

Dr. John L. Irwin EdD
Michigan Technological University
Manufacturing & Mechanical Engineering Technology
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Education

EDD, Wayne State University, 2005. GPA 4.00
Major: Curriculum and Instruction
Dissertation Title: Engaging teachers and students in problem-based simulation activities

MS, Ferris State University, 1992. GPA 3.87
Major: Occupational Education
Supporting Areas of Emphasis: Business and Industry Training
Dissertation Title: An Investigation into CADD in the Saginaw area from the Viewpoint of Mechanical Drafting and Design Employers

BS, Ferris State University, 1984. GPA 3.87
Major: Technical Education
Minor: Athletic Coaching
Supporting Area of Emphasis: Tool Design

AAS, Michigan Technological University, 1982. GPA 3.45
Major: Mechanical Design Engineering Technology

Professional Experience – (Academia 32 yrs., Industry 6.5 yrs.)

Michigan Tech Academic Faculty Positions – (14 yrs.)

Professor – Manufacturing & Mechanical Engineering Technology (2019-Present). – **1 yr.**
Professor – School of Technology, MET (2015-2019). – **4 yrs.**
Associate Professor – School of Technology, MET (2006-2015). – **9 yrs.**

Previous Academic Faculty Positions – (18 yrs.)

Technology Department Faculty/Professor/Design Engineering Technology, Mott Community College. (August 15, 1993 - August 15, 2006). - **13 yrs.**

Adjunct Faculty/Manufacturing Engineering Technology/Teacher Education, Ferris State University. (January 1, 2004 - May 1, 2006).

Engineering Computer Drafting Instructor, Saginaw Career Complex. (August 15, 1988 - August 15, 1993). – **5 yrs.**

Adjunct Faculty/Design Engineering Technology, Mott Community College. (September 1, 1990 - May 1, 1993).

Industry Professional – (6.5 yrs.)

Computer Simulation Consultant, ICRC Engineering, TACOM/TARDEC. (July 1998 – September 1998). - **.2 yrs.**

Designer/Part-Time/Process Engineering Department, Thomson Saginaw Ball Screw Company. (January 1, 1989 - September 1, 1993). – approx. equiv. **2 yrs.**

Senior Designer, Sigma Air Conditioning Inc. (presently known as: AITransit. (June 1986 - August 1988). – **2.3 yrs.**

Layout Drafter, Thermotron Industries. (May 1984 - May 1986). - **2 yrs.**

Administrative Experience – (26 yrs.)

Department Chair, MMET. (July 2020 - Present). - **1yr.**

Associate/Assistant Chair, MMET. (August 2019 - June 2020). – **1yr.**

Director, Research and Innovation in STEAM Education Institute (RISE) Institute. (September 2018 - Present). – **3 yrs.**

Program Chair, School of Technology - Mechanical Engineering Technology. (August 2008 - May 2019). – **11 yrs.**

Program Chair, School of Technology - Industrial Technology. (August 2006 - May 2010). – **4 yrs.**

Head Cross Country Coach, Mott Community College. (August 1997 - October 2006).

Manufacturing Simulation Technology Program Coordinator, Mott Community College. (August 2002 - August 2006). – **4 yrs.**

Design Engineering Technology Program Coordinator, Mott Community College. (August 1998 - August 2002). – **4 yrs.**

Consulting

Education and Training Specialist, Irwin Technical Training, Inc. (May 1994 - Present).

Training/Education, 3D4EDU, LLC, Sault St Marie, Michigan. (June 27, 2016 - June 30, 2016).
Compensated

Training/Education, 3D4EDU, LLC, Iron Mountain, Michigan. (June 20, 2016 - June 23, 2016).
Compensated

Training/Education, 3D4EDU, LLC, Hancock, Michigan. (June 13, 2016 - June 16, 2016).
Compensated

Training/Education, 3D4EDU, LLC, Troy, Michigan. (June 21, 2015 - June 25, 2015).
Compensated

Academic, Michigan Department of Education, Detroit, Michigan. (September 2013 - October 2013). Pro Bono

Technical/Professional Work, Meritor Corporation, Troy, Michigan. (February 13, 2013 - May 10, 2013). Compensated

Training/Education, ASEE/Siemens Go PLM, Boston, Mass. (September 28, 2012 - September 30, 2012). Compensated

Academic, CCISD, Calumet, Michigan. (September 2011 - April 2012). Compensated

Technical/Professional Work, Pine Mountain Music Festival, Hancock, Michigan. (June 2011 - July 2011). Compensated

Training/Education, NSF/Mott Community College, Mott Community College/Sinclair Community College. (June 2006 - August 2006). Compensated

Management Consulting, NSF/Mott Community College, Mott Community College. (August 1, 2001 - July 31, 2006). Compensated

Technical/Professional Work, NSF/Mott Community College, Mott Community College. (August 1, 2001 - July 31, 2006). Compensated

Training/Education, Workforce Development Act/Mott Community College, Mott Community College. (June 2003 - June 2006). Compensated

Training/Education, NSF/Mott Community College/Tech Prep, Mott Community College. (June 1999 - June 2006). Compensated

Licensures and Certifications

ABET PEV, ETAC, SME. (May 15, 2016 - Present).

GO PLM Certification NX7.5, Siemens PLM Software. (June 1, 2012 - Present).

Full Vocational Authorization, State of Michigan, Department of Education. (November 1991 - Present).

Continuing Certificate, State of Michigan, Department of Education. (October 1991 - Present).

Professional Memberships

(June 2019 - Present). Director, Engineering Technology Council, American Society of Engineering Educators.

(July 2018 - Present). Chair - Accreditation Committee, Society of Manufacturing Engineers.

(January 2013 - Present). Accreditation Committee Member, Society of Manufacturing Engineers.

(June 2012 - Present). Committee Member-Engineering Design Graphics Division, American Society of Engineering Educators.

(December 2009 - Present). Committee Member-Graphics & Manufacturing Divisions, Association of Technology, Management and Applied Engineering.

(August 2009 - Present). Senior Member, Society of Manufacturing Engineers.

(October 2007 - Present). Member-At-Large, Epsilon Pi Tau.

(June 2002 - Present). Committee Member-Engineering Technology Division, American Society of Engineering Educators.

(July 2016 - July 2018). Vice Chair - Accreditation Committee, Society of Manufacturing Engineers.

(January 2016 - January 2017). National Science Teachers Association.

(November 2012 - November 2016). President, Manufacturing Division, Association of Technology, Management and Applied Engineering.

(June 2014 - June 2016). Chair - Mechanical Engineering Technology Leadership Committee, American Society of Mechanical Engineers.

(June 2012 - June 2016). Board on Education Member, American Society of Mechanical Engineers.

(June 2012 - June 2014). Vice Chair/Secretary-Mechanical Engineering Technology Department Head Executive Committee, American Society of Mechanical Engineers.

(December 2010 - November 2012). Vice President, Manufacturing Division, Association of Technology, Management and Applied Engineering.

(December 2009 - November 2011). Co-Coordinator Distance and Online Learning Focus Group, Association of Technology, Management and Applied Engineering.

(October 2006 - November 2009). Committee Member-Graphics and University Divisions, National Association of Industrial Technology.

(October 2007 - November 2009). Region 1 Director-University Division, National Association of Industrial Technology.

(August 2008 - October 2008). Member-Contributions Committee, Upper Peninsula Power Company.

(September 2005 - August 2007). American Technical Education Association.

Development Activities Attended - 2006-Present (*4 Diversity, **34 Teaching & *40 Technical)**

- **MTU Center for Teaching & Learning, "CTL Instructional Award Presentation Series," Michigan Technological University, Houghton, MI, United States. (October 22, 2019).
- *Workshop, "Advocates & Allies," The Advance Team, Houghton, Michigan. (October 18, 2019).
- ***Conference Attendance, "Engineering Technology Leadership Institute," ASEE - ETD and ETC, Alexandria, VA. (October 9, 2019 - October 12, 2019).
- **MTU Center for Teaching & Learning, "CTL Coffee Chat: Quality Online Learning at Michigan Tech," Michigan Technological University, Houghton, MI, United States. (October 1, 2019).
- **MTU Center for Teaching & Learning, "quality online learning coffee chat," Michigan Tech University, Houghton, MI, US. (October 1, 2019).
- **Tutorial, "Concur Training," Michigan Tech University, Houghton, MI, US. (September 17, 2019).
- **Webinar, "The Nation's Report Card Technology and Engineering Literacy," National Assessment of Educational Progress (NAEP), Washington, DC. (August 13, 2019).
- **Workshop, "Applying the QM Rubric (APPQMR) workshop," Quality Matters, Annapolis, MD,

