HAOLIN ZHU, Ph.D

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EDUCATION

CORNELL UNIVERSITY, Sibley School of Mechanical and Aerospace Engineering, Ithaca, NY
PhD in Theoretical and Applied Mechanics: Jan 2012
Major: Solid Mechanics
Minor: Computational Science and Engineering
Advisor: Subrata Mukherjee
Dissertation: Multi-scale multiphase modeling and numerical analysis of coupled large viscoelastic deformation and fluid transport in swelling porous materials

SHANGHAI JIAO TONG UNIVERSITY, School of Naval Architecture, Ocean and Civil Engineering, Shanghai, China
BEng in Engineering Mechanics: July 2006

EMPLOYMENT

Assistant Director, NAE Grand Challenges Scholars Program, Ira A. Fulton Schools of Engineering, Arizona State University Spring 2020-present

Senior Lecturer, Ira A. Fulton Schools of Engineering, Arizona State University Aug 2017 - present

Lecturer, Ira A. Fulton Schools of Engineering, Arizona State University Aug 2011 – July 2017

TEACHING EXPERIENCE

Instructor, Principles of Mechanical Design (MEE342), Arizona State University Jan 2012 – May 2021
- Developed and taught weekly lectures;
- Implemented gamification in the course;
- Utilized active learning activities such as think-pair-and share, jigsaw activity, flipped classroom;
- Developed a wind turbine gearbox design and optimization project
- *Student Eval*.:4**.52/5**

Instructor, Mechanism Analysis and Design (MAE341), Arizona State University Jan 2014 – May 2021
- Developed and taught weekly lectures;
- Developed and implemented a manual mechanical toy hands-on design project;
- Developed and implemented a cam design project;
- Developed and implemented a four-bar mechanism analysis and animation project;
- Developed a manual mechanical toy proposal competition for a startup company hands-on design project to instill the Entrepreneurial Mindset
- *Student Eval*.:**4.68/5**

Instructor, *Grand Challenges for Engineering* (FSE150), Arizona State University Aug 2014 – May 2021
- Developed a new course structure for the course for cohered topics;
- Developed interactive class discussions and activities;
- Revamped the future solutions project;
- Coordinated faculty guest lectures
- *Student Eval*.:**4.67/5**

Instructor, *Introduction to Engineering online* (FSE100), Arizona State University Aug 2014 – Mar 2021

- Co-developed the online course;
- Co-developed video lectures, hands on activities, team activities, and a hands on team based design project;

Student Eval.:**4.88/5**

Instructor, *Introduction to Engineering* (FSE100), Arizona State University Aug 2011 – Dec 2020

- Developed various hands-on and team based active learning activities for both lectures and labs;
- Redesigned the course structure with a focus on just-in-time learning;
- Co-developed and implemented a hands-on Disaster Relief design project;
- Developed four hands-on design projects including the Assistive Technology design project, the Autonomous Waste Sorter design project, the Grand Challenges design project, the Clean Water design project;
- Developed an interdisciplinary design project that involves teams from SEMTE/EE sections collaborating with teams from the CIDSE sections;
- Developed the Clean Water design project to incorporate Entrepreneurial Mindset;
- Developed and implemented a flipped classroom model;
- Utilized reflection activities such as muddiest point and weekly reflections;
- Implemented an incentive based system;
- Implemented innovative assessment methods to assess teamwork and engineering design process

Student Eval.:**4.88/5**

Instructor, Perspectives on Grand Challenges for Engineering (FSE150), Earned Admission, Arizona State University Jan 2020 – May 2020

- Co-developed the MOOC course;
- Developed interactives (online games), activities, and discussions;
- Developed scripts for four application videos;
- Developed all material for the future solutions project that incorporates the Entrepreneurial Mindset;
- Co-designed various innovative content, delivery, and assessment for a MOOC environment;
- Co-taught the course

Instructor, Introduction to Engineering: Imagine, Design, Engineer! (FSE100), Earned Admission/Global Freshman Academy, Arizona State University Jan 2018 – May 2019

