

Andrew Olewnik

School of Engineering and Applied Sciences
University at Buffalo

140M Capen Hall
Buffalo, New York, USA 14260
office: (716) 645-2630
mobile: (716) 308-0090

106 Parkhaven Drive
Amherst, New York
USA 14228
(716) 828-8528

olewnik@buffalo.edu

EDUCATION

PHD IN MECHANICAL ENGINEERING, University at Buffalo, September 2005

University at Buffalo SUNY Presidential Fellow

Dissertation: *Validation of Design-Decision Support Models* (advisor: Kemper Lewis)

Topics of study: validation criteria for design-decision support models, potential flaws in decision support models, empirical study of House of Quality, method for improving validity of House of Quality, simulation-based validation

MS IN MECHANICAL ENGINEERING, University at Buffalo, May 2002

University at Buffalo SUNY Presidential Fellow

Thesis: *A Comprehensive Decision Support Framework for Flexible Systems* (advisor: Kemper Lewis)

Topics of study: design of flexible systems (re-configurable systems), relationship to open engineering systems, measuring flexibility, demand modeling in design, application of Decision-Based Design principles, decision framework for the design of flexible systems

BS IN MECHANICAL ENGINEERING, University at Buffalo, May 2000

EMPLOYMENT HISTORY

ASSISTANT PROFESSOR OF RESEARCH, September 2019 to present
Department of Engineering Education, University at Buffalo

DIRECTOR OF EXPERIENTIAL LEARNING PROGRAMS, September 2013 to present
School of Engineering and Applied Sciences, University at Buffalo

RESEARCH ASSISTANT PROFESSOR (VOLUNTEER), September 2006 to August 2019
Department of Mechanical and Aerospace Engineering, University at Buffalo

RESEARCH ASSOCIATE, April 2007 to December 2013
New York State Center for Engineering Design and Industrial Innovation (NYSCEDII), University at Buffalo

POSTDOCTORAL RESEARCH ASSOCIATE, April 2006 to April 2007
New York State Center for Engineering Design and Industrial Innovation (NYSCEDII), University at Buffalo

GRADUATE RESEARCH ASSISTANT, January 2000 to June 2005
Design of Open Engineering Systems Laboratory - Department of Mechanical and Aerospace Engineering, University at Buffalo

ENGINEERING INTERN, June 1999 – June 2000
Comptek Amherst Systems, Buffalo, NY

HONORS AND AWARDS

Journal of Mechanical Design 2017 Editors' Choice Paper Award Honorable Mention
2005 Tau Beta Pi - NY Nu Chapter Teaching Assistant of the Year
2004 ASME –DETC/NSF Design Essay Competition Award

PUBLICATIONS

ARCHIVED JOURNALS

- Olewnik, A., Yerrick, R., Simmons, A., Lee, Y.H., and Stuhlmiller, B., 2020, "Defining Open-Ended Problem Solving Through Problem Typology Framework," *International Journal of Engineering Pedagogy*, 10(1): 7-30, doi: 10.3991/ijep.v10i1.11033.
- Ghosh D., **Olewnik A.** and Lewis K., 2018, "Application of Autoencoders in Cyber-Empathic Design," *Design Science*, 4, doi:10.1017/dsj.2018.11.
- Ghosh D., **Olewnik A.**, and Lewis K., 2017, "Application of Feature-Learning Methods Toward Product Usage Context Identification and Comfort Prediction," *Journal of Computing and Information Science Engineering*, 18(1):011004-011004-10, doi:10.1115/1.4037435.
- Mesmer L., and **Olewnik A.**, 2018, "Enabling Supplier Discovery Through a Part-Focused Manufacturing Process Ontology," *International Journal of Computer Integrated Manufacturing*, 31(1):87-100, doi: 10.1080/0951192X.2017.1357837.
- Ghosh D., **Olewnik A.**, Lewis K., Kim J., and Lakshmanan A., 2017, "Cyber-Empathic Design: A Data-Driven Framework for Product Design," *Journal of Mechanical Design*, 139(9):091401-091401-12, doi:10.1115/1.4036780.
- Cormier P., **Olewnik A.**, and Lewis K., 2014, "Toward a Formalization of Affordance Modeling for Engineering Design," *Research in Engineering Design*, 25(3):259-277.
- Ferguson S., **Olewnik A.** and Cormier P., 2014, "A Review of Mass Customization Across Marketing, Engineering and Distribution Domains Toward Development of a Process Framework", *Research in Engineering Design*, 25(1):53-74.
- Ghosh D. and **Olewnik A.**, 2013, "Computationally Efficient Imprecise Uncertainty Propagation," *Journal of Mechanical Design*, 135(5):051002-051002-12.
- Olewnik A.** and Hariharan V.G., 2010, "Conjoint-HoQ: Evolving a Methodology to Map Market Needs to Product Profiles," *International Journal of Product Development*, 10(4):338-368.
- Olewnik A.** and Lewis K., 2008, "Limitations of the House of Quality to Provide Quantitative Design Information," *International Journal of Quality & Reliability Management*, 25(2):125-146.
- Olewnik A.** and Lewis K., 2006, "A Decision Support Framework for Flexible System Design," *Journal of Engineering Design*, 17(1):75-97.
- Olewnik A.** and Lewis K., 2005, "On Validating Engineering Design Decision Support Tools," *Journal of Concurrent Engineering Design Research and Applications*, 13(2):111-122.
- Olewnik A.**, Brauen T., Ferguson S. and Lewis, K. 2004, "A Framework for Flexible Systems and its Implementation in Multiattribute Decision Making," *Journal of Mechanical Design* 126(3):412-419.