- USA. (July 30, 2019 - August 13, 2019).
- **Graduate Course, "ED 5101-foundations of online teaching," Michigan Technological University, Houghton, MI, US. (May 11, 2019 - June 28, 2019).
 - ***Conference Attendance, "ASEE Annual Conference," ASEE, Tampa, Florida. (June 17, 2019 - June 19, 2019).
 - **Workshop, "Department Chairs Conclave," ASEE, Tampa, Florida. (June 16, 2019).
 - **MTU Center for Teaching & Learning, "CTL Instructional Award Presentation Series - John Irwin: "Assessment, and Testing, and Grading... Oh My!"," Michigan Technological University, Houghton, MI, United States. (September 20, 2018).
 - ***Conference Attendance, "EDGD Midyear Conference," ASEE, Montego Bay, Jamaica. (January 3, 2018 - January 6, 2018).
 - **MTU Center for Teaching & Learning, "Reading and Reflection Circle," CTL/PHC, Houghton, Michigan. (September 11, 2017 - December 18, 2017).
 - ***Conference Attendance, "International Mechanical Engineering Congress & Exposition," ASME, Phoenix, Arizona. (November 13, 2016 - November 17, 2016).
 - **Conference Attendance, "2016 NSTA Annual Conference," NSTA, Nashville, Tennessee, USA. (March 31, 2016 - April 3, 2016).
 - ***Conference Attendance, "International Mechanical Engineering Congress & Exposition," ASME, Houston, Texas. (November 15, 2015 - November 18, 2015).
 - ***Conference Attendance, "2015 ATMAE Convention," Association of Technology Management and Applied Engineering, Pittsburgh, Pennsylvania, USA. (November 11, 2015 - November 13, 2015).
 - ***Conference Attendance, "**The Big M Manufacturing Convergence**," SME, Detroit, Michigan. (May 31, 2015 - June 4, 2015).
 - ***Webinar, "**Creating Disruption in Additive Manufacturing**," SME, online. (March 17, 2015).
 - ***Conference Attendance, "2015 ME Education Leadership Summit," ASME, Newport Beach, California. (March 14, 2015 - March 15, 2015).
 - ***Webinar, "**Additive Manufacturing - 3D Printing Fundamentals**," SME, online. (February 19, 2015).
 - ***Conference Attendance, "2014 ATMAE Convention," Association of Technology Management and Applied Engineering, St. Louis, Missouri, USA. (November 19, 2014 - November 22, 2014).
 - ***Conference Attendance, "International Mechanical Engineering Congress & Exposition," ASME, Montreal, Canada. (November 15, 2014 - November 18, 2014).
 - ***Conference Attendance, "Engineering Technology Leadership Institute," ASEE ETD, Arlington, Virginia, USA. (October 9, 2014 - October 10, 2014).
 - ***Conference Attendance, "2014 ASEE Annual Conference," ASEE, Indianapolis, Indiana, USA. (June 15, 2014 - June 18, 2014).

- ***Seminar, "Accreditation Committee and MER Community Advisors meetings," SME, Detroit, Michigan. (June 7, 2014 - June 8, 2014).
- ***Webinar, "**ABET Accreditation and Manufacturing Engineering Technology Programs: Impact of Changes**," SME, online. (May 16, 2014).
- ***Conference Attendance, "2014 ME Education Leadership Summit," ASME, San Juan, Puerto Rico. (March 13, 2014 - March 15, 2014).
- ***Conference Attendance, "2013 ATMAE Convention," Association of Technology Management and Applied Engineering, New Orleans, Louisiana, USA. (November 19, 2013 - November 22, 2013).
- ***Workshop, "**Rapid Prototyping Stratasys FDM Hardware & Insight Software**," Stratasys Inc., Eden Prairie, Minnesota, USA. (September 24, 2013 - September 26, 2013).
- ***Conference Attendance, "2013 PACE Annual Forum," Siemens PLM Connection, Pasadena, California, United States. (July 22, 2013 - July 25, 2013).
- ***Conference Attendance, "EDGD Mid-Year Conference," ASEE, Limerick, Ireland. (November 18, 2012 - November 20, 2012).
- ***Conference Attendance, "2012 ATMAE Convention," Association of Technology Management and Applied Engineering, Nashville, Tennessee, USA. (November 14, 2012 - November 17, 2012).
- ***Conference Attendance, "2012 ASEE Annual Conference," ASEE, San Antonio, Texas, USA. (June 10, 2012 - June 13, 2012).
- ***Conference Attendance, "Americas User Conference 2012," Siemens PLM Connection, Las Vegas, Nevada, United States. (May 7, 2012 - May 10, 2012).
- **Conference Attendance, "2012 ABET Symposium," ABET, St. Louis, Mo, USA. (April 21, 2012).
- *Workshop, "Diversity Literacy - Legal Aspects," NSF-STRIDE, Houghton, Mi, USA. (November 15, 2011).
- ***Conference Attendance, "2011 ATMAE Convention," Association of Technology Management and Applied Engineering, Louisville, Kentucky, USA. (November 9, 2011 - November 12, 2011).
- **Workshop, "Summer Reading Discussion Leader Workshop," MTU/Center for Teaching, Learning and Faculty Development, Houghton, Michigan, USA. (August 24, 2011).
- **Workshop, "Teaching Perspectives," MTU/Center for Teaching, Learning and Faculty Development, Houghton, Michigan, USA. (August 23, 2011 - August 24, 2011).
- **Workshop, "Lesson Observation System," SAMPI Western Michigan University, Grand Rapids, Mi, USA. (May 16, 2011 - May 17, 2011).
- ***Conference Attendance, "Americas User Conference 2011," Siemens PLM Connection, Las Vegas, Nevada, United States. (May 2, 2011 - May 6, 2011).
- **Seminar, "2010-2011 Title II, Part A(3) Improving Teacher Quality Competitive Grants Program Technical Assistance," State of Michigan, Department of Education, Lansing, Michigan, USA.

(April 11, 2011).

- ***Conference Attendance, "2010 ATMAE Convention," Association of Technology Management and Applied Engineering, Panama City Beach, Florida, USA. (October 25, 2010 - October 29, 2010).
- **Workshop, "Perspectives Instructor Workshop," Cognitive and Learning Sciences, Houghton, Michigan, USA. (October 19, 2010).
- *Workshop, "STRIDE training," NSF, Houghton, Mi, USA. (October 11, 2010).
- **Workshop, "Perspectives Instructor Workshop," Cognitive and Learning Sciences, Houghton, Michigan, USA. (October 8, 2010).
- **Workshop, "Summer Reading Discussion Leader Workshop," MTU/Center for Teaching, Learning and Faculty Development, Houghton, Michigan, USA. (August 25, 2010).
- **Workshop, "Teaching Perspectives," MTU/Center for Teaching, Learning and Faculty Development, Houghton, Michigan, USA. (August 24, 2010 - August 25, 2010).
- ***Conference Attendance, "2009 ATMAE Convention," Association of Technology Management and Applied Engineering, Louisville, Kentucky, USA. (November 11, 2009 - November 14, 2009).
- ***Workshop, "Scholarly Publishing," Association of Technology Management and Applied Engineering, Louisville, Kentucky, USA. (November 11, 2009 - November 14, 2009).
- **Workshop, "Perspectives Instructor Workshop," Cognitive and Learning Sciences, Houghton, Michigan, USA. (November 2, 2009).
- **Workshop, "Perspectives Instructor Workshop," Cognitive and Learning Sciences, Houghton, Michigan, USA. (October 8, 2009).
- **Workshop, "Perspectives Instructor Workshop," Cognitive and Learning Sciences, Houghton, Michigan, USA. (September 16, 2009).
- **Workshop, "Teaching Perspectives," MTU/Center for Teaching, Learning and Faculty Development, Houghton, Michigan, USA. (August 25, 2009 - August 27, 2009).
- **Workshop, "Summer Reading Discussion Leader Workshop," MTU/Center for Teaching, Learning and Faculty Development, Houghton, Michigan, USA. (August 20, 2009).
- **Webinar, "2008-2009 Title II, Part A(3) Improving Teacher Quality Competitive Grants Program Technical Assistance," State of Michigan, Department of Education, Lansing, Michigan, USA. (March 26, 2009).
- ***Conference Attendance, "2008 NAIT Conference," NAIT, Nashville, Tennessee, USA. (November 20, 2008 - November 22, 2008).
- ***Conference Attendance, "2008 IAJC-IJME International Conference," IAJC-IJME, Nashville, Tennessee, USA. (November 19, 2008).
- **Workshop, "Accreditation Self-Study Workshop," NAIT, Nashville, Tennessee, USA. (November 15, 2008).
- **Workshop, "NAIT Accreditation Team Member Training Workshop," NAIT, Nashville,

- Tennessee, USA. (November 15, 2008).
- **Workshop, "Visions of Success: Indigenous Theory of Educational Persistence," MTU/Center for Teaching, Learning and Faculty Development, Houghton, Michigan, USA. (October 23, 2008).
 - ***Conference Attendance, "2008 ASEE North Midwest Section Conference," ASEE/UW Platteville, Platteville, Wisconsin, USA. (October 16, 2008 - October 18, 2008).
 - ***Conference Attendance, "2008 ASEE Annual Conference," ASEE, Pittsburg, Pennsylvania, USA. (June 22, 2008 - June 25, 2008).
 - *Workshop, "Teaching for Inclusion," Michigan Tech Institutional Diversity, Houghton, Michigan, United States. (March 25, 2008).
 - **Workshop, "Study abroad: a place for you and your students," Michigan Tech Center for Teaching, Learning, and faculty development, Houghton, Michigan, United States. (December 6, 2007).
 - ***Conference Attendance, "Autodesk University 2007," Autodesk, Las Vegas, Nevada, United States. (November 27, 2007 - November 30, 2007).
 - **Workshop, "Web CT and Electronic Submission," Michigan Tech Center for Teaching, Learning, and faculty development, Houghton, Michigan, United States. (November 18, 2007).
 - ***Conference Attendance, "2007 NAIT Conference," NAIT, Panama City, Florida, United States. (October 24, 2007 - October 27, 2007).
 - ***Workshop, **"An Introduction to Rapid Prototyping Tools/Processes,"** NAIT CCTI Division/NSF, Panama City, Florida, United States. (October 24, 2007).
 - **Workshop, "Collaborative-based Design Techniques in the Classroom," NAIT CCTI Division/NSF, Panama City, Florida, United States. (October 24, 2007).
 - **Workshop, "Educational Architecture: Creating Space, Times, and opportunities for Transformational learning," Michigan Tech Center for Teaching, Learning, and faculty development, Houghton, Michigan, United States. (October 18, 2007).
 - **Workshop, "Plagiarism, Integrity, Cut-and-Paste & Trust," Michigan Tech Center for Teaching, Learning, and faculty development, Houghton, Michigan, United States. (September 27, 2007).
 - ***Attendance, "2007 ASEE North Midwest Section Conference," ASEE/Michigan Tech University, Houghton, Michigan, USA. (September 20, 2007 - September 22, 2007).
 - ***Conference Attendance, "2007 ASEE Annual Conference," ASEE, Honolulu, Hawaii, USA. (June 24, 2007 - June 27, 2007).
 - ***Conference Attendance, "Advancing Innovations in Engineering Technology Education," NSF/Hillsborough Community College, Tampa, Michigan, USA. (November 1, 2006 - November 3, 2006).
 - ***Conference Attendance, "2006 ASEE Annual Conference," ASEE, Chicago, Illinois, USA. (June 18, 2006 - June 21, 2006).

