, 226; doi:10.3390/mi11020226
445. J. Xie, S. Bandhari, J. Cao, K. Ehmann, “Model and Simulation of Laser Pulse Absorption in Laser-Induced Plasma Micro-Machining (LIPMM),” MSEC 2020, Cincinnati, OH, June 22-26, 2020 (Accepted)
446. Y. Shi, J. Cao, K. Ehmann, “Generation of Surfaces with Isotropic and Anisotropic Wetting Properties by Curved Water Jet Guided Laser Micro-Machining,” MSEC 2020, Cincinnati, OH, June 22-26, 2020 (Accepted)
447. Zihao Pua, Xiubing Jing, Chengjuan Yang, Fujun Wang, Kornel F. Ehmann, “Wettability modification of zirconia by laser surface texturing and silanization," International Journal of Applied Ceramic Technology, 2020;17:2182–2192., 00:1–11. DOI: 10.1111/ijac.13579
448. Zhang, Chen; Song, Yun; Ehmann, Kornel, “Design and Experimental Investigation of a Parallel Flexure Hinge Based 3D Elliptical Vibration-Assisted Cutting Mechanism," Journal of Micromechanics and Microengineering, 30 (2020) 085008 (16pp)
449. Samantha Webster, Kornel Ehmann, Jian Cao, “Energy Density Comparison via Highspeed, In-situ Imaging of Directed Energy Deposition,” Procedia Manufacturing 48 (2020) 691–696
450. Nicolas Martinez-Prieto, Kornel Ehmann, Jian Cao, “Near-field electrospinning on nonconductive substrates using AC fields,” Procedia CIRP 93 (2020) 120–124
451. Shuheng Liao, Qiang Zeng, Kornel Ehmann, and Jian Cao, “Parameter Identification and Non-parametric Calibration of the Tri-Pyramid Robot,” IEEE/ASME Transactions on Mechatronics, Vol. 25, N0. 5, October 2020, pp. 2309-2317

452. Hao Wu; David Pritchet; Sarah Wolff; Jian Cao; Kornel Ehmann; Ping Zou, " A Vibration-Assisted Powder Delivery System for Additive Manufacturing - An experimental investigation," Additive Manufacturing (in print)
453. Hao Wu; Ping Zou, Jian Cao; Kornel Ehmann, "Vibrating-Lens-Assisted Laser Drilling," Journal: Journal of Manufacturing Processes, (in print)
454. Suman Bhandari, Nicolas Martinez-Prieto, Jian Cao and Kornel Ehmann "Surface Morphology and Wall Angle Comparison of Micro-Channels Fabricated in Titanium Alloy using Laser Based Processes," ASME: Journal of Micro- and Nano-Manufacturing, JUNE 2020, Vol. 8 / 021001-1, [DOI: 10.1115/1.4046283]
455. Xuedao Shu; Song Zhang; Kornel F Ehmann; Zixuan Li; Yilun Wei, "Forming and Uniformity of Shaft Parts without a Stub Bar by Axial Closed-Open Type Cross Wedge Rolling," Journal of Iron and Steel Research International volume 27, pp. 1054–1063 (2020)
456. Zihao Pua, Dawei Zhang, Xiubing Jing, Zhen Yang, Chengjuan Yang, Kornel F. Ehmann, "Fabrication of super-hydrophobic and highly oleophobic Ti-6Al-4 V surfaces by a hybrid method," Materials Research Bulletin, Volume 130, October 2020, 110915
457. Cheng, P., Liu, W. K., Ehmann, K. and Cao, J. (2020) "Enumeration of Additive Manufacturing Toolpaths Using Hamiltonian Paths", Mfg. Letters, Vol. 26, 29-32, https://doi.org/10.1016/j.mfglet.2020.09.008.