REFEREED CONFERENCE PROCEEDINGS

- Stuhlmiller, B., Olewnik, A., and Yerrick, R., 2019, "Thinking About Design Thinking: Toward Capturing Students' Metacognition in Solving Design Problems," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Anaheim, CA, August 18-21, DETC2019-98280.
- Ghosh D., **Olewnik A.**, and Lewis K., 2017, "An Integrated Framework for Predicting Consumer Choice Through Modeling of Preference and Product Use Data," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Cleveland, OH, August 6-9, DETC2017-68010.
- Ghosh D., **Olewnik A.**, and Lewis K., 2016, "Product In-Use Context Identification Using Feature Learning Methods," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Charlotte, NC, August 21-24, DETC2017-59645.

- Ghosh D., **Olewnik A.**, and Lewis K., 2016, "Cyber-Empathic Design: A Data-Driven Framework for Product Design," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Charlotte, NC, August 21-24, DETC2017-59642.
- Mesmer L., and **Olewnik A.**, 2015, "Development of a Part-Focused Manufacturing Process Ontology: Exploring Use and Applications," ASME Design Engineering Technical Conferences & Computers and Information in Engineering, Boston, MA, August 2-5, DETC2015-47591.
- Renz J.**, and **Olewnik A.**, 2015, "A Pilot Study of Customer Requirement Derivation Methods Among Engineering Students," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Boston, MA, August 2-5, DETC2015-47584.
- Olewnik A.**, and English K., 2015, "Development of a Methodology for Knowledge Discovery in Engineering Design," Proceedings of the 2015 Industrial and Systems Engineering Research Conference, Nashville, TN, May 30 – June 2.
- Lewis K.**, **Moore-Russo D.**, **Cormier P.**, **Olewnik A.**, **Kremer G.**, **Tucker C.**, **Simpson, T.**, and **Ashour O.**, 2013, "The Assessment of Product Archaeology as a Platform for Contextualizing Engineering Design," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Portland, OR, August 4-7, DETC2013-13075.
- Cormier P.**, **Olewnik A.** and **Lewis K.**, 2013, "Towards a Formalization of Affordance Modeling in the Early Stages of Design," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Portland, OR, August 4-7, DETC2013-13170.
- Ghosh D. and **Olewnik A.**, 2012, "Computationally Efficient Imprecise Uncertainty Propagation in Engineering Design and Decision Making," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Chicago, IL, August 12-15, DETC2012-70419.
- Nichols A.** and **Olewnik A.**, 2012, "A Pilot Study of Engineering Design-Decision Methods in Practice," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Chicago, IL, August 12-15, DETC2012-70407.
- Van Horn D.**, **Olewnik A.** and **Lewis K.**, 2012, "Design Analytics: Capturing, Understanding and Meeting Customer Needs Using Big Data, ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Chicago, IL, August 12-15, DETC2012-71038.
- Ferguson S.**, **Olewnik A.** and **Cormier P.**, 2011, "Exploring Marketing to Engineering Information Mapping in Mass Customization: A Presentation of Ideas, Challenges and Resulting Questions," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Washington, DC, August 28-31, DETC2011-48742.
- Ferguson S.**, **Olewnik A.**, **Cormier P.**, **Kansara S.** and **Malegonkar P.**, 2010, "Mass Customization: A Review of the Paradigm Across Marketing, Engineering and Distribution Domains in Search of Opportunities," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Montreal, Canada, August 15-18, DETC2010-27853.
- Back C.**, **Redding R.** and **Olewnik A.**, 2010, "Development of Infrastructure and Applications for Using the Nintendo Wii Remote in Engineering Design," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Montreal, Canada, August 15-18, DETC2010-28695.
- Cormier P.**, **Olewnik A.** and **Lewis K.**, 2008, "An Approach to Quantifying Design Flexibility for Mass Customization in Early Design Stages," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Brooklyn, NY, August 3-6, DETC2008-49343.
- Olewnik A.** and **Lewis K.**, 2007, "Conjoint-HoQ: A Quantitative Methodology for Consumer-Driven Design," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Las Vegas, NV, September 4-7, DETC2007-35568.
- Olewnik A.** and **Lewis K.**, 2005, "Can a House Without a Foundation Support Design," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Long Beach, CA, September 24-28, DETC2005/DAC-84765.