- Co-developed the MOOC course;
- Co-designed two design projects that incorporate the Entrepreneurial Mindset;
- Co-designed various innovative content, delivery, and assessment for a MOOC environment;
- Co-taught/taught the course

Instructor, *ProMod Introduction to Engineering* (FSE100), Arizona State University Aug 2015 – Dec 2018

- Designed the curriculum using Project Based Learning principles and standards;
- Designed interdisciplinary course project that allows students to demonstrate learning outcomes from various disciplines;
- Designed course cohered course assignments with ENG101 and COM230
- *Student Eval*.:**4.84/5**

Instructor, Mechanics of Particles/Rigid Bodies I (MAE201), Arizona State University Jan 2018 – May 2018

- Developed and taught weekly lectures;
- Designed assessments;
- Coordinated with other instructors for homogeneous content delivery and assessment;
- Utilized technologies and tools such as Gradescope, Piazza
- *Student Eval*.:**4.81/5**

Instructor, *Solid Mechanics* (MAE213), Arizona State University Jan 2012 – May 2017

- Developed and taught weekly lectures;
- Designed and implemented a hands-on truss bridge team design project;
- Introduced modeling tools such as ForceEffect and ANSYS Workbench;
- Designed and implemented a flipped classroom model involving Pencast™ audio lectures and in-class worksheets that focus on everyday examples, hands-on activities, and real world applications;
- Developed a Kansas City Hyatt Regency Hotel walkway redesign project which instills the Entrepreneurial Mindset;

- Implemented an incentive based system
- *Student Eval*.:**4.74/5**

Instructor, *Engineering Projects in Community Service Gold I* (FSE194/FSE104), Arizona State University Aug 2012 – May 2017
- Developed course materials;
- Supervised student teams for real-world design projects

Instructor, *Introduction to Engineering online* (FSE100), ASU Online, Arizona State University Aug 2013 – Mar 2016
- Co-designed and developed online course structure and content with a focus on teamwork and hands-on activities;
- Implemented reflection activities about the engineering design process;
- Managed and co-taught the course
- *Student Eval*.:**4.74/5**

Instructor, *Transfer Success in Engineering* (FSE394), Arizona State University Aug 2014 – Oct 2015
- Developed and taught weekly lectures
- *Student Eval*.:**4.81/5**

Instructor, *The ASU Experience* (ASU101), Arizona State University Aug 2011 – May 2014
- Developed and taught weekly lectures;
- Developed a team conflict module for use by all Fulton instructors
- *Student Eval.:***4.64/5**

Instructor, *Computer Aided Engineering II* (MAE323), Arizona State University Jan 2013 – May 2013
- Designed the course and developed all course materials, including lab training modules;
- Designed an ANSYS Workbench based design and optimization project

Teaching Assistant, *Analysis of Mechanical&Aerospace Structures* (MAE3250), Cornell University Aug 2010-Dec 2010
- Developed three course projects; Gave lectures; Taught weekly recitation sessions
- *Student Eval*.: **4.84/5**

Teaching Assistant, *Methods of Applied Math II* (TAM6110), Cornell University Jan 2010-May 2010
- Prepared assignments solutions; Graded assignments and exams

Invited Presenter and Panelist, School of Industrial and Labor Relations, Cornell University Aug 2009 & Aug 2010
- Developed and co-facilitated workshop on *Grading, Office Hours, Advising & Handling Difficult Situations*

Campus Master Teaching Assistant, Center for Teaching Excellence, Cornell University Aug 2009-May 2010
- Developed and facilitated workshop for the University-wide TA Workshops
- Developed and facilitated/co-facilitated the Graduate Teaching Assistant Excellence Series
- Facilitated the Teaching Excellence Program (TEP) sessions
- Organized a class for the International Teaching Assistant Program (ITAP) Summer Program
- Provided consultation to a Teaching Assistant

Workshop topics: *First Time TA Needs and Issues; Teaching with Online Course Management Systems; Using Student Feedback to Assess and Improve your Teaching*
Brownbag discussion topics: *Elevator Talk; Grading: Preventing and Handling Student Complaint*