458. Jiaxi Xie, Kornel Ehmann and Jian Cao, "Simulation Of Ultrashort Laser Pulse Absorption At The Water-Metal Interface In Laser-Induced Plasma Micro-Machining (LIPMM)," ASME Transactions: Journal of Micro- and Nano-Manufacturing, (2020) (in print)
459. Yanming Zhang; Suman Bhandari; Jiaxi Xie; Zhen Zhang; Kornel Ehmann, "Investigation of the Capabilities of Transverse Magnetic Field Controlled Laser-Induced Plasma Micro-Machining," Journal of Manufacturing Science and Engineering (accepted)
460. Kuniaki Dohda, Masahito Yamamoto, Chengliang Hu, Laurent Dubar, Kornel F. Ehmann, "Galling phenomena in metal forming," Friction ISSN 2223-7690, https://doi.org/10.1007/s40544-020-0430-z CN 10-1237/TH (in print)
461. Yanjie Yuan, Dawei Zhang, Hanyu Zhu, Kornel F. Ehmann, "Machining of Micro Grayscale Images on Freeform Surfaces by Vibration-assisted Cutting," J. Manufacturing Processes, Volume 58, October 2020, Pages 660-667
462. Jennifer Bennett, Haiguang Liao; Tilo Buergel; Gregory Hyatt; Kornel Ehmann; Jian Cao, "Towards Bi-Metallic Injection Molds by Directed Energy Depositions,", Manufacturing Letters, 27 (2021) 78–81
463. Jennifer Glerum, Jennifer Bennett, Kornel Ehmann, Jian Cao "Mechanical properties of hybrid additively manufactured Inconel 718 parts created via thermal control after secondary treatment processes," Journal of Materials Processing Technology, 291 (20210 117047 (in print)
464. Samantha Webster, Hui Lin, Fred Carter, Kornel Ehmann, Jian Cao, "Physical Mechanisms in Hybrid Additive Manufacturing: A Process Design Framework," Journal of Materials Processing Tech., Volume 291, May 2021, 117048
465. Adrian Lindenmeyer, Samantha Webster, Michael Zaeh, Kornel F. Ehmann, Jian Cao, "Template-Bayesian Approach for the Evaluation of Melt Pool Shape

and Dimension of a DED-Process from In-Situ X-Ray Images," CIRP Annals - Manufacturing Technology 70 (2021) 183-186

INVITED LECTURES AND TALKS:

1. McMaster University, Hamilton, Canada -- "Machine Tool Dynamics Analysis through Time Series Methods," June (1981).
2. University of California-Berkeley -- "Forecasting Control of Chatter in Turning," May (1981).
3. Ford Motors (Detroit) --"Adaptive Control for Robotics--Speed and Position Accuracy," April (1984).
4. IBM Manufacturing Technology Institute (New York) -- "On-Line Modeling Using the DDS Approach," June (1984).
5. University of Wisconsin-Madison (Manufacturing Systems Engineering Seminar) -- "Forecasting Compensatory Control of Form Accuracy -- A Systems Approach," February (1984).
6. IBM (Endicott) -- "Drilling Research at the University of Wisconsin-Madison," October (1984).
7. Northwestern University (Evanston) -- "Compensatory Control of Form Accuracy in Machining," November (1984).
8. University of Florida (Gainesville) -- "Machine Tool Dynamics and Accuracy," December (1984).
9. IBM Manufacturing Technology Institute (New York) -- "Applications of Time Series Modeling in Manufacturing," December (1984).
10. University of Cincinnati (Cincinnati) -- "Dynamics and Accuracy of Metal Cutting Machine Tools," May (1985).
11. University of Illinois (Urbana-Champaign) --" Machine Tool Accuracy and Dynamics," November (1985).
12. The University of Illinois at Chicago (Chicago) -- "Stochastic Analysis and Control of Machine Tools," November (1986).
13. Beijing Agricultural Engineering University Beijing, PRC) -- "Time Series Methods for Structural Dynamics Analysis," August (1988).
14. Huazhong University of Science and Technology (Wuhan, PRC)--Stochastic Dynamics and Control of Machine Tool and Robotic Systems," (series of 10 lectures) September (1988).
15. Syracuse University (Syracuse) -- "Surface Topography Control in Die Manufacture," October (1989).
16. The University of Michigan (Ann Arbor) -- "Accuracy Issues in the Manufacture of Sculptured Die Surfaces," November (1989).
17. Pennsylvania State University (University Park) -- "Problems in the Manufacture of Sheet Metal Dies," March (1990).
18. Auburn University (Auburn) -- "Active Compensation for Precision Machining," November 1990.
19. Auburn University (Auburn) -- "Time Series Methods for Identification and Control in Metal Cutting," November 1990.
20. Ford Motor Co. (Detroit) -- " On the Feasibility of a New Generation of Precision Self-Correcting Multi-axis Machines," February 1991.
21. The University of Michigan, (Ann Arbor) -- "Microhole Drilling," May 1991.

22. IIT (Chicago) -- "Geometry and Mechanics of Micro-Hole Drilling." November 1991.
23. University of Kentucky (Lexington) -- "Geometry and Mechanics of Micro-Hole Drilling," March 1992.
24. Tulon Co. (Gardena, CA) -- "Micro-drilling Research at Northwestern," November 1992.
25. Seoul National University (Seoul, Korea) -- "Surface Topography Control in the Manufacture of Sculptured Die Surfaces," June 1993.
26. Korea Advanced Institute of Science & Technology (Taejon, Korea) -- "Geometry and Mechanics of Micro-hole Drilling," June 1993.
27. Korea Advanced Institute of Science & Technology (Taejon, Korea) -- "Active Compensation for Precision Machining," June 1993.