Olewnik A., Hammill M. and Lewis K. 2004, "Education and Implementation of an Approach for New Product Design: An Industry-University Collaboration," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Salt Lake City, UT, September 28 - October 2, DETC2004-57320.

Olewnik A. and Lewis K. 2003, "On Validating Design Decision Methodologies," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Chicago, IL, September 2-6, DETC03/DTM-48669.

Olewnik A., Brauen T., Ferguson S. and Lewis K. 2001, "A Framework for Flexible Systems and its Implementation in Multiattribute Decision Making," ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Pittsburgh, PA, September 9-12, DETC2001/DTM-21703.

BOOK CHAPTERS

Olewnik A. and Lewis K., 2007, "Development and Use of Design Method Validation Criteria," in Decision Making in Engineering Design, W. Chen, L. Schmidt, and K. Lewis, Editors, ASME Press.

INVITED TALKS

Olewnik A. and English K., 2012, "Knowledge-Driven New Product Development", seminar hosted by The Center for Industrial Effectiveness, June 26.

Olewnik A. and English K., 2012, "Creating a Vision for Information Infrastructure in New Product Development", UB Partners Day, June 13.

Olewnik A., 2011, "The House of Quality: Approach & Value| Potential Flaws| Derived Methods," Cameron Compression Systems, March 15.

Olewnik A., 2007, "Rapid Prototyping: A Beginner's Guide," ASME Buffalo-Section Meeting, May 30.

Olewnik A., 2005, "Engineering Design: Understanding an Evolving Human Centered Process," Pennsylvania State University, April 7.

CONFERENCE PRESENTATIONS AND PROJECT POSTERS

Olewnik, A., Yerrick, R., Lee, Y.H., and Simmons, A., 2019, "Engineering Epiphany: One Student's Experience with Problem Typology," NSF EEC Grantees Conference, Arlington, VA, October 21-23.

Tomita M.R., **Olewnik A.**, and Ghosh D., 2018, "Prediction for Future Falls in High-Risk Community-Dwelling Older Adults," *Archives of Physical Medicine and Rehabilitation*, 99(10), doi.org/10.1016/j.apmr.2018.07.029, presented at the ACRM 2018 Annual Conference, Dallas, TX, September 28-October 3.

Tomita M.R., **Olewnik A.**, Ghosh D., Ahrens L., Clark E., Grzebinski K., and Haering C., 2017, "Novel Accurate Approach Toward Predicting Frail Older Adults' Falls Within Three Months," *Innovation in Aging*, 1(Issue suppl_1), doi.org/10.1093/geroni/igx004.3324, presented at the IAGG 2017 World Congress of Gerontology and Geriatrics, San Francisco, CA, July 23-27.

Olewnik A., 2017, "Engineering Intramurals: Exploring a Mechanism for Extracurricular Projects with Engineering Undergrads," 4th Annual SUNY Applied Learning Conference, October 4-5, Niagara Falls, NY, Available: <https://www.suny.edu/applied-learning/conference/>

Vacanti J., **Olewnik A.**, and English K., 2016, "e-FMEA (Electronically-Enabled Failure Modes and Effects Analysis), project poster presented at Center for e-Design IAB Meeting, Gaithersburg, MD, October 4-6.

Vacanti J., **Olewnik A.**, and English K., 2016, "e-FMEA (Electronically-Enabled Failure Modes and Effects Analysis), project poster presented at Center for e-Design IAB Meeting, Chicago, IL, April 5-7.