Development Activities Attended - 1994-2006

- Conference Attendance, "Advancing Innovations in Engineering Technology Education," NSF/San Diego City College, San Diego, California, USA. (November 2, 2005 - November 4, 2005).
- Conference Attendance, "CETL Winter Conference - Recognizing and Responding to Learning Style Differences," Mott Community College, Center for Excellence in Teaching and Learning, Flint, Michigan, USA. (February 18, 2005).
- Conference Attendance, "2004 Conference on Information Technology," League for Innovation in the Community College, Tampa, Florida, USA. (November 7, 2004 - November 10, 2004).
- Conference Attendance, "Eleventh National ATE Principal Investigators Conference," NSF/American Association of Community Colleges, Washington, DC, USA. (October 13, 2004 - October 15, 2004).
- Conference Attendance, "Tenth National ATE Principal Investigators Conference," NSF/American Association of Community Colleges, Washington, DC, USA. (October 22, 2003 - October 24, 2003).
- Conference Attendance, "3rd Annual Lilly - North Teaching and Learning Conference," CMU, FSU, Miami University, NMU, Northwestern Michigan College, Wayne State University., Traverse City, Michigan, USA. (September 19, 2003 - September 21, 2003).
- Workshop, "Rapid Prototyping Statusys FDM Hardware & Insight Software," Stratasys Inc., Southfield, Michigan, USA. (February 2, 2003 - February 4, 2003).
- Conference Attendance, "2002 ASEE annual conference and exposition," ASEE, Montreal, Quebec, Canada. (June 16, 2002 - June 19, 2002).
- Conference Attendance, "CETL Winter Conference 01," Mott Community College Center for Excellence in Teaching & Learning, Flint, Michigan, United States. (February 15, 2002).
- Seminar, "NSF Dynamic Designer Training," NSF/Advanced Technology Education regional center grant, Flint, Michigan, United States. (February 15, 2002).
- Conference Attendance, "Designing Engineers Conference," SolidWorks, Detroit, Michigan, United States. (October 19, 2001).
- Conference Attendance, "2001 ASEE annual conference and exposition," ASEE, Albuquerque, New Mexico, United States. (June 24, 2001 - June 27, 2001).
- Conference Attendance, "Unigraphics User Group Annual Conference," EDS, Orlando, Florida, United States. (May 20, 2001 - May 24, 2001).
- Seminar, "Delmia IGRIP Advanced Training," NSF/Advanced Technology Education project grant, Flint, Michigan, United States. (March 23, 2001 - March 31, 2001).
- Conference Attendance, "2000 Winter Simulation Conference," ACM/SIGSIM, ASA, IEEE/SMC, IIE, INFORMS-SIM, NIST and SCS, Orlando, Florida, United States. (December 10, 2000 - December 13, 2000).

Conference Attendance, "Worldwide Automotive Conference," MSC Software, Detroit, Michigan, United States. (October 10, 2000).

Workshop, "WIDS Coach Workshop," Worldwide Instructional System & MCC, Flint, Michigan, United States. (August 28, 2000 - August 29, 2000).

Workshop, "Virtual Simulation Camp - Train the Teacher," NSF/Advanced Technology Education project grant, Flint, Michigan, United States. (June 13, 2000 - June 15, 2000).

Conference Attendance, "CETL Winter Conference 00," Mott Community College Center for Excellence in Teaching & Learning, Flint, Michigan, United States. (March 24, 2000).

Workshop, "MST Curriculum Team Workshop," NSF/Advanced Technology Education project grant, Flint, Michigan, United States. (March 15, 2000 - March 16, 2000).

Workshop, "Module Development," NSF/Advanced Technology Education project grant, Flint, Michigan, United States. (October 27, 1999 - October 28, 1999).

Workshop, "The Basic WIDS Workshop," Worldwide Instructional System & MCC, Flint, Michigan, United States. (April 30, 1999 - May 21, 1999).

Conference Attendance, "CETL Winter Conference 99," Mott Community College Center for Excellence in Teaching & Learning, Flint, Michigan, United States. (February 12, 1999).

Conference Attendance, "Interservice/Industry Training, Simulation & Education Conference," National Training Systems Association & National Defense Industrial Association, Orlando, Florida, United States. (November 30, 1998 - December 3, 1998).

Workshop, "Interactive Graphics Robot Instruction Program IGRIP Basic Training Course," Deneb Robotics, Inc, Oakland, Michigan, United States. (August 11, 1998 - August 14, 1998).

Workshop, "Work Cell Simulation," NSF/Advanced Manufacturing Education Network (AMEN), Dayton, Ohio, United States. (June 14, 1998 - June 19, 1998).

Workshop, "Curriculum: Content & Pedagogy," National Center of Excellence for Advanced Manufacturing Education, Flint, Michigan, United States. (June 9, 1998 - June 10, 1998).

Conference Attendance, "A/E/C Systems 98," ARCOM Master Systems, Chicago, Illinois, United States. (June 4, 1998 - June 5, 1998).

Workshop, "Process Improvement through Modeling and Simulation," American Society for Quality Control (ASQC), Chicago, Illinois, United States. (May 4, 1997 - May 5, 1997).

Conference Attendance, "Visualization for AutoCAD users," Autodesk University, Chicago, Illinois, United States. (September 15, 1996 - September 16, 1996).

Workshop, "Concepts of Agility," NSF/Advanced Manufacturing Education Network (AMEN), Southfield, Michigan, United States. (June 24, 1996 - June 28, 1996).

Workshop, "Trends in Occupational Studies," Michigan Community Colleges Association (MCCA), Grand Rapids, Michigan, United States. (October 12, 1995 - October 13, 1995).

Workshop, "Quality Leadership Symposium," American Society for Quality Control (ASQC), Chicago, Illinois, United States. (April 4, 1995).

Workshop, "Unigraphics V10 Basic Modeling," Envisions Inc., Warren, Michigan, United States.
(December 16, 1994 - December 20, 1994).

Awards and Honors

Creative/Scholarship/Research

ASEE-GSW Section Third Place Paper Award. (2020).

Top Paper in Manufacturing Division, ATMAE. (September 12, 2014).

Top Paper in Manufacturing Division, ATMAE. (August 21, 2013).

University Faculty Scholarship, Autodesk, Inc. (November 27, 2007).

Leadership

Undergraduate Expo Senior Project award, Michigan Tech. (April 2012).

Undergraduate Expo Senior Project award, Michigan Tech. (April 2009).

Service, Professional

Warner Award, Epsilon Pi Tau. (February 21, 2019).

3Q PACE SpacePilot Grant, PACE/3DConnexion. (August 26, 2009).

2Q PACE SpacePilot grant, PACE/3DConnexion. (June 9, 2009).

NAIT Mini Grant, National Association of Industrial Technology. (November 12, 2007).

Teaching

Curriculum Development and Assessment Award, CTL Instructional Award Presentation Series.
(October 2018).

Deans' Teaching Showcase member, William G. Jackson Center for Teaching and Learning.
(March 30, 2018).

CTLFD Mini Grant Recipient, Michigan Tech CTLFD. (October 23, 2007).

Connections and Partnerships

Alumni

Julie Sprenger, Laurium, Michigan, United States. (January 2008).

Field Trip

Keweenaw Research Center, Houghton, MI, USA. (February 16, 2009).

Fund Raising

Parker Hannifin, Cleveland, Ohio. (September 2019).

Kohler company, Kohler, Wisconsin, USA. (March 2012).

Meritor, Troy, Michigan, USA. (December 2011).

Rozsa Center, Houghton, Michigan, USA. (December 2, 2009).

Lost Lake Cranberry Inc., Manitowish Waters, Wisconsin, USA. (June 11, 2009).

UPPCO Contributions Committee, Houghton, Michigan, United States. (September 3, 2008).

C-ideas, Inc., Cary, Illinois, United States. (May 7, 2007).

NSF/Mott Community College/Design Simulations Technologies, Flint, Michigan, United States.
(August 22, 2006).

Recruitment

Career Technical Education - Houghton County, Houghton, Michigan. (February 3, 2020).

Calumet High School, Calumet, Michigan, USA. (March 13, 2009).

Lake Linden High School, Lake Linden, Michigan, USA. (March 13, 2009).

Jeffers High School, South Range, Michigan, USA. (March 10, 2009).

Macomb Community College, Clinton Township, Michigan, USA. (March 1, 2009).

Henry Ford Community College, Dearborn, Michigan, United States. (December 2006).

Macomb Community College, Macomb, Michigan, United States. (December 2006).

Oakland Community College, Oakland, Michigan, United States. (December 2006).

Speaker

Caterpillar, Houghton, Michigan, USA. (September 23, 2013).

General Motors, Saginaw, Michigan, USA. (September 21, 2009).

Sandvik. (April 15, 2009).

Autodesk Corporation, Orlando, Florida, USA. (March 19, 2008).

Sandvik. (March 4, 2008).

Gentex Corporation, Zeeland, Michigan, United States. (October 2007).