28. Yeungnam University (Teagu, Korea) -- Active Compensation for Precision Machining," June 1993.
29. Universidad De Los Andes (Bogota, Colombia) -- A series of 8 seminars on manufacturing research and education, August, 1993.
30. Wright State University (Dayton, OH) -- “Geometry and Mechanics of Micro-drilling," February, 1994.
31. Northwestern University, Tribology Center, (Evanston, IL) -- "Engineered Surfaces," April 1994.
32. Notre Dame University (South Bend, MI) -- "Geometry, Mechanics, and Performance of Micro-drilling Processes," November 1994.
33. Seoul National University (Seoul, Korea) -- "Machining Dynamics," (Short Course for Graduate Students), June 1995.
34. Seoul National University (Seoul, Korea) -- "Geometry, Mechanics and Performance of Micro-hole Drilling Processes," June 1995.
35. Yeungnam University (Taegu, Korea) -- "An Overview of Research in the Metal Cutting and Machine Tool Laboratory at Northwestern," June 1995.
36. Pohang Institute of Science and Technology (POSTECH) (Pohang, Korea) -- "Dynamics of Metal Cutting Processes," June 1995.
37. National Cheng Kung University (Tainan, Taiwan) -- "An Overview of Research in the Metal Cutting and Machine Tool Laboratory at Northwestern," June 1995.
38. Marquette University (Milwaukee, WI) -- "An Overview of Research in the Metal Cutting and Machine Tool Laboratory at Northwestern," February 1996.
39. Penn State University (College Park, PA) – “An Overview Of Research In The Advanced Manufacturing Laboratory At Northwestern” October 1997.
40. “Assessment and Development of Spade Drill Technology,” American Tools, Inc., July 1998.
41. “Stability and Accuracy of Manufacturing Processes,” Seminar, University of Michigan Ann Arbor, Dec 4, 1998.
42. “Geometry and Mechanics of Micro-hole Drilling,” Assiut University, Assiut, Egypt, March, 20, 1999.
43. “Stability and Accuracy of Manufacturing Processes,” Assiut University, Assiut, Egypt, March, 21, 1999.
44. “Chatter in Rolling,” Southern Methodist University, Dallas, TX, April 9, 1999.

45. “Error Analysis and Compensation of a Stewart-Platform Based Machine Tool,” Georgia Institute of Technology, Atlanta, GA, April 15, 1999.
46. “An Overview of Research in the Advanced Manufacturing Laboratory at Northwestern,” Technical University of Budapest, Budapest, Hungary, November 3, 1999.
47. “Error Analysis and Compensation of a Stewart-Platform Based Machine Tool,” University of Washington Seattle, January 18, 2000.
48. “Metal Cutting and Machine Tool Related Research in the Advanced Manufacturing Laboratory at Northwestern,” GM, Warren, MI, January 28, 2000.
49. "University-Based Research in Machining and Machine Tool Systems: Some Current Trends, Emerging Work, and Future Directions," Association for Manufacturing Technology (AMT) Forum, Orlando, FL, March 3, 2000.
50. “An Overview of Research in the Advanced Manufacturing Laboratory at Northwestern,” Computer and Automation Research Institute (SZTAKI), Hungarian Academy of Sciences, Budapest, Hungary, October 12, 2000.
51. “Mechanistic Model for Dynamic Forces in Micro-Drilling,” ASME/IMECE, New York, November 2001.
52. “Panel on Packaging Issues in Micro-integrated Nano-systems,” ASME/IMECE, New York, November 2001.
53. “Manufacturing Engineering Education; A Unified Approach,” The Collaborative Manufacturing Summit, May 29, 2002, Dallas, TX.
54. “Opportunities and Challenges for Mechanical Micro/Meso-Scale Manufacturing,” (**Keynote** presentation), Fifth International Conference on Frontiers of Design and Manufacturing, July 9-13, 2002, Dalian, China.
55. “Micro/Meso-scale Mechanical Manufacturing,” Gifu University, Gifu, Japan, July 18, 2002.
56. “Present and Future of Micro/Meso-scale Mechanical Manufacturing,” Center for Cooperative Research, Gifu, Japan, July 18, 2002.
57. “An Overview of Micro/Meso-scale Mechanical Manufacturing Process Development,” Pacific Industrial, Co, Ltd., Gifu, Japan, July 19, 2002.
58. “Processes and Machines for Micro/Meso-scale Mechanical Manufacturing,” PMC, Tai-Chung, Taiwan, July 23, 2002.
59. “Overview of Ongoing Research in the Advanced Manufacturing Laboratory at Northwestern,” Chung-Yuan University, Chung-Li, Taiwan, July 24, 2002.