Olewnik A., 2015, "Study vs Practice: Development of an Experiential Learning Program at a Research Institution," TYESA Annual Meeting, Buffalo, NY, November 5.

Olewnik A., 2014, "Development of a Methodology for Knowledge Discovery in Engineering Design," Advanced Design and Manufacturing Impact Forum (ADMIF), ASME Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Buffalo, NY, August 17-20.

- Olewnik A.**, Dargush G., Peng X., and Deng G., 2013, "Instituting a Retroactive KBE Philosophy for Transition to Lean Production," project poster presented at Center for e-Design IAB Meeting, Provo, UT, October 1-3.
- Olewnik A.**, English K., Mosa M., and Sen C., 2013, "KTI Inventory: Developing a Methodology for Knowledge Discovery in Engineering Design," project poster presented at Center for e-Design IAB Meeting, Provo, UT, October 1-3.
- Olewnik A.**, and Dargush G., 2013, "Instituting a Retroactive KBE Philosophy for Transition to Lean Production," project poster presented at Center for e-Design IAB Meeting, Ames, IA, April 2-4.
- Olewnik A.**, English K., and Sen C., 2013, "KTI Inventory: Developing a Methodology for Knowledge Discovery in Engineering Design," project poster presented at Center for e-Design IAB Meeting, Ames, IA, April 2-4.
- McLaughlin R., and **Olewnik A.**, 2012, "KTI Inventory: Developing a Knowledge-Based Design Information Mapping Tool," project poster presented at Center for e-Design IAB Meeting, Buffalo, NY, October 9-11.
- McLaughlin R., and **Olewnik A.**, 2012, "KTI Inventory: Developing a Knowledge-Based Design Information Mapping Tool," project poster presented at Center for e-Design IAB Meeting, Amherst, MA, April 17-19.
- Olewnik A.**, English K., and Ghosh D., 2011, "Exploration of Multimodal Data Capture and Fusion in a Design Review Environment," project poster presented at Center for e-Design IAB Meeting, Provo, UT, October 11-13.
- Olewnik A.**, English K., Lewis K., Cormier P., and Devendorf E., 2011, "eNPD: Development of an e-Enabled New Product Development Process," project poster presented at Center for e-Design IAB Meeting, Provo, UT, October 11-13.
- Olewnik A.**, English K., Lewis K., Cormier P., and Devendorf E., 2011, "eNPD: Development of an e-Enabled New Product Development Process," project poster presented at Center for e-Design IAB Meeting, Blacksburg, VA, March 23-25.
- Olewnik A.**, English K., and Ghosh D., 2011, "Development of a Virtual Environment for Collaborative Product Development," project poster presented at Center for e-Design IAB Meeting, Blacksburg, VA, March 23-25.

GRANTS & CONTRACTS

- NSF EEC Award 1830793: "Research Initiation: Investigating the Role of Problem Typology in Helping Engineering Undergrads Effectively Communicate Their Experience" (Principal Investigator), September 2018 – August 2020, \$199,642.**
- NSF CMMI Award 1435479: "Cyber-empathic Design: A Framework for Mapping User Perceptions to Design Features Through Embedded Sensors" (Principal Investigator), September 2014 – December 2017, \$342,927.
- NSF I/UCRC Center for e-Design project with Dresser-Rand: "e-FMEA (Electronically-Enabled Failure Modes and Effects Analysis)" (Principal Investigator), November 2015 – October 2016, \$25,000.
- NSF I/UCRC Center for e-Design project with Dresser-Rand: "KTI Inventory: Development of a Methodology for Knowledge Discovery in Engineering Design" (Principal Investigator), June 2013 – April 2015, \$60,000.
- NSF I/UCRC Center for e-Design project with Cameron: "Optimization and knowledge representation in high reliability component manufacturing" (Principal Investigator), October 2012 – September 2013, \$30,000.
- NSF I/UCRC Center for e-Design project with Cameron Compression: "Development of an e-Enabled New Product Development Process" (Principal Investigator), May 2010 – June 2012, \$60,000.
- UB-CAT with Oral Health Innovations: "Prototype Development of an Automated Dental Cleaning Device for Persons with Limited Motor Skills" (Principal Investigator), April 2009 – January 2010, \$65,000.

UB-CAT with Oral Health Innovations: “Design of an Oral Cleaning Device” (Principal Investigator), August 2008 – April 2009, \$20,826.