Sandvik. (March 11, 2007).

Gentex Corporation, Zeeland, Michigan, United States. (October 2006).

TEACHING

Teaching Experience

Michigan Tech

ED 5510, Spec Studies in Educ Tech, 1 course.
ED 5670, Prof Dev: Tchg Technology, 1 course.
ED 5900, Graduate Research in Education, 2 courses.
ENG 5100, The Engineering Process, 8 courses.
ENG 5200, Engg Apps Physical Sciences, 4 courses.
MEEM 5990, Special Topics, 6 courses.
MET 2120, Statics & Strength of Material, 9 courses.
MET 2153, Machine Tool Funds & Apps, 1 course.
MET 2400, Parametric Modeling, 59 courses.
MET 4460, Product Design and Development, 30 courses.
MET 4550, Computer Aided Manufacturing, 18 courses.
MET 4575, Senior Project I, 2 courses.
MET 4580, Facilities Planning & Layout, 2 courses.
MET 4660, CAE and FEA Methods, 19 courses.
MET 4670, Senior Project, 22 courses.
MET 4675, Senior Project II, 2 courses.
MET 4996, Design 1, 2 courses.
MET 4997, Large Scale 3D Printer Project, 1 course.
MET 4999, Professional Practice Seminar, 4 courses.
TE 4000, Independent Study in Tech, 4 courses.
TE 4998, Undergrad Res in Technology, 2 courses.
TE 5000, Stratasys Post Processing, 1 course.
TE 5001, 3D Printed Part Optimization, 7 courses.
UN 1001, Perspectives on Inquiry, 6 courses.

Ferris State University

Computer Apps for Technology
Instructional Planning and Practice
Pre-Student Teaching Field Experience
Curriculum Design and Evaluation
Foundations of Education
Principles of Teaching and Learning

Mott Community College

Blueprint Reading, Drft-170
Graphics For Engineers, Drft179
Introduction to CADD, CADD-185
Advanced Topics in CAD, CADD-186
UNIGRAPHICS-Basic Modeling and Drafting, CADD-187
UNIGRAPHICS-Advanced Modeling, CADD 188
UNIGRAPHICS-Drafting, CADD-189
Applied Layout, DDES-270
Descriptive Geometry, DDES-271
Jig, Fixture, Gage and Die Design, DDES-274

Graduate Student Advising – (15) Masters, (2) Doctoral

Masters' Advisory Committee Member, Cognitive & Learning Sciences. (January 13, 2020 - August 14, 2020).

Advised: Danielle Niergarth

Masters' Advisory Committee Member, Cognitive & Learning Sciences. "Using Short-Term Professional Development to Increase Science Teacher Confidence for Integrating the NGSS Engineering Standards" (January 14, 2019 - December 20, 2019).
Advised: Janet LaLonde

Masters' Advisory Committee Member, Cognitive & Learning Sciences. "Emotional Affect in Mathematics" (January 9, 2017 - August 16, 2019).
Advised: Eric Marshall

Masters' Advisory Committee Member, Cognitive & Learning Sciences. "Solar Power in Schools: Assessing Ways to Use Solar Array Systems to Teach Next Generation Science Standard Curriculum" (May 11, 2015 - May 3, 2019).
Advised: Jason Howes

Masters' Advisory Committee Member, Cognitive & Learning Sciences. "Quit Doing the Lesson and Start Doing Physics" (May 12, 2014 - May 3, 2019).
Advised: Katelyn McCarthy

Masters' Advisory Committee Member, Mechanical Eng - Eng Mechanics. "Kinesthetic Learning Experience Simulation Using an Online Intervention to Improve Hands-On Ability" (May 11, 2015 - May 4, 2018).
Advised: David Leach

Doctoral Advisory Committee Member, Humanities. "Articulating Digital Archival Practice within Writing Program Administration: A Theoretical Framework" (September 3, 2013 - May 4, 2018).
Advised: Amanda Girard

Doctoral Advisory Committee Member, Electrical & Computer Engrg. "Low-Cost Open-Source GMAW-Based Metal 3D Printing: Monitoring, Slicer, Optimization, and Applications" (May 11, 2015 - April 28, 2017).
Advised: Yuenyong Nilsiam

Masters' Advisory Committee Member, Mechanical Eng - Eng Mechanics. "Mechanical Testing of Fused Filament 3-D Printed Components for Distributed Manufacturing" (August 31, 2015 - August 12, 2016).
Advised: Nagendra Gautam Tanikella

Masters' Advisory Committee Member, Materials Science & Engrg. "Development of Practical Applications for RepRap Style 3-D Printers in Engineering" (September 3, 2013 - December 19, 2014).
Advised: Benjamin Wittbrodt

Masters' Advisory Committee Member, Mechanical Eng - Eng Mechanics. "A Study of Acoustic Cavity Boom Generation Due to Vibro- Acoustic Coupling in Passenger Cars" (September 4, 2012 - December 19, 2014).
Advised: Mayuresh Pathak

Masters' Advisory Committee Chair, Cognitive & Learning Sciences. "On the Effect of Virtual Reality on Student Understanding of and Interest in Physics" (May 13, 2013 - August 15, 2014).
Advised: Isaac Crouch

Masters' Advisory Committee Member, Mechanical Eng - Eng Mechanics. "A Study of Passenger Car Acoustic Cavity Boom Simulation Methods" (January 9, 2012 - May 2, 2014).
Advised: Shreerang Dhabe

Masters' Advisory Committee Member, Cognitive & Learning Sciences. "Occasional White Boarding: Examining the Effects on Physics Students' Understanding of Motion Graphs" (May 10, 2010 - December 16, 2011).
Advised: Tony Schwaller

Masters' Advisory Committee Member, Cognitive & Learning Sciences. "Teaching and Aligning Upper Level Mathematics Classes to Michigan High School Content Expectations in an Alternative Education Setting: Approaches and Issues" (January 14, 2008 - August 13, 2010).
Advised: Sarah Van Baale

Masters' Advisory Committee Member, Mechanical Eng - Eng Mechanics. "A Modified Hotelling T2 Multivariate Control Chart for Enhanced Assembly Fixture Fault Detection" (May 8, 2006 - August 15, 2008).
Advised: Jeremy Rickli

Masters' Advisory Committee Member, Mechanical Eng - Eng Mechanics. "Enhanced Dimension-Reduction (EDR) Method for Quality and Sensitivity-Free Reliability Assessment" (January 10, 2005 - August 15, 2008).
Advised: Lee Wells

RESEARCH

Published Intellectual Contributions – h index = 5 (470 citations)

Book Chapters – (1)

2017. Irwin, J. L. Published 3D Printing Implications for STEM education. In Adedeji B. Badiru, Vhance V. Valencia, David Liu (Ed.), *3D Printing Handbook: Product Development for the Defense Industry*. Boca Raton, FL: Taylor and Francis/CRC Press.

Peer Reviewed/Refereed Journal Articles – *(4) Teaching Pedagogy, **(2) Technical

***2020. Fox, P., Sorge, B., Gordon, M., Danielson, S., Land, R., Nettey, I. Richmond, Perry, T., Gaines, K., Irwin, J. L. Published** What is the Future of Engineering Technology? *Journal of Engineering Technology*. ASEE.

****2019. Deshpande, S. P., Kulkarni, S., Shah, S., Irwin, J. L. Published** Developing an Open Source Affordable Large-Scale Polar Configuration 3D Printer. *International Journal of Engineering Research & Innovation* 11(1), 13-22. http://ijeri.org/IJERI-Archives/issues/spring2019/X__IJERI%20spring%202019%20v11%20n1.pdf#page=15.

***2018. Irwin, J. L., Mehendale, S. S. Published** Simulations and Manipulatives used to Better Understand Graphics, Statics & Dynamics Concepts. In AJ Hamlin (Ed.), *Engineering Design Graphics Journal* 82(2), 9. Greenville: ASEE Engineering Design Graphics Division. <https://sites.asee.org/edgd/wp-content/uploads/sites/22/2018/07/63-J-Irwon.pdf>.

***2013. Irwin, J. L. Published** Wind Turbine Blade CAD Models used as Scaffolding Technique to Teach Design Engineers. In Robert Chin, Amy Hamlin (Ed.), 77(No 2), 17. Greenville, NC:

Engineering Design Graphics Journal.
<http://www.edgj.org/index.php/EDGJ/article/viewFile/362/260>.

****2013.** Alexandra, G. G., Wittbrodt, B. T., Laureto, J. X., Anzalone, G. C., Oppliger, D. E., **Irwin, J. L.**, Pearce, J. M. **Published** Life-Cycle Economic Analysis of Distributed Manufacturing with Open-Source 3-D Printers. In M. Steinbuch (Ed.), 23(6), 713-726. Elsevier: Mechatronics Journal. <http://dx.doi.org/10.1016/j.mechatronics.2013.06.002>.

***2010. Irwin, J. L. Published** Graphics Course Formative Feedback and Teaching Innovation Using Screen Capture Technology. 10(3). Technology Interface Journal. technologyinterface.nmsu.edu/Spring10/.

Conference Proceedings – *(21) Teaching Pedagogy, **(5) Technical

****2020. Irwin, J. L., Johnson, K. M. Published** Program Improvement Utilizing the SME CMfgT and NCEES FE Exam Results. 2020 ATMAE Annual Conference. ATMAE.

****2020.** Sergeyev, A. V., Minerick, A. R., **Irwin, J. L. Published** Pioneering Approach for Offering the Convergence MS Degree in Mechatronics and Associated Graduate Certificate. 2020 ASEE Gulf Southwest Section Conference. University of New Mexico, Albuquerque, Virtually. ASEE.