60. “Micro/meso-scale Mechanical Manufacturing – Opportunities and Challenges, March 28, WPI
61. “State-of-the-Art in Micro Machining Research,” SME Workshop on “Precision Micro-machining Fundamentals,” Minneapolis, MN, June 10, 2003, and Precision Micro Machining Technology & Applications Technical Conference,” June 11-12.
62. “Micro/Meso-Scale Machining and Machine Tool System Development,” IMECE – Panel presentation, November 2003, Washington, DC.
63. “Micromachining Research with Industrial Applications,” IMTS Manufacturing Conferenece – SME, Session on Micro Machining Technologies, Chicago, September 2004.
64. “Micromanufacturing,” Presentation to the House Science Committee, Washington, D.C., April 2005.

65. “Micromachining Research and Development,” Workshop on Micromanufacturing Fundamentals, Minneapolis, May 2005.
66. “Summary of Findings of the World Technology Evaluation Center’s (WTEC) Study on Micromanufacturing,” MicroManufacturing 2005 – Technical Conference and Tabletop Exhibit, SME, Minneapolis, May 2005.
67. “Micromanufacturing: About the Study; Summary and Recommendations,” at the “Panel on Micro Manufacturing – a WTEC Study,” Thirty-third North American Manufacturing Research Conference, New York, May 2005.
68. “Report on Micro-Manufacturing R&D Worldwide (World Technology Evaluation Center 2005 Study on Micromanufacturing), MicroManufacturing Workshop, Rockford, Illinois, July 2005.
69. “Micro/Meso-Scale Machine Tool Research and Development,” Microfactory – International Workshop, Jeju Island, Korea, July 2005.
70. “Micromanufacturing Research and Development at Northwestern University,” Korea Institute of Machinery and Metals (KIMM), Daejon, Korea, July 2005.
71. “Micro-Manufacturing – A Synopsis of R&D Worldwide and at Northwestern,” University of Wisconsin-Madison, WI, September 9, 2005.
72. “Micro-manufacturing Research and Development – State-of-the-art in the U.S.,” (**Keynote** presentation),1st Topical Meeting on Desktop MEMS and Nano-factories (TMMF 2005), Tsukuba, Japan, October 17, 2005.
73. “Micro-manufacturing Research and Development – State-of-the-art in the U.S.,” (**Keynote** presentation), International Forum on Desktop Factories (DTF 2005), Suwa, Japan, October 20, 2005.
74. “Development of Micro/meso Machine Tools,” Presentation on the panel “Micro-manufacturing – Outlook for the future,” ASME-IMECE, Orlando, FL, November 10, 2005.
75. “Micro-Manufacturing: -- An Overview,” Brainstorming Session for an Advanced Manufacturing Research Agenda , NSF, Arlington, VA, January 20, 2006.
76. “Micro-Manufacturing Research and Technology,” “Overview of Micromanufacturing Processes,” “Metrology for Micro-Manufacturing Applications,” and “Microfactory Concepts,” Workshop on Microsystems Manufacturing Technologies, CMERI – Central Mechanical Engineering Research Institute, Durgapur, India, January 30-February 1, 2006.
77. “Microfabrication Methods (based on “Traditional” processes),” “Shape Memory Alloy based Micro/Meso-Scale Monolithic Manipulator (mMM),” and “Development of High Speed Fluid Bearing Spindles for Meso-Scale Machine Tools (mMTs),”, Lecture Series on Micro Manufacturing, Indian Institute of Technology (IIT) Kanpur, India, February 4-6, 2006.
78. “State-of-the-Art of Micro-manufacturing Research and Development,” (**Keynote** presentation) International Precision Assembly Seminar IPAS’2006, Bad Hofgastein, Austria, February 19-22, 2006.
79. “Current State of Micro/Meso-Scale Machining and Machine Tool Systems Research,” and “MicroManufacturing Research and Development – A State-of-the-Art Assessment,” MicroManufacturing 2006 Conference and Exhibits, Los Angeles, CA, March 29-30, 2006.

80. “Overcoming Barriers in the Manufacture of Small Components and Devices,” (Invited presentation), NIBIB/NHLBI/NSF Workshop on “Improving Health Care Accessibility Through Point-of-Care Technologies,” April 11-12, 2006.
81. “A State-of-the-Art Assessment of Micro-manufacturing,” Symposium on Nano Rapid Prototyping for Photonic Structures, Western Carolina University, Cullowhee, April 27-28, 2006
82. “Overview of the Technology and Business Case for Micro-Manufacturing,” Boston Scientific Corporation – Corporate Metals Technology Team – Mid-year Meeting, Pacific Grove, CA, May 11, 2006.