Graduate Teaching Specialist, Engineering Learning Initiatives, Cornell University May 2008-Dec 2010
- Developed and co-facilitated workshops for Engineering Teaching Assistants
- Facilitated the microteaching sessions for Engineering Teaching Assistants

Workshop topics: *Classroom Presence; Effective Grading Practices (Formerly: Assessment & Academic Integrity)*

Teaching Assistant (three times), *Methods of Applied Math I* (TAM6100), Cornell University Aug 2007-Dec 2010
- Gave three lectures; Prepared assignments solutions; Graded assignments and exams

Instructor, *Calculus for Engineers* (MATH1910), Cornell University Aug 2009-Dec 2009
- Coordinated with other instructors for a common syllabus and maintained course progress
- Prepared course materials and taught 3 weekly lectures; Designed exams

Head Teaching Assistant, *Mechanics of Solids* (ENGRD2020), Cornell University Jan 2009-May 2009
- Took the leadership role, coordinated meetings and arranged duties for other Teaching Assistants

- Taught two weekly discussion sessions
- *Student Eval*.: **4.70/5**

Teaching Assistant, *Mechanics of Solids* (ENGRD202), Cornell University Aug 2007-Dec 2007
- Taught three weekly discussion sessions; Prepared assignment solutions; Graded quizzes, prelims and exams

PROGRAMS AND PROJECTS INVOLVED

KEEN GCSP Open Access Course, Arizona State University Aug 2018-present
- Key role: co-developed an open access Grand Challenges for Engineering course, as well as modules

Master Mentor Project, Arizona State University Aug 2018-present
- Key role: co-developed a faculty master mentorship model

Earned Admissions (Formerly Global Freshman Academy), Arizona State University Oct 2016-present
- Key role: co-designed the Introduction to Engineering: Imagine. Design. Engineer! course that is delivered online at the edX platform; co-designed the Perspectives on Grand Challenges course that is delivered online at the edX platform.

Engineering Futures Program, Arizona State University Aug 2016-present
- Key role: designed and taught the Introduction to Engineering course that focused on improving retention of high risk students

ASU Kern Project, Arizona State University Jan 2016-present
- Key role: defined Entrepreneurial Mindset learning outcomes for Introduction to Engineering; designed curriculum activities such as design projects that incorporate the Entrepreneurial Mindset; assessed the outcomes of the incorporation of the Entrepreneurial Mindset in the curriculum

ASU Project-Based, Modular Learning (ProMod) Project, Arizona State University Aug 2015-present
- Key role: served as the project lead for the engineering ProMod project; designed course activities, assignments, and project in Introduction to Engineering based on the golden rules of project-based learning, that cohered with English Composition and Small Group Communication

Grand Challenge Scholars Program (GCSP), Arizona State University Aug 2014-present
- Key role: redesigned course structure, designed course activities, and taught the Perspectives on Grand Challenges for Engineering course to first year Grand Challenge scholars; mentored Grand Challenge scholars for their research paper and futuristic solutions to Grand Challenges project

ASU Online Electrical Engineering Program, Arizona State University May 2013-present
- Key role: co-designed and delivered the largely team and activity based introduction to engineering course in an online environment

Engineering Projects in Community Service (EPICS), Arizona State University Aug 2012-present
- Key role: taught the Introduction to EPICS course; mentored student teams for real world design projects that impact community partners; participated in design reviews

FUNDING

KEEN Professorship Mini-Grant, 2016-2017
CPREE Mini-Grant, 2015-2016

PUBLICATIONS AND PRESENTATIONS

Referred Journal Papers

- **H. Zhu**, S. Mukherjee, A. Dhall, "A finite element analysis of coupling between water absorption and swelling of foodstuffs during soaking", *Transport in Porous Media*, 88(3), 399-419, 2011
- **H. Zhu**, A. Dhall, S. Mukherjee, A. K. Datta, "A model for flow and deformation in unsaturated swelling porous media", *Transport in Porous Media*, 84(2), 335-369, 2010