****2020. Irwin, J. L., Labyak, D. M. Published** FEA Taught the Industry Way. 2020 ASEE Annual Conference and Exposition. ASEE.

***2019. Irwin, J. L., Sergeyev, A. V. Published** The Vision for Shared Administration of a Mechatronics MS Degree. *ATMAE 2019 annual Conference Proceedings* (vol. November 6-8, 2019, pp. pp. 192-196). Charlotte, North Carolina: ATMAE.

***2019. Irwin, J. L., Al araje, A. N. S., Meadows, L. A., Fiss, L. K., Amato-Henderson, S. L., Hembroff, G. C., Sergeyev, A. V., Raffaelli, K. Published** Engineering Technology Scholars – IMProving Retention and Student Success (ETS-IMPRESS) - First Year Progress Report. Tampa, florida: 2019 ASEE Annual Conference & Exposition/NSF Grantees Poster Session.

***2019. Irwin, J. L. Published** Utilizing Parametric 3D Solid Modeling to Illustrate Statics and Strength of Materials Concepts. *ATMAE Annual Conference* (pp. pages 146 - 152). Kansas City, Missouri: ATMAE 2018 Conference Proceedings.
<https://www.dropbox.com/s/mgrxdc35kz9yu8m/ATMAE%202018%20Conf%20Proceedings%20%28web%29%20Finalv2.pdf?dl=0>.

****2016.** Deshpande, S. P., Rao, N., Pradhan, N., **Irwin, J. L. Published** Hybrid Additive Manufacturing of a Darrieus Type Vertical Axis Wind Turbine Design to Improve Power Generation Efficiency. (pp. 10). Phoenix, Arizona: ASME/International Mechanical Engineering Conference and Exhibition.

****2016. Pradhan, N. K., Irwin, J. L., Badarmanahalli, R., Harsha, S. Published** Design and Fabrication of the Power Transmission System of a Large Scale 3d Printer. (pp. 10). Orlando, Florida: Association of Technology, Management, and Applied Engineering.

****2015. Irwin, J. L., Kasture, P. V., Deole, P. Published** CASE STUDY USING OPEN SOURCE ADDITIVE MANUFACTURING (AM) TECHNOLOGY FOR IMPROVED PART FUNCTION. Houston, Texas: ASME/International Mechanical Engineering Conference and Exhibition.

- *2015.** Mehendale, S. S., **Irwin, J. L.**, Marlor, R. **Published** An Interactive Dynamics Learning Course. 2015 ASEE Annual Conference and Exposition, Seattle, WA, USA, June 14-17, 2015.
- **2015.** **Irwin, J. L.**, Pearce, J. M., Anzalone, G., Oppliger, D. E. **Published** Evaluation of RepRap 3D Printer Workshops in K-12 STEM. Seattle, Washington: ASEE Annual Conference & Exposition Proceedings.
- **2014.** **Irwin, J. L.**, *Garg, A.* **Published** A Study of Temperature and Humidity Effects on Desktop 3D Printers. (pp. 1). St. Louis, Missouri: Association of Technology, Management, and Applied Engineering.
- *2014.** **Irwin, J. L.**, Pearce, J. M., Anzalone, G., Oppliger, D. E. **Published** The RepRap 3-D Printer Revolution in STEM Education. (pp. 13). Indianapolis, Indiana: ASEE Annual Conference & Exposition Proceedings.
<http://www.asee.org/public/conferences/8/papers/5035/view>.
- *2013.** **Irwin, J. L.**, Pearce, J. M., Anzalone, G. **Published** Implementing Self-Replicating Rapid Prototypers (RepRaps) into a Mechanical/Manufacturing Program. (pp. 20). New Orleans, Louisiana: Association of Technology, Management, and Applied Engineering.
http://c.ymcdn.com/sites/www.atmae.org/resource/resmgr/event_materials/2013_conf_proc.pdf.
- *2012.** **Irwin, J. L.** **Published** Classroom Inquiry and Graphics Technology Skills for K-12 STEM Physical Science Educators. (pp. 7). Limerick: ASEE Engineering Design Graphics Division.
http://www.edgj.org/index.php/EDGJ/article/viewFile/362/260/67th%20Midyear/Paper%20Presentations%20-%20Session%201/Classroom%20Inquiry%20and%20Graphics%20Technology%20Skills%20for%20K-12%20STEM%20Physical%20Science%20Educators_Irwin_67th%20EDGD%20Proceedings.pdf.
- *2012.** **Irwin, J. L.**, Clark, M. M. **Published** Being the Next Steve Jobs Without Offshoring – MTEC SmartZone. (pp. 114-118). Nashville, Tennessee: Association of Technology, Management, and Applied Engineering. https://c.ymcdn.com/sites/atmae.site-ym.com/resource/resmgr/event_materials/atmae2012confproc.pdf.
- *2012.** **Irwin, J. L.**, Wanless, D. D., Wagner, S. W., Sanders, P. G. **Published** Engineering Technology Interdisciplinary Projects. (pp. 13). San Antonio, Texas: ASEE Annual Conference & Exposition Proceedings.
<http://www.asee.org/public/conferences/8/papers/5035/view>.
- *2009.** **Irwin, J. L.**, Al araje, A. N. S. **Published** Abet Accreditation: Resolving a Weakness or Concern. (pp. 13). Austin, Texas: ASEE Annual Conference & Exposition Proceedings.
- *2009.** Al araje, A. N. S., **Irwin, J. L.** **Published** The Electrical Engineering Technology Program. (pp. 14). ASEE Annual Conference & Exposition Proceedings.
- *2008.** **Irwin, J. L.** **Published** Graphics Course Formative Feedback and Teaching Innovation Using Screen Capture Technology. (Paper 089, ENT207 ed., pp. 12). Nashville, Tennessee: 2008 IAJC-IJME International Conference on Engineering & Technology: www.ijme.us/cd_08/PDF/89%20ENT%20207.pdf.

- *2008. Irwin, J. L. Published** Three-way Comparison Used to Reinforce FEA Solutions. (pp. 10). Platteville, Wisconsin: 2008 ASEE North Midwest Section Conference. www.ndsu.nodak.edu/asee/conferences/2008/papers/Irwin.pdf.
- *2008. Wanless, L. S., Irwin, J. L., Amos, S. J., Wanless, D. D. Published** To Build a Better Bottle Opener: Interweaving a Project Through the Engineering Technology Curriculum. (pp. 19). Pittsburgh, Pennsylvania: 2008 ASEE Annual Conference & Exposition Proceedings.
- *2007. Irwin, J. L. Published** Teaching Design Engineering Technology: Experiential Learning Activities. (pp. 8). Houghton, Michigan: 2007 ASEE North Midwest Section Conference. www.ndsu.nodak.edu/asee/conferences/2007/proceedings/Irwin_ExperientialLearning.pdf.
- *2007. Irwin, J. L. Published** Embedded Design in Parametric Modeling, and CAM. (AC 2007-1472 ed., pp. 9). Honolulu, Hawaii: ASEE Annual Conference & Exposition.
- *2007. Irwin, J. L. Published** Senior Project Course Enhancement. (AC 2007-1413 ed., pp. 15). Honolulu, Hawaii: 2007 ASEE Annual Conference & Exposition.
- *2006. Irwin, J. L. Published** MTU MICUP Program and Industrial Technology Recruitment Efforts - Advancing Innovations 2006 Presentation. (MERC ID: S0600316 ed.). Tampa, Florida: Advancing Innovations in Engineering Technology: Ideas for a New Age. www.merconline.net/view_abstract.php?id=538.
- *2006. Irwin, J. L., Moseley, J. L. Published** Engaging Teachers and Students in Problem-based Simulation Activities. (2006-252 ed., pp. 12). Chicago, Illinois: 2006 ASEE Annual Conference & Exposition.

Conference Abstract - *(4) Teaching Pedagogy, **(1) Technical

- *2018. Irwin, J. L. Published** Importance of the Affective Domain in Learning: Objectives, Strategies, Evaluation, and Theory Support for Implementation. *Upper Peninsula Teaching and Learning Conference*. Marquette, Michigan: Upper Peninsula Teaching and Learning Conference.
- **2015. Irwin, J. L. Published** Optimizing Part Design for Consumers using Open Source AM Technology. (pp. 1). Pittsburgh, Pennsylvania: Association of Technology, Management, and Applied Engineering.
- *2008. Irwin, J. L. Published** Teaching Tidbits - Quick Hits on What Works. Nashville, Tennessee: 2008 NAIT Convention.
- *2007. Irwin, J. L. Published** Enhancement of CAM Course using Emulation Software. (pp. 10). Panama City Beach, Florida: 2007 NAIT Convention.
- *2007. Irwin, J. L. Published** Senior Design Project Parametric Modeling and Simulation Analysis. Atlanta, Georgia: 44th National Conference on Technical Education.

Doctoral Dissertation

- 2006. Irwin, J. L. Published** Teachers and Students in Problem-based Simulation Activities. (vol. DAI, 66, no. 11A (2005): p. 3911, pp. 161). ProQuest/Dissertation Abstracts International.

Magazine/Trade Publication

- 2013. Irwin, J. L.,** Clark, M. **Published** A Model for Job Creation in US Manufacturing. In Sarah Webster, Editor in Chief, SME (Ed.), Dearborn, Michigan: Manufacturing Engineering Media - Society of Manufacturing Engineers.
<http://www.sme.org/MEMagazine/Article.aspx?id=72415&taxid=1434>.
- 2010. Irwin, J. L.,** Nutter, P., Kirby, D. **Published** Online Simulation Tools for Advanced Manufacturing Workforce Development Needs – Lessons Learned in Higher Education. (pp. 9). Manufacturing Engineering, SME.