83. “Study on Advanced Manufacturing Research and Technology,” World Technology Evaluation Center (WTEC) – NSF Workshop, Washington, DC, June, 6, 2006.
84. “Overview of the Technology and Business Case for Micro Manufacturing,” Micro Manufacturing Engineering - New opportunities in manufacturing,” (**Keynote** presentation) Dublin, Ireland, June 13, 2006.
85. “Current Status of World Wide Micro Manufacturing Research,” (**Keynote** presentation) The 7th International Conference on Frontiers of Design and Manufacturing, Guangzhou, China, June 19-22, 2006.
86. “Micro-Manufacturing Research at Northwestern – Cutting and Manipulation,” National Taiwan University, Taipei, Taiwan, July 3, 2006
87. “Micro-Manufacturing – A Synopsis of R&D Worldwide and at Northwestern,” 2006 International Micro-Manufacturing Workshop, Chung Yuan Christian University, Chung Li, Taiwan, July 4, 2006.
88. “Recent Developments in Meso-scale Machine Tools (mMTs),, 2nd International Workshop on Next-Generation Microfactory System, KIMM, Daejon, Korea, July 6, 2006.
89. “Report on: WTEC Study on Advanced Manufacturing Research and Technology,” 2006 NSF/DMI Grantees and Research Conference, St. Louis, MO, July 25-27,2006.
90. “Micromaching Research and Development – A State-of-the-art Assessment,” Competitive Manufacturers Conference at IMTS2006: New and Emerging Technologies: Micro Machining Technologies, September 6-8, 2006.
91. “Micromanufacturing Research and Development – A State-of-the-Art Assessment,” MicroManufacturing 2006 Conference and Exhibits, Hoffman Estates, IL, March 13-15, 2007.
92. “Overview of Micro-Meso Mechanical Manufacturing R&D in USA –From Basic Research to Commercialization,” Joint Tampere Workshop on Micro and Desktop Manufacturing, June 8, 2007.
93. “A Synopsis of Automotive Engineering Research in the U.S. and at Northwestern University,” Nagoya Institute of Technology, Nagoya, Japan, August 27, 2007
94. “Micro-Drilling and Micro-Machining Mechanics and Practice,” Nachi-Fujikoshi Corp., Toyama, Japan, August 28, 2007
95. “Micro-Drilling and Micro-Machining Mechanics and Practice,” Sugino Machine Limited, Toyama, Japan, August 29, 2007

96. "A Synopsis of U.S. Micro-manufacturing Research and Development Activities and Trends," Proc. 3rd International Conference on: Multi-Material Micro-manufacture (4M), October 3-5, 2007, Borovets, Bulgaria (**Keynote** presentation)
97. "Point-of-Need Manufacturing," International Workshop on Futuristic Shaping Technology at Meso, Micro and Nano Scales, Center for Advanced and Futuristic Manufacturing, IIT Kanpur, October 9-12, 2007 (Invited presentation)
98. "Point of Need Manufacturing – a New Paradigm for Manufacturing," Workshop on Futuristic Manufacturing Opportunities and Challenges, Thrust – "Mahatma Gandhi Mission, College of Engineering, Aurangabad, India, November, 26, 2007
99. "A Review of Ongoing Research in Futuristic Manufacturing at Northwestern University," Workshop on Futuristic Manufacturing Opportunities and Challenges, Thrust – "Mahatma Gandhi Mission, College of Engineering, Aurangabad, India, November 26, 2007
100. "Micro-Cutting and -Manipulation Processes and Machines," IIT-Bombay, November 27, 2007
101. "Development of a Monolithic Micro/Meso-scale Manipulator," International Conference on Advanced Manufacturing Technologies – ICAMT-2007, CMERI – Durgapur, November 29-30, 2007 (**Keynote** presentation)
102. "Miniaturized Processes and Machines for Micro-cutting and –manipulation," Purdue University, December 6, 2007
103. "Micro/Meso-scale Processes and Machines for Machining and Manipulation," University of Michigan, Ann Arbor, December 5, 2007
104. "Research Priorities for Advanced Manufacturing Technologies and Applications," Automotive Innovation Summit 2008 – From made in China to made by China," Shanghai Jiao Tong University, Shanghai, December 12-14, 2007, (**Keynote** presentation)
105. "Topics in Micromanufacturing," Institut für Werkzeugmaschinen und Fabrikbetrieb - Technische Universität Berlin, February 7-8, 2008. (Invited: 6 hours of lectures)
106. "Advances in Micro/Meso-scale Machining and Machine Tool R&D," 2008 Workshop on Advanced Technologies for New Materials, Mold Design/Analysis, Molding Process, Equipment and Inspection, CYCU, 4th ~ 8th July, Jung Li, Taiwan, (Invited presentation)
107. "Micromanufacturing – Bits and Pieces-," Seminar, SIMTech, Singapore, August 28, 2008.