Conference Proceedings

- **H. Zhu**, A. K. Trowbridge, D. J. Laxman, K. Taylor "Online sharing platform for course modules: understanding materials use and effectiveness", in American Society of Engineering Education (ASEE) Annual Conference & Exposition, Submitted.
- **H. Zhu** "Fostering entrepreneurial mindset through a hands-on design project in a mechanism design course", in American Society of Engineering Education (ASEE) Annual Conference & Exposition, Submitted.
- **H. Zhu**, A. K. Trowbridge, "Community building in a first-year course in the NAE Grand Challenges Scholars Program through active learning in the hybrid learning modality", in American Society of Engineering Education (ASEE) Annual Conference & Exposition, Submitted.
- **H. Zhu**, A. K. Trowbridge, "Work-in-progress: defining criteria to evaluate achievement of the NAE Grand Challenges Scholars Program competencies", in American Society of Engineering Education (ASEE) Annual Conference & Exposition, Submitted.
- **H. Zhu**, A. K. Trowbridge, and J. R. Roter, "Work-in-progress: development of an interdisciplinary MOOC that introduces the NAE Grand Challenges for Engineering", in American Society of Engineering Education (ASEE) Annual Conference & Exposition, Proceedings of, Montreal, Quebec, Canada, June 2020
- **H. Zhu**, A. Baumann, G. Lichtenstein, "Assessment of entrepreneurial mindset coverage in an online first year design course", in First Year Engineering Experience (FYEE) Annual Conference, University Park, PA, July 2019
- **H. Zhu**, "Can a first day activity help raise customer awareness, an important attribute of an entrepreneurially minded engineer?", in First Year Engineering Experience (FYEE) Annual Conference, University Park, PA, July 2019
- **H. Zhu**, T. G. Ganesh, C. Sonnier, "Studying changes using concept maps in first year students' understanding of the engineering design process", in American Society of Engineering Education (ASEE) Annual Conference & Exposition, Proceedings of, Tampa, FL, June 2019
- **H. Zhu**, D. J. Taylor, I. Derk, "Cohering small group communication with introduction to engineering and its impact on team dynamics", in American Society of Engineering Education (ASEE) Annual Conference & Exposition, Proceedings of, Tampa, FL, June 2019
- A. F. McKenna, J. M. Bekki, M. Herrmann, M. V. Huerta, R. Pan, R. M. Pendyala, **H. Zhu**, "Master mentors: the process of developing a mentoring model at scale", in American Society of Engineering Education (ASEE) Annual Conference & Exposition, Proceedings of, Tampa, FL, June 2019
- A. K. Trowbridge, **H. Zhu**, J. Collofello, "First year students developing a systems perspective in the Grand Challenge Scholars Program", WEEF-GEDC 2018 Conference, Albuquerque, NM, Nov 2018
- B. E. Mertz, **H. Zhu**, A. K. Trowbridge, A. J. Baumann, "Development and implementation of a MOOC introduction to engineering course", in American Society of Engineering Education (ASEE) Annual Conference & Exposition, Proceedings of, Salt Lake City, UT, June 2018
- **H. Zhu**, I. Derk, S. Sowl, and N. Nailor, "Fusing introduction to engineering and intercultural communication and its effect on the customer awareness aspect of the entrepreneurial mindset", in American Society of Engineering Education (ASEE) Annual Conference & Exposition, Proceedings of, Salt Lake City, UT, June 2018
- **H. Zhu**, and B. E. Mertz, "Work in progress: incorporation of the entrepreneurial mindset into the introduction to engineering courses", in *American Society of Engineering Education (ASEE) Annual Conference & Exposition*, Proceedings of, Columbus, OH, June 2017, Accepted
- A. K. Trowbridge, and **H. Zhu**, "Work in progress: an interdisciplinary course designed to assist first year students in planning and preparing for success in the NAE Grand Challenge Scholars Program", in *American Society of Engineering Education (ASEE) Annual Conference & Exposition*, Proceedings of, Columbus, OH, June 2017, Accepted
- **H. Zhu**, "A flipped solid mechanics course designed based-on the Interactive, Constructive, Active, and Passive (ICAP) framework", in *American Society of Engineering Education (ASEE) Annual Conference & Exposition*, Proceedings of, New Orleans, LA, June 2016
- A. R. Lee, **H. Zhu**, J. A. Middleton, "Effectiveness of flipped classroom in mechanics of materials", in *American Society of Engineering Education (ASEE) Annual Conference & Exposition*, Proceedings of, New Orleans, LA, June 2016
- **H. Zhu**, "Implementing open-ended hands-on design projects throughout the mechanical engineering curriculum", in *American Society of Engineering Education (ASEE) Annual Conference & Exposition*, Proceedings of, New Orleans, LA, June 2016