Technical Report

- 2008. Irwin, J. L. Published** Enhancement of CAM Course using 3D Emulation Software. (pp. 7). Bloomfield, Michigan: Immersive Engineering, Inc.

Presentations Given – (43)

- Irwin, J. L. (Panelist), Research Development Day, "*Creating Impact through Educational Opportunities (K-Grad School)*" Michigan Tech Research Development, Houghton, Michigan. (January 9, 2020).
- Irwin, J. L. (Presenter & Author), ATMAE Annual Conference, "*The Vision for Shared Administration of a Mechatronics MS Degree*" Association of Technology, Management and Applied Engineering, Charlotte, North Carolina. (November 7, 2019).
- Irwin, J. L. (Panelist), Promotion & Tenure Session, "*P&T Packet preparation*" Michigan Tech Faculty Development, Houghton, Michigan. (August 28, 2019).
- Irwin, J. L. (Presenter & Author), Al araje, A. N. S. (Presenter & Author), ASEE Annual Conference, "*NSF Poster Session - ETS IMPRESS S-STEM Award*" ASEE, Tampa, Florida. (June 17, 2019).
- Irwin, J. L. (Co-Author), Dare, E. A. (Presenter & Author), Ellis, J. A. (Co-Author), NARST 2019 Annual Meeting, "*Making an impact with professional development: Understanding changes in science teachers' engineering self-efficacy and practice*" NARST, Baltimore, MD. (March 2019).
- Irwin, J. L. (Co-Author), Dare, E. A. (Presenter & Author), Ellis, J. A. (Co-Author), ASTE Annual Meeting, "*Exploring engineering self-efficacy and practice: Supporting science teachers through professional development*" The Association for Science Teacher Education, Savannah, GA. (January 2019).
- Irwin, J. L., ATMAE Annual Conference, "*Utilizing Parametric 3D Solid Modeling to Illustrate Statics and Strength of Materials Concepts*" Association of Technology, Management and Applied Engineering, Kansas City, Missouri. (November 8, 2018).
- Irwin, J. L. (Co-Author), 6th IAJC Conference Proceedings, "*Developing an Open Source Affordable Large-Scale Polar Configuration 3D Printer*" INTERNATIONAL ASSOCIATION OF JOURNALS AND CONFERENCES, Orlando, Florida. (October 12, 2018).
- Irwin, J. L., Upper Peninsula Teaching and Learning Conference, "*Importance of the Affective Domain in Learning: Objectives, Strategies, Evaluation, and Theory Support for Implementation*" Northern Michigan University/Michigan Tech, Marquette, Michigan. (May 11,

- 2018).
- Irwin, J. L., 2018 ASEE EDGD Midyear Conference, "*Simulations and Manipulatives used to Better Understand Graphics, Statics & Dynamics Concepts*" ASEE Engineering Design Graphics Division, Montego Bay, Jamaica. (January 5, 2018).
- Irwin, J. L. (Presenter & Author), ASME 2016 International Mechanical Engineering Congress & Exposition, "*HYBRID POLYMER ADDITIVE MANUFACTURING OF A DARRIEUS TYPE VERTICAL AXIS WIND TURBINE DESIGN TO IMPROVE POWER GENERATION EFFICIENCY*" ASME, Phoenix, Arizona. (November 17, 2016).
- Irwin, J. L. (Presenter & Author), ASME 2015 International Mechanical Engineering Congress & Exposition, "*Case Study Using Open Source Additive Manufacturing (AM) Technology for Improved Part Function*" ASME, Houston, Texas. (November 17, 2015).
- Irwin, J. L. (Presenter & Author), 2015 ATMAE Conference, "*Optimizing Part Design for Consumers using Open Source AM Technology*" ATMAE, Pittsburg, Pennsylvania. (November 13, 2015).
- Irwin, J. L. (Presenter & Author), 2015 ASEE Annual Conference & Exposition, "*Evaluation of RepRap 3D Printer Workshops in K-12 STEM*" ASEE, Seattle, Washington. (June 15, 2015).
- Irwin, J. L. (Moderator), Abell, J. (Panelist), Nutter, P. (Panelist), Zargari, A. (Panelist), Posinasetti, N. R. (Panelist), 2014 ATMAE Conference, "*Tools for improving manufacturing technical and management programs for ATMAE accreditation that include using the SME Four Pillars of Manufacturing Knowledge*" ATMAE, St. Louis, Missouri. (November 21, 2014).
- Irwin, J. L. (Presenter & Author), Garg, A. (Presenter & Author), 2014 ATMAE Conference, "*A Study of Temperature and Humidity Effects on Desktop 3D Printers*" ATMAE, St Louis, Missouri. (November 20, 2014).
- Irwin, J. L. (Presenter & Author), 2014 ASEE Annual Conference & Exposition, "*The RepRap 3-D Printer Revolution in STEM Education*" ASEE, Indianapolis, Indiana. (June 16, 2014).
- Irwin, J. L. (Panelist), Flanigan, R. (Panelist), Nutter, P. (Panelist), Mack, R. (Moderator), 2013 ATMAE Conference, "*Common Cause to Develop Tomorrow's Workforce – A Panel Discussion on Manufacturing Education, Academia and Industry*" ATMAE, New Orleans, Louisiana. (November 21, 2013).
- Irwin, J. L. (Presenter & Author), 2013 ATMAE Conference, "*Implementing Self-Replicating Rapid Prototypers (RepRaps) into a Mechanical/Manufacturing Program*" ATMAE, New Orleans, Louisiana. (November 19, 2013).
- Irwin, J. L., PACE Annual Forum, "*NX FEA Methods for EcoCAR2 Challenge Participants*" Siemens, Pasadena, California. (July 25, 2013).
- Irwin, J. L., CLK Schools In Service for Teachers and Staff, "*Safety in Schools*" Public Schools of Calumet, Laurium & Keweenaw, CLK School Commons, Calumet, Michigan. (January 9, 2013).
- Irwin, J. L. (Presenter & Author), 2012 ASEE EDGD Mid-Year Conference, "*Classroom Inquiry and Graphics Technology Skills for K-12 STEM Physical Science Educators*" ASEE, Limerick, Ireland. (November 19, 2012).
- Irwin, J. L. (Presenter & Author), 2012 ATMAE Conference, "*Being the Next Steve Jobs Without Offshoring – MTEC SmartZone*" ATMAE, Nashville, Tennessee. (November 16, 2012).

- Irwin, J. L. (Presenter & Author), 2012 ASEE Annual Conference & Exposition, "*Engineering Technology Interdisciplinary Projects*" ASEE, San Antonio, Texas. (June 11, 2012).
- Irwin, J. L. (Presenter & Author), Americas User Conference 2012, "*Summer Youth CAM Program, How it's Made: Art to Part*" Siemens PLM Connections, Las Vegas, Nevada. (May 8, 2012).
- Irwin, J. L. (Presenter & Author), 2011 ATMAE Conference, "*Interdisciplinary Service Opportunities for Technology Students*" ATMAE, Louisville, Kentucky. (November 11, 2011).
- Irwin, J. L. (Presenter & Author), 2011 ATMAE Conference, "*Design, Manufacture and Utilization of a Low Cost CNC Router*" ATMAE, Louisville, Kentucky. (November 10, 2011).
- Irwin, J. L. (Presenter & Author), Americas User Conference 2011, "*Utilizing Expressions for Developing Parametric Wind Turbine Blade Models*" Siemens PLM Connections, Las Vegas, Nevada. (May 4, 2011).
- Irwin, J. L. (Presenter & Author), 2010 ATMAE Conference, "*A Methodology for Developing Wind Turbine Blade Parametric Models*" ATMAE, Panama City Beach, Florida. (October 28, 2010).
- Irwin, J. L. (Presenter & Author), 2010 ATMAE Conference, "*Classroom Inquiry and Technology to Improve Teaching and Student Learning*" ATMAE, Panama City Beach, Florida. (October 28, 2010).
- Irwin, J. L. (Presenter & Author), 2009 ATMAE Conference, "*Horizontal vs. Vertical Axial Flux Wind Turbine Design and Manufacture*" ATMAE, Louisville, Kentucky. (November 13, 2009).
- Irwin, J. L. (Author Only), Al araje, A. N. S. (Co-Author), 2009 ASEE conference, "*ABET Accreditation: Resolving a Weakness or Concern*" ASEE -, Austin, TX, USA. (June 2009).
- Irwin, J. L. (Presenter & Author), 2008 IAJC-IJME international conference, "*Graphics Course Formative Feedback and Teaching Innovation Using Screen Capture Technology*" IAJC-IJME, Nashville, Tennessee. (November 2008).
- Irwin, J. L. (Presenter & Author), 2008 NAIT Convention, "*Teaching Tidbits - Quick hits on what works*" NAIT, Nashville, Tennessee. (November 2008).
- Irwin, J. L. (Presenter & Author), 2008 ASEE North Midwest Section Conference, "*Three-way Comparison used to Reinforce FEA solutions*" ASEE, Platteville, Wisconsin. (October 2008).
- Irwin, J. L. (Presenter & Author), 2008 ASEE Annual Conference & Exposition, "*To Build a Better Bottle Opener: Interweaving a Project Through the Engineering Technology Curriculum*" ASEE, Pittsburgh, Pennsylvania. (June 2008).
- Irwin, J. L. (Presenter & Author), 2007 NAIT Convention, "*Enhancement of CAM Course using Emulation Software*" NAIT, Panama City Beach, Florida. (October 2007).
- Irwin, J. L. (Presenter & Author), 2007 ASEE North Midwest Section Conference, "*Teaching Design Engineering Technology: Experiential Learning Activities*" ASEE, Houghton, Michigan. (September 2007).
- Irwin, J. L. (Presenter & Author), 2007 ASEE Annual Conference & Exposition, "*Embedded Design in Parametric Modeling and CAM*" ASEE, Honolulu, Hawaii. (June 2007).
- Irwin, J. L. (Presenter & Author), 2007 ASEE Annual Conference & Exposition, "*Senior Project*"

Course Enhancement" ASEE, Honolulu, Hawaii. (June 2007).