108. "A Synopsis of Micro-Manufacturing R&D in AML," National Taiwan University, Taipei, Taiwan, July 13, 2009.
109. "Micro/Meso-scale Processes and Machines for Machining and Manipulation," 2009 International Workshop on Precision Machine Tools and Applications, NCHU, Taichung, Taiwan July 14, 2009. (Invited)
110. "Overview of Laser-based Micro-Manufacturing Processes," 2009 Workshop on Advanced Technologies for New Materials, Mold Design/Analysis, Molding Process, Equipment and Inspection, Christian Chung Yuan University (CYCU), July 10 - 14, 2009. (Invited).
111. "Micromanufacturing R&D at Northwestern," Bengal Engineering and Science University (BESU) – January 8, 2009.

112. “Micro-textured Engineered Surfaces,” IUWMF-2009, Kharagpur – January 9-11, 2009
113. “Micro/Desktop Factories,” 3rd Indo US Workshop on Fabrionics, University of California, Irvine, June 28-29, 2009. (Invited)
114. “Micro-textured Engineered Surfaces,” NSF - Energy Manufacturing Workshop Honolulu, June 23, 2009. (Invited)
115. “Micro/Meso-scale Processes and Machines,” KAIST, Daejeon, Korea, February 25, 2010, (Invited seminar)
116. “Futuristic Manufacturing Korea Institute of Machinery & Materials (KIMM), Daejeon, Korea, February 25, 2010.
117. “A Manufacturing Bridge for the Nano- and Macro-Worlds - Micro-Scale Engineered Surfaces for the 21st Century,” Korea Institute of Machinery & Materials (KIMM), Daejeon, Korea, February 26, 2010.
118. “Micromanufacturing R&D at Northwestern,” Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia, March 22, 2010 (Seminar)
119. “Micromanufacturing – Past, Present and Future,” (A series of 6 lectures to students and faculty), Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia, March 23-25, 2010
120. “A Study on Extreme Functional Integration – Monolithic Meso-scale Manipulator,” International Symposium on Flexible Automation (ISFA-2010), July 12-14, 2010, Tokyo, Japan (**Keynote**)
121. “Plausible R&D Opportunities in Advanced Manufacturing,” Sugino Machine Limited, Toyama, Japan, July 21, 2010 (Invited)
122. “Engineered Surfaces with Defined Micro-textures,” – International Symposium on Advanced Abrasive Technologies - ISAAT-2010, Taipei, Taiwan, September 20, 2010. (**Keynote**)
123. “A Synopsis of R&D at the Advanced Manufacturing Laboratory at Northwestern,” National Taiwan University, September 20, 2010 (Invited seminar)
124. “Engineered Surfaces with Defined Micro-textures,” Chung Yuan Christian University, Chung Li, Taiwan, September 21, 2010.
125. “Engineered Surfaces with Defined Micro-textures,” Metal Industries Research and Development Center (MIRDC), Kaohsiung, Taiwan, September 23, 2010.
126. “Engineered Surfaces with Defined Micro-textures,” All India Machine Tool Design and Research (AIMTDR’2010) Conference, Visakhapatnam, India, December 13-15, 2010, (**Keynote**)
127. “Micro-Manufacturing Processes for Micro/Nano-Scale Engineered Surfaces,” An International Conference On Precision, Meso, Micro, and Nano Engineering, December 10-11, 2011, College of Engineering, Pune, India (**Keynote**)
128. “Generation of Multi-Scale High Density Surface Textures” ICCMM2011, IIT-Guwahati – December 15-16, 2011, Guwahati, India (**Keynote**).
129. “A Synopsis of MicroManufacturing R&D at Northwestern,” Harbin Institute of Technology (HIT), Harbin, P.R. China, November 12, 2012
130. “A Synopsis of MicroManufacturing R&D at Northwestern,” North Eastern University, Shenyang, P.R. China, November 14, 2012
131. “An Overview of Current Machining and Machine Tool Systems Research in the U.S,” North Eastern University, Shenyang, P.R. China, November 16, 2012

132. "Generation of Multi-scale Engineered Surface Textures," 3M-NANO 2013, 26-30 August 2013, Suzhou, China (**Keynote**)
133. "Engineered Surfaces – Manufacture and Applications," 5th International Symposium on "Surfactants in Tribology, 20th International Symposium on Surfactants in Solution (SIS-2014), University of Coimbra, Coimbra, Portugal, June 22-27, 2014
134. "Generation and Applications of Engineered Surface Textures," International Conference of Manufacturing Technology Engineers (ICMTE) Jeju, Korea, October 1-2, 2014 (**Keynote**)
135. "Additive Manufacturing: Limitations and Prospects," "Tec de Monterrey Additive Manufacturing Workshop – TECAM-2014", Tecnológico de Monterrey, Monterrey, Mexico, Nov 23-25, 2014. (**Keynote**)
136. "Micro-Textured Engineered Surfaces," 5th International and 26th All India Manufacturing Technology, Design and Research Conference - AIMTDR 2014, IIT Guwahati, Guwahati, India, December 12-14, 2014. (**Keynote**).