- **H. Zhu**, and B. E. Mertz, "Redesign of the introduction to engineering course and its impact on students' knowledge and application of the engineering design process", in *American Society of Engineering Education (ASEE) Annual Conference & Exposition,* Proceedings of, New Orleans, LA, June 2016
- **H. Zhu**, and A. K. Trowbridge, "Assessing the impact of incorporating the NAE Grand Challenges for Engineering as a multidisciplinary hands-on design project in the introduction to engineering course", in *American Society of Engineering Education (ASEE) Annual Conference & Exposition,* Proceedings of, New Orleans, LA, June 2016
- **H. Zhu**, and R. J. Meuth, "Assessment of communication, teamwork, and engineering motivation in inter-disciplinary projects implemented in an introduction to engineering course", in *American Society of Engineering Education (ASEE) Annual Conference & Exposition,* Proceedings of, Seattle, WA, June 2015
- D. Benson, and **H. Zhu**, "Student reflection, self-assessment and categorization of errors on exam questions as a tool to guide self-repair and profile student strengths and weaknesses in a course", in *American Society of Engineering Education (ASEE) Annual Conference & Exposition,* Proceedings of, Seattle, WA, June 2015
- B. E. Mertz, **H. Zhu**, and C. Wang, "Design, implementation and evaluation of an online team and activity-based introduction to engineering course", in *American Society of Engineering Education (ASEE) Annual Conference & Exposition*, Proceedings of, Seattle, WA, June 2015
- K. C. Dimiduk, R. Bhaskaran, **H. Zhu**, Y. Gao, "Helping students approach FEA simulations like experts", in *American Society of Engineering Education (ASEE) Annual Conference & Exposition*, Proceedings of, Vancouver, BC, June 2011
- **H. Zhu**, S. Mukherjee, "Flow and deformation in unsaturated swelling porous materials", *Proceedings of the 10th US National Congress on Computational Mechanics* (USNCCM-X), July 2009

Conference Workshops

- A. K. Trowbridge, **H. Zhu**, "EML everywhere: adapting EML activities for use in different learning modalities", *KEEN National Conference*, Feb 2021
- **H. Zhu**, R. J. Meuth, S. Ramakrishnan, "Incorporation of EM into first year design projects", *KEEN National Conference,* Jan 2017

Presentations [*Presenter]

- **H. Zhu***, A. Baumann, G. Lichtenstein, "Assessment of entrepreneurial mindset coverage in an online first year design course", in First Year Engineering Experience (FYEE) Annual Conference, University Park, PA, July 2019
- **H. Zhu***, "Can a first day activity help raise customer awareness, an important attribute of an entrepreneurially minded engineer?", in First Year Engineering Experience (FYEE) Annual Conference, University Park, PA, July 2019
- **H. Zhu***, I. Derk, S. Sowl, and N. Nailor, Fusing introduction to engineering and intercultural communication and its effect on the customer awareness aspect of the entrepreneurial mindset, *ASEE Annual Conference & Exposition*, June 2018
- **H. Zhu***, R. J. Meuth*, S. Ramakrishnan*, "Incorporation of EM into first year design projects", *KEEN National Conference Workshop,* Jan 2017
- **H. Zhu***, A flipped solid mechanics course designed based-on the Interactive, Constructive, Active, and Passive (ICAP) framework, *ASEE Annual Conference & Exposition*, June 2016
- **H. Zhu***, Implementing open-ended hands-on design projects throughout the mechanical engineering curriculum, *ASEE Annual Conference & Exposition*, June 2016
- A. Lee, **H. Zhu***, and J. A. Middleton, Effectiveness of flipped classroom in mechanics of materials, *ASEE Annual Conference & Exposition*, June 2016
- D. Benson, and **H. Zhu***, Student reflection, self-assessment and categorization of errors on exam questions as a tool to guide self-repair and profile student strengths and weaknesses in a course, *ASEE Annual Conference & Exposition*, June 2015
- **H. Zhu***, C. Wang*, Benjamin Mertz*, Incorporating active learning techniques into an online class, *Faculty Showcase,* ASU Online, Arizona State University, 2014
- Y. Gao*, **H. Zhu***, K. C. Dimiduk*, Finite Element Analysis in required solid mechanics course, *2010 Advisory Committee Meeting,* Swanson Engineering Simulation Program, Cornell University, November 2010
- **H. Zhu***, S. Mukherjee, Flow and deformation in unsaturated swelling porous materials, *10th US National Congress on Computational Mechanics* (USNCCM-X), July 2009