Irwin, J. L. (Presenter & Author), *Advancing Innovations in Engineering Technology: Ideas for a New Age.*, "MTU MICUP Program and Industrial Technology Recruitment Efforts - Advancing Innovations 2006 Presentation" NJCATE, NCME, and MATEC, Tampa, Florida. (November 2006).

Irwin, J. L. (Presenter & Author), 2006 ASEE Annual Conference & Exposition, "*Engaging Teachers and Students in Problem-based Simulation Activities*" ASEE, Chicago, Illinois. (June 2006).

Intellectual Contributions in Submission

Journal Article

Contracts, Grants and Sponsored Research – awarded \$1,538,856

Other Sponsored Activities - \$1,603,856

Irwin, J. L. (Principal), CTE Mechatronics, Sponsored by: Copper Country Intermediate School District (CCISD), Requested: \$70,000, Awarded: \$70,000, Matching (MTU): \$0. (August 27, 2020 - June 11, 2021). (Awarded).

Irwin, John L (Principal), Hembroff, Guy Charles (Co-Principal), Azizi, Seyyedmohsen (Co-Principal), Fiss, Laura (Co-Principal), "Engineering Technology Scholars - IMProving REtention and Student Success (ETS-IMPRESS)," Sponsored by National Science Foundation, Amount Awarded: \$999,483.00. Project Dates: January 1, 2018 - December 31, 2022. Date Submitted: March 29, 2017. (Awarded).

Dare, Emily A (Principal), **Irwin, John (Co-Principal)**, Ellis, Joshua A (Co-Principal), "Engaging Students in Physical Science," Sponsored by Michigan Dept of Education, Amount Awarded: \$116,790. Project Dates: March 28, 2016 - September 30, 2017. Date Submitted: May 13, 2016. (Awarded).

Irwin, John L (Principal) Hungwe, Kedmon Nyasha (Co-PI) Schrank, Amy J (Co-PI) "Improving Teacher Quality - Educators' Professional Development Institute Series (EPDIS) - Biological Sciences" sponsored by Michigan Dept of Education, Amount Awarded: \$212,026. Project Dates: May 1, 2013 – September 30, 2014. Date Submitted: January 2013. (Awarded).

Irwin, John L (Principal), Hungwe, Kedmon Nyasha (Co-Principal), Meyer, Michael R (Co-Principal), Oppliger, Douglas Edward (Co-Principal), Charlesworth, Paul (Co-Principal), "Improving Teacher Quality - Educators' Professional Development Institute Series (EPDIS) Physical Sciences - Physics and Chemistry," Sponsored by Michigan Dept of Education, Amount Awarded: \$196,557.84. Project Dates: May 1, 2009 - September 30, 2010. Date Submitted: August 31, 2009. (Awarded).

Research & Development

Irwin, John Lawrence (Co-Principal), Sergeyeve, Aleksandr Vladimirovich (Principal), Kuhl, Scott A (Co-Principal), Khanmohammadi Hazaveh, Paniz (Co-Principal), Rawashdeh, Nathir A (Co-Principal), "Promoting Mechatronics Education: University community college and industry collaboration to meet 21st Century workforce needs," Sponsored by National Science

Foundation. Project Dates: July 1, 2020 - June 30, 2023. Date Submitted: December 4, 2019. (Pending).

Irwin, John Lawrence (Co-Principal), Sergeyeve, Aleksandr Vladimirovich (Principal), Cai, Yu (Co-Principal), Kuhl, Scott A (Co-Principal), Khanmohammadi Hazaveh, Paniz (Co-Principal), "Promoting Advanced Manufacturing by Developing a Mechatronics Educational Portal for use by Educational Institutions Industry and Military Representatives Displaced Workers K-12 Teachers and Students," Sponsored by US Dept of Defense. Project Dates: September 1, 2019 - August 31, 2022. Date Submitted: June 28, 2019. (Pending).

Research & Development-Student Design – \$23,000

Wagner, S. W. (Principal), **Irwin, J. L. (Co-Principal)**, STUDENT DESIGN: Kohler Engines Development Flow Bench, Sponsored by: Kohler Co, Requested: \$5,000, Matching (MTU): \$0. (September 1, 2020 - April 30, 2021). (Awarded).

Labyak, D. M. (Principal), **Irwin, J. L. (Co-Principal)**, STUDENT DESIGN: Extendo Telehandler Sensing, Sponsored by: Balluff Inc, Requested: \$2,500, Awarded: \$2,500, Matching (MTU): \$0. (August 27, 2020 - April 30, 2021). (Awarded).

Labyak, D. M. (Principal), **Irwin, J. L. (Co-Principal)**, STUDENT DESIGN: Extendo Telehandler Sensing, Sponsored by: Pettibone Traverse LLC, Requested: \$1,500, Awarded: \$1,500, Matching (MTU): \$0. (August 24, 2020 - April 30, 2021). (Awarded).

Labyak, David Michael (Principal), Irwin, **John L (Co-Principal)**, Berkey, Richard Jason (Co-Principal), "Senior Design: Safety Weight," Sponsored by Jacobson John, Amount Awarded: \$9,000.00. Project Dates: September 3, 2019 - May 1, 2020. Date Submitted: September 17, 2019. (Awarded).

Irwin, J. L. (Principal), Precision Flow Meter for Detection of Insufficient Flow of in Power Plant Operations, Sponsored by Sentry Equipment Corp, Requested: \$5,000, Awarded: \$5,000. Project Dates: September 14, 2018 - December 12, 2019. Date Submitted: September 1, 2018. (Awarded).

SERVICE

Editorial and Review Activities

Reviewer, Journal Article, "one journal article," TECHNOLOGY INTERFACE INTERNATIONAL JOURNAL (TIJ). Volunteered. (January 19, 2020).

Reviewer, Journal Article, "one journal article," TECHNOLOGY INTERFACE INTERNATIONAL JOURNAL (TIJ). Volunteered. (January 5, 2019).

Reviewer, Conference Paper, "one conference paper," 6th IAJC Conference Proceedings. Volunteered. (June 6, 2018 - September 18, 2018).

Reviewer, Conference Paper, "Three Papers: ATMAE 2016 International Conference Proceedings," ATMAE/Graphics division. Appointed. (August 2016).

Reviewer, Journal Article, "one journal article," International Journal of Manufacturing Engineering. Appointed. (August 11, 2016).

Reviewer, Journal Article, "one journal article," TECHNOLOGY INTERFACE INTERNATIONAL

JOURNAL. Volunteered. (March 29, 2016).

Reviewer, Conference Paper, "ATMAE 2015 International Conference Proceedings Proposals," Manufacturing Review Chair. Appointed. (February 2015 - August 2015).

Reviewer, Conference Paper, "Eight Papers: Engineering Technology Division," 2015 ASEE Annual Conference and Exhibition. Appointed. (February 2015 - April 2015).

Reviewer, Conference Paper, "Eight Papers: Manufacturing Division," 2015 ASEE Annual Conference and Exhibition. Appointed. (February 2015 - April 2015).

Reviewer, Conference Paper, "Three Papers: K-12 & Pre-College Engineering Education Division," 2015 ASEE Annual Conference and Exhibition. Appointed. (February 2015 - April 2015).

Reviewer, Journal Article, "one journal article," IJERI. Appointed. (March 15, 2015).

Reviewer, Conference Paper, "ATMAE 2014 International Conference Proceedings Proposals," Manufacturing Review Chair. Appointed. (February 2014 - August 2014).

Reviewer, Conference Paper, "one conference paper," 2014 IAJC/ISAM 4th Joint International Conference. Appointed. (May 7, 2014).

Reviewer, Conference Paper, "one conference paper," 2014 IAJC/ISAM 4th Joint International Conference. Appointed. (May 7, 2014).

Reviewer, Journal Article, "one journal article," IJERI. Appointed. (April 3, 2014).

Reviewer, Journal Article, "one journal article," IJERI. Appointed. (March 26, 2014).

Reviewer, Conference Paper, "Eight conference papers," 2014 ASEE Annual Conference and Exhibition. Appointed. (February 5, 2014).

Reviewer, Journal Article, "one journal article," IJME. Appointed. (October 15, 2013).

Reviewer, Journal Article, "one journal article," IJME. Appointed. (October 13, 2013).

Reviewer, Conference Paper, "ATMAE 2013 International Conference Proceedings Proposals," Manufacturing Review Chair. Appointed. (February 2013 - August 2013).

Reviewer, Journal Article, "one journal article," IJME. Appointed. (August 1, 2013).

Reviewer, Conference Paper, "ATMAE 2013 International Conference Proceedings Proposals," Graphics Review Committee. Appointed. (April 2013 - May 2013).

Reviewer, Journal Article, "one journal article," Technology Interface International Journal. Appointed. (April 22, 2013).

Reviewer, Journal Article, "one journal article," Journal of Engineering Technology - ASEE. Appointed. (March 11, 2013 - March 25, 2013).

Reviewer, Journal Article, "one journal article," Technology Interface International Journal. Appointed. (February 22, 2013).

Reviewer, Conference Paper, "one conference paper," 2013 ASEE Annual Conference and Exhibition. Appointed. (January 16, 2013).

Reviewer, Journal Article, "one journal article," Technology Interface International Journal. Appointed. (January 16, 2013).

Reviewer, Journal Article, "one journal article," IJME. Appointed. (April 2, 2012).