137. "Investigations of Rock Cutting Mechanics through Embedded Thin Film Sensor Arrays in PCD Inserts," NSF Workshop on Advanced Manufacturing for the Oil and Gas Energy Industry, Houston, TX, November 2-4, 2014 (Invited)
138. "Micro-Manufacturing Processes for Engineered Surfaces," Florida International University, February 6, 2015 (Invited)
139. "Micro/Meso-scale Manufacturing Processes, Machines and Applications," University of Texas, Austin, November 21, 2014 (Invited)
140. "Micro-Manufacturing Processes for Engineered Surfaces," International Forum on MicroManufacturing & Biofabrication'15 (IFMM'15 & IFBF'15), May 18-21, 2015, Toyama, Japan (**Keynote**)
141. "Micro/Meso-scale Manufacturing Processes, Machines and Applications," International Forum on MicroManufacturing & Biofabrication'15 (IFMM'15 & IFBF'15), Symposium "Application of Micro-Nano Technology to Pharma-Medical and Manufacturing Industries" May 18-21, 2015, Toyama, Japan (**Keynote**)
142. "Micro-Manufacturing Processes for Engineered Surface Textures," UCLA May 29, 2015 (Invited)
143. "Micro/Meso-scale Manufacturing Processes, Machines and Applications," Tianjin University, China, June 17, 2015 (Invited seminar)
144. "Micro/Meso-scale Manufacturing Processes, Machines and Applications," Nanjing Agricultural University, Nanjing, China, September 21, 2015 (Invited seminar)
145. "Present Status and Future Trends of Manufacturing R&D in the U.S.," Nanjing Agricultural University, Nanjing, China, September 22, 2015 (Invited)
146. "Generation and Applications of Engineered Surface Textures," Nanjing Agricultural University, Nanjing, China, September 23, 2015 (Invited)
147. "Generation and Applications of Engineered Surface Textures," Nanjing University of Aeronautics and Astronautics, Nanjing, China, September 24, 2015 (Invited seminar)
148. Connectivity for Optimized Industrial Control Systems, Panelist, Bosch Summit: Connected Manufacturing, 17 September 2015 18 September, Roberts Hall, Carnegie Mellon University

149. "U.S. Initiatives on Advanced Manufacturing," Workshop for Intelligent Manufacturing Technology, Industrial Technology Research Institute, Taiwan, September 30, 2015 (Invited)
150. "Manufacturing R&D at Northwestern Micro-Textured Engineered Surfaces and Related Ongoing Activities," Politecnico Di Milano, Milano, Italy, October 7, 2015 (Invited)
151. "Towards Multiscale Manufacturing," Workshop: Future Trends in Machine Tools and Manufacturing, EMO (Trade show) Milano 2015, Milano, Italy, October 8, 2015 (Invited)
152. "Generation and Applications of Engineered Surface Textures," Texas A&M University, November 4, 2015 (Invited seminar).