NYSCEDII Product Development with ReTread Products, Inc.: “Manufacturing Process Selection for Tire Logs” (Principal Investigator), January 2008 – February 2008, \$2,156.

NYSCEDII Product Development with BBX Racing, Ltd.: “Conceptual Design of Hub Stands for Racing Vehicles: Engineering Analysis” (Principal Investigator), January 2008 – April 2008, \$3,644.

NYSCEDII Product Development with AccuMed Technologies: “Solid Works Weider Belt Design” (Principal Investigator), July 2007, \$6,464.

NYSCEDII Product Development with Shopt to Cook, Inc.: “Design of a Bar Code Scanner Shield” (Principal Investigator), February 2007 – March 2007, \$6,848.

NYSCEDII Product Development with S.A. Day Manufacturing Company, Inc.: “Ring Feeding and Sorting Device Redesign” (Principal Investigator), June 2006 – October 2006, \$15,692.

TEACHING EXPERIENCE

Micro-credential: **Engineering Intramurals**, Fall 2014-present

Problem/project-based extracurricular experience that brings together students from multiple departments to solve problems from industry and the community. Students apply as they would to any engineering job opportunity, and if selected work collaboratively over a ten-week period toward understanding and solving the problem. Students are able to earn a micro-credential in the form of a digital badge based on sustained contribution to the project, as well as a series of reflective activities that reinforce the interplay of technical and professional competencies in project success.

EAS 493/494: **Interdisciplinary Senior Design Sequence**, Fall 2016-present

Capstone engineering design sequence comprised of a 1-credit seminar and 3-credit design course. The seminar focuses on project management and systems engineering principles to prepare students for effective interdisciplinary development. Design problems have industry relevance, incorporate projects directly from local industry, or are self-defined. The course structure follows a formal design process, similar to what students will see in industry, and involves students from two or more departments.

EAS 496: **Engineering Co-op**, Fall 2017-present

Co-op students work in technical assignments in industry, with emphasis on practical application of engineering coursework. The course goal is to provide valuable experience for students, while making a positive contribution to the employer. Course assignments help students understand the relationship between technical and professional competencies and the transition from theory to practice.

MAE 494: **Senior Design Project**, Spring 2007, 2009-2015

Capstone mechanical engineering design class in which students design a product or system in a semester long design project. Design problems have industry relevance or incorporate projects directly from local industry. The course is structured around a formal design process, similar to what students will see in industry.

MAE 277: **Introduction to Mechanical Engineering Practice**, Fall 2011-2012

An overview of mechanical engineering in industry; introduces engineering design concepts, reverse engineering, case studies (including a hands-on product dissection project), basics of manufacturing processes, elementary modeling of engineering systems, and technical communications.

MAE 449/549: **Design of Complex Engineering Systems**, Spring 2006-2007

Introduces students to formal notions of design theory and practice, and provides opportunity to consume and critique design research through class discussions and journal articles. The course provides opportunity to develop critical perspective on design research and to expand upon current notions of the engineering design process. Students exposed to design tools and exercises that provide perspective on the challenges of designing complex systems in an increasingly global economy.

MAE 311: **Machines and Mechanisms I**, Fall 2003-2009, Spring 2006, 2008, Summer 2010-2013

Introduces theories for predicting failure of mechanical components in both static and fatigue loading applications. Students also introduced to the design and failure of common components in mechanical engineering design, including bolts, screws, welds, springs and gears.

MAE 412: Machines and Mechanisms II, Spring 2002

Introductory course on dynamic analysis and kinematic synthesis of planar mechanisms. Course integrated mechanism design software (Working Model) through a course design project.

STUDENT RESEARCH ADVISEMENT

PHD DISSERTATION

Dipanjan Ghosh, December 2016

M.S. THESIS

Nicholas Eadie, June 2018

Julian Renz, August 2013

Dipanjan Ghosh, May 2012

Aaron Nichols, May 2012

Phil Cormier, May 2008 (co-advisement)

M.S. PROJECT

Dennis Poshulek, February 2018

Lucas Mesmer, May 2014

Mohammad Mosa, December 2013

Julie Trybuskiewicz, May 2011

Vinayak Kane, May 2010

Christopher Back, June 2009

COMMITTEE MEMBER

Arjun Prakash, M.S. Project, June 2015

Brian Literman, M.S. Thesis, February 2013

David Van Horn, M.S. Thesis, February 2013

Jonathan Schmiedel, M.S. Project, April 2012

Ameya Wadekar, M.S. Project, August 2011

Nikhil Sapre, M.S. Project, August 2011

Vishwa Sundaram, M.S. Thesis, May 2011

Bryan Dolan, M.S. Thesis, May 2007

Matt Devendorf, M.S. Thesis, May 2007

UNDERGRADUATE ADVISEMENT

UB Honors Program: Destiny Diaz, Tarun Kumar, Chris Chungbin, Laura Zeigler, Eric Barone