Reviewer, Journal Article, "one journal article," IJME. Appointed. (March 25, 2012).

Reviewer, Journal Article, "one journal article," IJERI. Appointed. (February 3, 2012).

Reviewer, Conference Paper, "Two conference papers," 2012 ASEE Annual Conference and Exhibition. Appointed. (January 18, 2012).

Reviewer, Textbook, "Discovering AutoCAD 2013," Aptara Inc. Appointed. (October 11, 2011).

Reviewer, Journal Article, "one journal article," IJME. Appointed. (August 31, 2011).

Reviewer, Conference Paper, "ATMAE 2012 International Conference Proceedings Proposals," Graphics Review Committee. Appointed. (April 2011 - May 2011).

Reviewer, Conference Paper, "one conference paper," 2011 IAJC-ASEE Annual Conference and Exhibition. Appointed. (February 14, 2011 - February 21, 2011).

Reviewer, Conference Paper, "Two conference papers," 2011 IAJC-ASEE Annual Conference and Exhibition. Appointed. (February 14, 2011 - February 21, 2011).

Reviewer, Journal Article, "one journal article," International Journal of Engineering Research and Innovation (IJERI). Appointed. (June 25, 2010 - July 16, 2010).

Reviewer, Conference Paper, "ATMAE 2010 International Conference Proceedings Proposals," DOL Focus Group Review Committee for Papers. Appointed. (April 2010 - May 2010).

Reviewer, Conference Paper, "ATMAE 2010 International Conference Proceedings Proposals," DOL Focus Group Review Committee for abstracts. Appointed. (March 2010 - April 2010).

Reviewer, Journal Article, "one journal article," International Journal of Engineering Research and Innovation (IJERI). Appointed. (February 17, 2010 - March 10, 2010).

Reviewer, Journal Article, "one journal article," International Journal of Engineering Research and Innovation (IJERI). Appointed. (February 17, 2010 - March 10, 2010).

Reviewer, Conference Paper, "Four conference papers," 2010 ASEE Annual Conference and Exhibition. Appointed. (February 6, 2010 - February 26, 2010).

Reviewer, Journal Article, "one journal article," International Journal of Engineering Research and Innovation (IJERI). Appointed. (August 16, 2009 - September 5, 2009).

Reviewer, Conference Paper, "ATMAE 2009 International Conference Proceedings Proposals," Graphics Division Review Committee. Appointed. (March 19, 2009 - April 2, 2009).

Reviewer, Textbook, "Workplace Skills for Success with AutoCAD 2009: Basics.," Bookworks Publishing Services. Appointed. (September 10, 2008 - October 10, 2008).

Reviewer, Textbook, "Discovering AutoCAD 2009," Bookworks Publishing Services. Appointed. (August 8, 2008 - September 8, 2008).

Reviewer, Conference Paper, "Two conference papers," 2008 IAJC-IJME Conference. Appointed. (June 15, 2008 - July 15, 2008).

Reviewer, Conference Paper, "Four conference papers," 2008 ASEE Annual Conference and Exhibition. Appointed. (January 1, 2008 - February 1, 2008).

Reviewer, Textbook, "AutoCAD Fast track 2009," Prentice Hall/Pearson Education. Appointed. (December 18, 2007 - January 18, 2008).

Reviewer, Textbook, "Discovering AutoCAD 2009," Bookworks Publishing Services. Appointed. (July 2, 2007 - August 2, 2007).

Reviewer, Textbook, "Introduction to AutoCAD 2007: A Modern Perspective," Bookworks Publishing Services. Appointed. (October 12, 2006 - November 12, 2006).

General Service

College/School

(November 2019 - Present). Committee Member, College of Engineering TPR Committee.

(September 2006 - Present). Student Recruiter, Open House - Tech Showcase.

(March 2006 - Present). Student Recruiter, Spring prospective student program fair.

(August 2006 - September 2019). Committee Member, School of Technology Council.

(August 1, 2015 - September 1, 2019). Committee Chair, School Tenure Promotion & Reappointment.

(September 2016 - October 2017). Special Institutional Assignment, ABET ETAC MET Self-Study Report.

(August 1, 2010 - September 1, 2014). Committee Chair, School Tenure Promotion & Reappointment.

(October 2011 - March 2012). Committee Chair, MET Faculty Search Committee, School of Technology.

(April 2011 - June 2011). Special Institutional Assignment, ABET TAC MET Self-Study Report.

(December 2010 - January 2011). Committee Chair, Facilities Operations Manager Search Committee, School of Technology.

(April 2010 - January 2011). Committee Member, Dean Search Committee, School of Technology.

(April 2007 - May 2007). Committee Member, School of Technology faculty search committee - INT.

Department

(August 2007 - September 2019). Committee Chair, Mechanical Engineering Technology Program Curriculum Committee.

(January 2014 - April 2014). Program Coordinator, Siemens Go PLM NX8.5 Certification Exam.

(January 2014 - April 22, 2014). Program Coordinator, PACE Student Course Competition.

(August 2006 - April 2011). Committee Chair, Industrial Technology Program Curriculum Committee.

Other

(November 12, 2019). promotion review, University/promotion external Reviewer.

(August 4, 2019). promotion review, University/promotion external Reviewer.

Professional

(March 2019 - October 2019). Conference Program Organizer, ETLI session Future of ET Programs.

(October 11, 2019). Conference Session Moderator, ASEE - ETC.

(June 17, 2019). Program Session Moderator, ASEE EDGD.

(November 2, 2018). Engineering Technology Accreditation Delegate, SME/ABET 2018 Fall Governance Meeting.

(May 2018). Proposal Panel Reviewer, NSF Review Panelist.

(March 22, 2018 - March 23, 2018). Board Member, SME/ABET 2018 Spring Governance Meeting.

(December 1, 2017 - December 23, 2017). Pro Bono Professional Service, University/External Reviewer Promotion.

(November 1, 2017 - November 21, 2017). Pro Bono Professional Service, University/External Reviewer Promotion.

(October 20, 2017 - October 21, 2017). Board Member, SME/ABET 2017 Fall Governance Meeting.

(August 1, 2017 - September 25, 2017). Pro Bono Professional Service, University/External Reviewer Promotion.

(March 30, 2017 - April 2, 2017). Board Member, ABET ETAC Area Delegation.

(November 15, 2016). Program Session Moderator, IMECE.

(September 25, 2016 - September 27, 2016). Observer, ABET ETAC program evaluator.

(November 17, 2015). Program Session Moderator, IMECE.

(April 2014 - November 2014). Conference Track Organizer, ATMAE - Manufacturing Division.

(June 1, 2014 - June 30, 2014). Program Session Moderator, 2014 ASEE Annual conference and exposition.

(April 2013 - November 2013). Conference Track Organizer, ATMAE - Manufacturing Division.

(November 14, 2012 - November 15, 2012). Robot Fabrication/Innovation Judging, ATMAE Student Robot Competition.

(June 1, 2012 - June 30, 2012). Program Session Moderator, 2012 ASEE Annual conference and exposition.

(November 19, 2008 - November 20, 2008). Robot construction Judging, NAIT Student Robot Competition.

(June 1, 2008 - June 30, 2008). Program Session Moderator, 2008 ASEE Annual conference and exposition.

Public/Community

(November 2018). External Reviewer Promotion, University/External Reviewer.

(October 2018). Conference Session Chair, 6th IAJC Conference.

(August 23, 2016 - September 10, 2016). Pro Bono Professional Service, University/External Reviewer Promotion.

(March 9, 2016). Pro Bono Professional Service, University/External Reviewer Promotion.

(July 1, 2015). Pro Bono Professional Service, University/External Reviewer.

(March 29, 2009 - March 30, 2009). Judge, Western UP Science Fair.

(March 1, 2008 - March 5, 2008). Judge, Western UP Science Fair.

Student Organization

(November 2007 - Present). Faculty Advisor, Epsilon Pi Tau Honor Society Delta Zeta Chapter.

(September 2006 - Present). Faculty Advisor, Sigma Tau Gamma Fraternity.

University

(September 2019 - Present). Member, Tech Forward: 1st Year Experience.

(September 1, 2012 - Present). Committee Member, University Assessment Council.

(December 2006 - Present). Participant, Graduation, Winter Graduation Faculty Representative.

(October 2006 - Present). Workshop Organizer, Explorations Session.

(September 25, 2006 - Present). Graduate faculty, Graduate School.

(October 2019 - November 22, 2019). Committee Chair, Search Committee, Educational Assessment Specialist.

(September 12, 2019). Interaction with Industry, Panelist at Dean Kamen Luncheon.

(January 2019 - May 2019). Member, Education for the 21st Century - Task Force.

(September 2018 - December 2018). Task Force Member, Task Force on Innovation.

(September 2017 - May 2018). Committee Chair, Michigan Tech University/Early Career Management Committee.

(December 17, 2013 - December 18, 2013). Judge, PACE Student Course Competition.

(September 2006 - September 2013). Committee Member, University Senate Academic Policy Committee.

(September 2010 - August 2013). University Senate Service, University Senate Representative, School of Technology.

(July 16, 2012 - July 20, 2012). Summer Pre-College Program Involvement, Tech Summer Youth Program.

(July 2010 - August 2010). Summer Pre-College Program Involvement, Tech Summer Youth Program.

(June 6, 2010 - July 7, 2010). WIE/ESP/PURSE.

(September 2006 - April 2010). University Senate Service, University Senate School of Technology Alternate.

(July 2009 - August 2009). Summer Pre-College Program Involvement, Tech Summer Youth Program.

(June 6, 2009 - July 9, 2009). WIE/EIE.

(July 2008 - August 2008). Summer Pre-College Program Involvement, Tech Summer Youth Program.

(September 2006 - September 2007). Committee Member, University Assessment Council.