Book Publication

- **Co-author**, *Handbook on applications to graduate schools abroad*. (ISBN 962-450-363-X) June, 2006

RESEARCH EXPERIENCE

Research Assistant, Swanson Engineering Simulation Program, Cornell University, Ithaca, NY May 2010-June 2011

- Improved and developed undergraduate curriculum through integration of advanced simulations into an Engineering course: *Analysis of Mechanical & Aerospace Structures* (MAE3250) to help students approach simulation like experts
  Key contributions—Development of simulation demo examples using ANSYS Workbench and design of guided homework problems to stimulate students' interest, help students gain insight on the theories and help students develop problem solving skills like experts; Assessment of the outcomes of integrating advanced simulations into this course

Research Assistant, Mechanical and Aerospace Engineering, Cornell University, Ithaca, NY 2007-Aug 2012

- Developed a multi-scale thermo-hygro-mechanical theory for multiphase transport in deformable viscoelastic porous materials
  Key contributions—A thermo-hygro-mechanical theory for unsaturated viscoelastic swelling porous systems using multi-scale multiphase porous media approach; Non-empirical coupling of fluid and heat transport with large viscoelastic deformation for multiphase porous systems with applications in Biomedical Engineering, Tissue Engineering, Soil Science, Structural Engineering, Food Industry, and Household Industry

- Conducted modeling and Finite Element analysis of coupled fluid transport and swelling during soaking of biopolymers
  Key contributions—Non-empirical modeling and investigation of the coupled fluid transport and swelling of the porous biopolymers in a soaking process for the first time; Development of a Finite Element model for nonlinear two way coupled systems; Investigation of viscoelastic effect on the transport process; Investigation of swelling using a fundamental approach for biopolymers

- Investigated shrinkage and case hardening in drying processes
  Key ideas—Modeling and investigation of shrinkage during drying of biopolymers using fundamental based approaches; Investigation of case hardening phenomenon and its effect on the drying processes

SERVICE

Mentorship

Connor Sonnier, FURI, 2020
Alek Pensky, Honors Thesis, 2019-2020
Connor Sonnier, GCSP research, 2019
Sun Devil Scale Modeling-Club, 2018-present
Arminta Claire Jordan, Honors Thesis, 2018-2019
Chasen Williams, Honors Thesis, 2018-2019
Marnie Wong, New Faculty, 2015
Andrew R. Lee, *Effectiveness of Flipped Classroom in Solid Mechanics*, Honors Thesis, 2015-2016
EPICS team StarDust, 2015
Andrej Simeunovic, *Mechanical Design of a RF Transmitting Belt as Part of a Wireless SCS System*, Honors Thesis, 2014
Jonathon Houda, *ROV Thruster Waterproofing through Magnetic Coupling*, Honors Thesis, 2014
Casey Ankney, New Faculty, 2013
Honors Contracts in Various Courses, 2011-2019

Reviewer

First Year Engineering Experience (FYEE), Annual Conference, 2019
American Society of Engineering Education (ASEE), Annual Conference, 2015-2021
American Society of Engineering Education (ASEE), Pacific Southwest Section Meeting, 2017
Transport in Porous Media, 2011

