

DEREK T. REAMON

Teaching Professor, Mechanical Engineering
College of Engineering and Applied Science
University of Colorado Boulder

Professional Preparation

Stanford University	Mechanical Engineering	BS	1992
Stanford University	Electro-mechanical Systems	MS	1995
Stanford University	Engineering Education Research	PhD	1999

Appointments

- 2017 – present **Teaching Professor, Engineering Plus and Mechanical Engineering, University of Colorado Boulder**
Regularly teach the following courses: *First-Year Engineering Projects*, *Thermodynamics*, and *Mechatronics*. Research interests include robotics and engineering education.
- 2007 – 2019 **Co-Director, Integrated Teaching and Learning Program, University of Colorado Boulder.** Co-led the hands-on learning program by promoting faculty linkages and encouraging the development and implementation of multi-departmental curricular initiatives. Oversaw ~20 sections per year of the retention-building, undergraduate *First-Year Engineering Projects* course, including its semester-end Engineering Design Expo.
- 2013 – 2019 **Co-Director, Engineering Plus Program, University of Colorado Boulder.**
Co-led the accredited undergraduate degree program featuring disciplinary emphasis in engineering and customizable concentration including math or science teaching licensure.
- 2010 – 2013 **Undergraduate Chair, Mechanical Engineering, University of Colorado Boulder**
and 2006 – 2007
- 2007 – 2017 **Senior Instructor, Mechanical Engineering, University of Colorado Boulder**
Taught the following courses: *First-Year Engineering Projects*, *Component Design*, *Product Design*, *Thermodynamics*, *Dynamics*, *Systems Dynamics*, *Circuits and Mechatronics*.
- 2002 – 2006 **Instructor, Mechanical Engineering, University of Colorado Boulder**
- 2000 – 2002 **Adjunct Assistant Professor, Integrated Teaching and Learning Program, University of Colorado Boulder**
- 1999 – 2000 **Lead Engineer, Innerstep Design Services, San Jose, CA**
- 1993 – 1998 **Teaching Assistant and Fellow, Stanford University, Stanford, CA**
- 1991 – 1993 **Edison Engineer, General Electric Corporation, San Jose, CA**

Selected Engineering Education Publications

- Tsai, J., Myers, B., Sullivan J., Reamon, D., Anderson, K., O'Connor, K. *Scaling Up or Scale-making? Examining Sociocultural Factors in a New Model for Engineering Mathematics Education.* ASEE Annual Conference and Exposition, June 2018.
- Tsai, J., O'Connor, K., Myers, B., Sullivan, J., Reamon, D., Anderson, K. *Examining the Replication – or Mutation – Processes of Implementing a National Model for Engineering Mathematics Education at a New Site.* ASEE Annual Conference and Exposition, June 2018.
- Segil, J., Sullivan, J., Tsai, J., Reamon, D., and Forbes, M. (2017) *Investigation of spatial visualization skills across world regions.* IEEE Frontiers in Education Conference (FIE), October 2017. Indianapolis, IN.
- Forbes, M., Sullivan, J., Myers, B., Reamon, D. (2016) *Exploring Student Impressions of and Navigations through a Flexible and Customizable Multidisciplinary Engineering Program.* ASEE Annual Conference and Exposition. June 2016. New Orleans, LA.

Engineering Education Grants and Teaching Service Activities

Principal Investigator for *One Day's Pay* — \$500k NSF Innovations in Engineering Education, Curriculum, and Infrastructure (IEECI) Grant for investigation of the Altruistic Design Projects and impact of project type on student learning. Co-PI's: Argrow, B., Kotys-Schwartz, D., Nelson, M., Sullivan, J. Funding two doctoral students in Engineering Education research.

Recent Curriculum Development

Redesigned curriculum for *Thermodynamics* — fundamental course in thermodynamics including thermodynamic properties and processes. Revamped curriculum and created hands-on workshops and introduced design project where students build and analyze a system with a functioning thermodynamic cycle.

K-12 Engineering Outreach

Developed curriculum and design project for *Robotics Design Challenge* at DSST Cole in the Summers of 2015 - 2018, involving design of soccer playing robots for 2 on 2 matches. Program targets highly diverse student population in STEM-focused, high-achieving public school.

Teaching Awards

- *John & Mercedes Peebles Innovation in Education Award*, College of Engineering and Applied Science, University of Colorado Boulder, 2013.
- *Sullivan-Carlson Innovation in Teaching Award*, Engineering Excellence Fund, College of Engineering and Applied Science, University of Colorado Boulder, 2010.
- *Outstanding Undergraduate Educator*, Mechanical Engineering, University of Colorado Boulder, 2009-10.
- *Excellence in Teaching Award*, Boulder Faculty Assembly, University of Colorado Boulder, 2009.
- *Faculty Appreciation Award*, CU Multicultural Engineering Program, 2009.
- *Dean's Outstanding Teaching Award*, College of Engineering and Applied Science, University of Colorado Boulder, 2007.
- *Best Professor Award*, ASME University of Colorado Chapter, 2006-07.
- *Shell Outstanding Undergraduate Educator*, Mechanical Engineering, University of Colorado Boulder, 2005-06.
- *Best Professor Award*, ASME University of Colorado Chapter, 2005-06.
- *Charles Hutchinson Outstanding Teaching Award*, College of Engineering and Applied Science, University of Colorado Boulder, 2005.

Collaborators and Other Affiliations

Collaborators and Co-Editors

University of Colorado Boulder: Brian Argrow, Angela Bielefeldt, Lawrence Carlson, Noah Finklestein, Marissa Forbes, Daniel Knight, Daria Kotys-Schwartz, Beth Myers, Mary Nelson, Jacob Segil, Jacquelyn Sullivan, Janet Tsai, Janet Yowell, and Malinda Schaefer Zarske.

Graduate and Postdoctoral Sponsor

Advisor: Sheri D. Sheppard (Stanford University)

Thesis Advisees and Sponsored Postgraduate-Scholars

Graduate Students (8 total): Brian Foy (unknown), Joel Bettner (Abengoa Solar IST), James Margolis (University of Colorado Boulder), Daria Kotys-Schwartz (University of Colorado Boulder), Malinda Schaefer Zarske (University of Colorado Boulder), Lauren Cooper (California Polytechnic University), Jacob Segil (University of Colorado Boulder), Janet Tsai (University of Colorado Boulder).