CSTEP: Corinna Joseph, Jordan Jorgensen

NSF Research Experiences for Veterans: Ryan McLaughlin

NSF Research Experiences for Undergraduates: Jamie Asbach, Alex Elhage, Varukumar Vruddhula

UG Research Assistants: Jonathan Bessette, Rei Yoshinaga, Dan Snitzer, Alex Borsuk, Srivatsa Mahesh, Peter Cormier, Jessica Wong, Richard Redding

SERVICE

NATIONAL/INTERNATIONAL

Reviewer for: ASME IDETC/CIE Conferences, ASME Journal of Manufacturing Science and Engineering, ASME Journal of Mechanical Design, Central European Journal of Operations Research, Journal of Engineering Design (2019), Journal of Professional Issues in Engineering Education and Practice (2019), Journal of Research in Engineering Design, International Journal of Quality and Reliability Management, Production Planning and Control, Applied Mathematical Modeling, International Journal of Product Development

Design Engineering Conference Chair, 2019 ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Anaheim, CA, August 4-7.

Design Engineering Conference Program Chair, 2018 ASME International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Quebec City, Canada, August 26-29.

UNIVERSITY

UB Micro-Credential Review Committee Member, February 2018 – present

UB SUNY Works Committee Member, March 2015 – present

Professional Skills Lab Work Group Member, June 2016 – September 2016

DEPARTMENTAL/UNIT

SMART CoE Education Group Chair, January 2017 – present

SEAS Scholarship Reviewer, September 2015 – present: (David M. Benenson Memorial Scholarship, Matthew Grappone Scholarship, SEAS Student Leaders Scholarship, Felix Smist Scholarship, Watts Engineering Scholarship, Cobham Mission Systems Scholarship)

ISE Strategic Planning Committee Member, October 2018 – December 2018

SEAS First Year Seminar Committee Member, March 2015 – September 2015

Advisor, Tau Beta Pi Engineering Honor Society, NY Nu Chapter, September 2014 – May 2018

Advisor, UB Design Club, September 2014 – May 2018

COMMUNITY

Member, Advisory Board, WNY Invention Convention, November 2012 – 2016

Judge, Project Lead the Way, West Seneca West School District, 2011 – 2013

PROFESSIONAL DEVELOPMENT

4th Annual SUNY Applied Learning Conference, Niagara Falls, NY, October 4-5, 2017.

NSF ESD/SYS Program Workshop and Grantees Meeting: Future Directions in Engineering Design and Systems Engineering, Georgia Institute of Technology, Atlanta, GA, January 20-22, 2017.

Model-Based Enterprise Summit, NIST, Gaithersburg, MD, April 12-14, 2016.

SUNY Applied Learning Workshop, Syracuse, NY, September 18-19, 2014.

Pivot Points Seminar – Advances in Design, Prototyping and Manufacturing, Toronto, Canada, April 20, 2006.

Decision-Based Design, Sixteenth Workshop National Science Foundation, Chicago, IL, September 6, 2003.

Decision-Based Design, Fifteenth Workshop National Science Foundation, Birmingham, AL, January 10, 2003.

Decision-Based Design, Fourteenth Workshop National Science Foundation, Montreal, Canada, October 2, 2002.

Decision-Based Design, Eleventh Workshop National Science Foundation, Tampa, FL, January 7, 2001.

Decision-Based Design, Tenth Workshop National Science Foundation, Baltimore, MD, September 5, 2000.

PROFESSIONAL AFFILIATIONS

American Society of Mechanical Engineers

American Society of Engineering Education

Golden Key, International Honor Society

Pi Tau Sigma, Mechanical Engineering Honor Society

Tau Beta Pi, National Engineering Honor Society

CONSULTING

Fisher-Price, Inc., East Aurora, NY
Multisorb Technologies, Inc., West Seneca, NY
Praxair, Inc., Tonawanda, NY
Ultra-Scan Corporation, Amherst, NY
Roach, Brown, McCarthy, & Gruber, P.C., Buffalo, NY