153. "Multi-material and Scalable Surface Texturing via Laser-Induced Plasma Micro-Patterning," International Conference on Precision, Meso, Micro and Nano Engineering, COPEN^{9}, December 10-12, 2015, IIT-Bombay (**Keynote**)
154. "Micro/Meso-scale Manufacturing Processes, Machines and Applications," Metal Industries Research & Development Centre (MIRDC, Kaohsiung, Taiwan, September 29, 2015, (Invited)
155. "Laser-Induced Plasma Micro-Patterning." nanoMan2016, The 5th International Conference on Nanomanufacturing, August 15-17, 2016, Macau, China (**Keynote**)
156. "Accelerating Advanced Manufacturing in the U.S.," National Chung Hsing University, Taichung, August 23, 2016, (Invited)
157. "Micro/Meso-scale Manufacturing Processes, Machines and Applications (R&D Activities in the Advanced Manufacturing Processes Laboratory)," The Chinese University of Hong Kong, Department of Mechanical and Automation Engineering, Hong Kong, August 18, 2016, (Invited seminar)
158. "Micro/Meso-scale Manufacturing Processes, Machines and Applications (R&D Activities in the Advanced Manufacturing Processes Laboratory)," The Hong Kong Polytechnic University, Department of Industrial and Systems Engineering, Hong Kong, August 19, 2016, (Invited Seminar)
159. "Micro/Meso-scale Manufacturing Processes, Machines and Applications (R&D Activities in the Advanced Manufacturing Processes Laboratory)," Zhejiang University of Technology, Hangzhou, October 2016, (Invited Seminar + 3 other talks)
160. "Micro/Meso-scale Manufacturing Processes, Machines and Applications (R&D Activities in the Advanced Manufacturing Processes Laboratory)," Politecnico Di Milano, Milano, Italy, October 28, 2016 (Invited)
161. "Micro/Meso-scale Manufacturing Processes, Machines and Applications (R&D Activities in the Advanced Manufacturing Processes Laboratory)," University of Belgrade, Department of Mechanical Engineering, October 31, 2016
162. "Advanced Processes for Micro- and Surface-engineering Applications," AIMTDR-2016, December 16, 2016, University of Pune, India, (**Keynote**)
163. "Advanced Manufacturing R&D in the U.S. and at Northwestern," University of Pune, India, December 15, 2016, (Invited)
164. Manufacturing of Miro and Nano Products," Industry 4.0 – Smart and Intelligent Products, June 7-9, 2017, Belgrade, Serbia (**Keynote**)

165. Multi-scale and Hybrid Cutting Processes and Machines - Modeling and Control – (ISNM Summer School, Tianjin, July 14, 2017 – 8 lectures) Tianjin University, China
166. “Micro-Manufacturing Processes and Machines for the Generation of Micro-Textured Engineered Surfaces,” Harbin Institute of Technology, Harbin, China, October 2017 (four 90 min presentations).
167. “Micro-textured Engineered Surfaces,” North Eastern University, Shenyang, China, October 2017, (Invited)
168. “Micromanufacturing Processes for Surface Texturing and Modification,” Nanjing University of Science and Technology, Nanjing, January 2018 (Invited seminar)
169. “Engineered Surfaces, Advanced Processes and Digital Manufacturing - A Précis of R&D in the Advanced Manufacturing Processes Laboratory -“, Nanjing University of Aeronautics & Astronautics – NUAA, Nanjing, January 23 - 26, 2018 (series of Invited presentations)
170. “Micro-textured Engineered Surfaces,” NSK, Yokohama, Japan, July 23, 2018 (Invited)
171. “Generation and Applications of Micro-textured Engineered Surfaces,” IDEMITSU, Toyama, Japan, July 24, 2018 (Invited)
172. “Micro-textured Engineered Surfaces,” Fujii Die Co., Koriyama, Japan, August 24, 2018 (Invited)
173. “From Advanced Multi-scale Processes to Digital Manufacturing,” International Expert Forum, September 8, 2019, Nanjing University of Aeronautics and Astronautics (NUAA) (Invited)
174. 2nd ZIJIN Salon on Sustainable Manufacturing- Integration of Technology and Information (ZIJIN Salon 2019), September 9-11, 2019, Nanjing University of Aeronautics and Astronautics (NUAA) (Speaker & moderator) (Invited).
175. “A Summary of Activities in the Advanced Manufacturing Processes Laboratory,” September 12, 2019, Nanjing University of Science and Technology, (Invited)
176. “Hybrid Multi-scale Manufacturing Processes and Systems - Manufacturing R&D at Northwestern,” Northeastern University – Shenyang, October 8, 2019. (Invited)
177. “Micro-textured Engineered Surfaces,” The 18th International Manufacturing Conference, IMCC 2019, October 9-12, 2019, Shenyang, China (**Keynote**)
178. “Hybrid Multi-scale Manufacturing Processes and Systems - Manufacturing R&D at Northwestern,” National Taiwan University, October 29, 2019. (Invited)
179. “The Changing Landscape of Manufacturing,” Smart Machinery & Intelligent Manufacturing Forum, National Chung Hsing University, October 31, 2019. (Invited)
180. “From Advanced Multi-scale Processes to Digital Manufacturing,” AUTOMATION 2019, The 16th International Conference on Automation Technology, National Taiwan University of Science and Technology (NTUST), November 23, 2019. (**Keynote**)
181. “Micro/Meso-scale Manufacturing Processes, Machines and Applications,” International Symposium for Micro- and Nano-Manipulation (ISoMNM), 19-20 December 2019, Guangzhou (**Keynote**)

182. “Hybrid Multi-scale Manufacturing Processes and Systems - A Virtual Tour of Northwestern Manufacturing -, ISFA 2020, International Symposium on Flexible Automation, July 8 – 9, 202 (**Keynote**)
183. “Modeling of Hybrid Multi-scale Manufacturing Processes,” ISSPM 2020, The Second International Symposium on Simulation and Process Modelling, August 29-30, 2020 Shenyang, China (**Keynote**)