Committees

ASA EM Task Force Committee, 2019-present
FSE100 Curriculum Committee, 2019-present
Fulton Academic Integrity Committee, 2019-present
ASA Online Classes Committee, 2019-present
ASA Faculty Personnel Committee, 2018-present
GCSP Faculty Committee, 2018-present
Fulton Standards Committee, 2015-2019
Faculty Search Committees, Fulton Lecturers, 2015, 2017-2019
New Faculty Advisory Committee, 2014-2016

Other

Fulton Resource Fair, 2020-2021
More to Explore, 2020-2021
YEI (Young Engineers Invent) with Hope Academy and the National Girl-Scouts Network, 2020-2021
EPICS Design Review, 2020
Master Mentors, 2018-2021
SEE@ASU, 2019, 2020
Women in Engineering Dinner, 2018-2019
Event Supervisor, Science Olympiad, 2017-2018
Girl's Make-a-thon K-12 Engineering Outreach Event, 2016
Grand Challenge Scholars Program Gore Grant Reviewer, 2015
Robot Design Judge, AZ FLL Southeast Mesa Qualifier, 2015
Robot Design Judge, AZ FLL Championship Tournament, 2015
Senior Scholar Dinner, 2013-2014
SEE@ASU, 2013
EPICS Design Reviewer, 2012-present
More to Explore, 2012-2013
ABET Program Assessment Fair, 2012
E2 Camp Volunteer, 2011-present
Feasting with Faculty, 2011-present

PROFESSIONAL DEVELOPMENT ACTIVITIES

KEEN National Conference, 2021
NAE Grand Challenges Scholars Program Annual Meeting, 2020
ASU Sync Workshop, 2020
Design Thinking Workshop, Feb 2019
American Society of Engineering Education (ASEE) Annual Conferences, 2015-2016, 2018-2021
EM101 Workshop, Feb 2018
3rd Global Grand Challenge Summit, 2017
NSF-Supported Project, Scaling a Cyber-Enabled, Just-in-Time Teaching with Two-Way Formative Feedback (JTF)
Pedagogy to the Multiple Disciplinary Problem Level (JTFD) Professional Development Workshops, 2016-2017
Using Disruptive Technologies to Foster EM Workshop, 2017
KEEN National Conference, 2017
ProMod Project Based Learning Workshop, 2016
KEEN Winter Conference, 2016
Introduction to Engineering Education Research Workshop, 2016
Getting Started with TI LaunchPad –from Freshman Engineering to Internet of Things Workshop, 2016
2nd Global Grand Challenge Summit, 2015
Freshman Year Engineering Experience (FYEE) Annual Conference, 2014, 2019-2020
How to Actively Engage Your Students: A Workshop for Active Learning, 2014
Teaching and Learning Workshop, 2013
Human-Centered Design for Social Innovation, 2013
Introduction to Public Speaking, 2013
Hewlett Foundation Engineering Schools of the West Initiative Everyone's First Engineering Class Workshop, 2012

AWARDS AND CERTIFICATES

Best Card ASEE 2019, Kern Entrepreneurial Engineering Network (KEEN), 2019
Best Paper Finalist, First Year Programs Division, ASEE Annual Conference, 2019
Fulton Outstanding Lecturer, Arizona State University, 2018
KEEN (Kern Entrepreneurial Engineering Network) Professorship, Arizona State University, 2016
Sun Award, Fostering Cooperation, ENGR Academic & Student Affairs, Arizona State University, December 2015
ASU Online Faculty Showcase, Arizona State University, April 2014
Certificate: Master Teaching Assistant Program, Center for Teaching Excellence, Cornell University, May 2010
Travel Award, 10th US National Congress on Computational Mechanics (USNCCM-X), July 2009
Certificate: Teaching Assistant Development Program, College of Engineering, Cornell University, 2007
Olin Fellowship, Cornell University, 2006
***Wu Shaolin* Fellowship**, Shanghai Jiao Tong University, 2005
Excellent Academic Scholarship, Shanghai Jiao Tong University, 2003-2005 successively