

Professional Activities

- Contributing attendee: NIST Workshop: Materials Research and Measurement Needs for Ceramic Additive Manufacturing, Gaithersburg, MD, USA, 2019.
- Invited project: Exploring the design space for sports helmet. BASF, Heidelberg, Germany, 2018.
- Exploring structural metamaterials: From single to multiple scales. KY Nanotechnology and AM Symposium, Louisville, KY, USA, 2018.
- Additive Manufacturing Lightweight Cellular Structure Design: Background, Approaches and Challenges, Naval Surface Warfare Center (NSWC) at the Crane IN base, IN, USA, 2017.
- On the understanding of the design of additive manufacturing structures and processes. National Institute of Standards and Technology, Washington, D.C., 2017.
- Using Additive Manufacturing for Spare Part Supply, RAPID Conference and Exhibition, Orlando, FL, USA, 2016.
- Attendee of NSF CAREER Workshop, St. Louis, MO, USA, 2016.
- Design for additive manufacturing workshop. Honeywell Aerospace, Phoenix, AZ, USA, 2015.
- Introduction of Additive Manufacturing. Global Issues in Manufacturing Seminars, University of Kentucky, Lexington, KY, USA, 2015-2018.
- Custom cervical orthotic based on patient anthropometry. Kentucky EPSCoR Annual Conference, Lexington, KY, USA, 2015.
- Design of lightweight cellular structures with additive manufacturing, ICAM-BM, Beijing, China, Nov. 2014.
- Additive Manufacturing Research at University of Louisville. RTD2014, Rolla, MO, USA, 2014.
- From Model to Part: Fundamentals of Additive Manufacturing. RTD2014, Rolla, MO, USA, 2014.
- Design of lightweight cellular structure with additive manufacturing. National Science Foundation US-South Korea Workshop, Reno, NV, USA, 2014.
- Design of 3D auxetic cellular structures with additive manufacturing. Mechanical Engineering Graduate Seminar, University of Cincinnati, Cincinnati, OH, USA, 2014.
- Additive Manufacturing Education in University of Louisville. Additive Manufacturing Consortium Winter Meeting. Louisville, KY, USA, 2014.
- Design of high performance 3D auxetic structures with metal additive manufacturing. Additive Manufacturing Consortium Fall Meeting. Raleigh, NC, USA, 2013.

Patents

- Patent Application No. 62,716, 018: USE OF ELECTROPOLISHING FOR UNIFORM SURFACE TREATMENT OF METAL COMPONENTS WITH COMPLEX EXTERNAL GEOMETRIES, 2018.

Service Activities

Peer-reviewed Journal Review

3D Printing and Additive Manufacturing
Acta Biomaterialia
Acta Materialia
Additive Manufacturing
Advanced Engineering Materials
Applied Sciences
ASME Journal of Mechanical Design
ASME Journal of Manufacturing Science and Engineering
Assembly Automation
Biofabrication
Ceramic International
Computational Mechanics
Computer Aided Design
Engineering
IISE Transaction
Ingenieria e Investigacion Journal
International Journal of Machine Tools and Manufacture
International Journal of Mechanical Sciences
IOP Journal of Micromechanics and Microengineering
IOP Translational Materials Research
Journal of Manufacturing and Materials Processing
Journal of Reinforced Plastics and Composites
Journal of the Mechanical Behavior of Biomedical Materials
Laser in Engineering
Materials and Design
Materials Science and Engineering A
Mathematical Biosciences and Engineering
Measurement Science and Technologies
MRS Advances
Nanoscale
Physical Chemistry Chemical Physics
Rapid Prototyping Journal
Scientific Reports
Smart Materials and Structures
Structural and Multidisciplinary Optimization
Surface Topology

Grant Proposal Reviews

Panel reviewer, multiple programs, National Science Foundation
Research North Dakota

Community

Co-Organizer, UofL Booth at Louisville Mini Makers Faire, 2014
Reviewer, National Manufacturing Research Conference (NMRC), 2014-2020
Reviewer, Solid Freeform Fabrication Symposium, 2011 – 2016, 2019

Referee, SkillsUSA, 2016

Reviewer, ASME-Materials Science and Engineering Conference, 2016

Session Chair, Solid Freeform Fabrication (SFF) Symposium, 2014-2019

Faculty Advisor, KY Science Fair Competition (Middle school), 2016, 2018

Internal Service

Committee Member, IE Undergraduate curriculum review committee, 2013 - 2014

Committee Member, IE Committee for Student Awards Nomination, 2014

Meetings, Duthie Chair Search Committee, 2014

Faculty Advisor, GEM Graduate Lab Visit, 2014

Committee Member, RPC Staff candidate committee, 2014

Meetings, Mechanical Engineering Faculty Search, 2014

Committee Member, IE Associate Faculty Search Committee, 2014 - 2015

Committee Member, Clark Chair Professor Search, 2015 - 2016

Committee Member, ME Assistant Professor Search, 2015 – 2016

Member, Mechanical Engineering Faculty Search, 2017-2018

Committee Member, IE Department Chair Search, 2019-2020

Committee Member, Speed School of Engineering summer faculty salary and contract, 2019