

Alice Merner Agogino

Roscoe and Elizabeth Hughes Chair of Mechanical Engineering

<http://www.me.berkeley.edu/faculty/agogino/>

PROFESSIONAL PREPARATION

- B.S. (1975) Mechanical Engineering, University of New Mexico, Albuquerque, NM
- M.S. (1980), Mechanical Engineering, UC Berkeley, Berkeley, CA
- Ph.D. (1984), Engineering-Economic Systems, Stanford University, Stanford, CA

APPOINTMENTS

- Roscoe and Elizabeth Hughes Chair of Mechanical Engineering (1998-); Professor (1992-), Associate Professor (1988-92), Assistant Professor (1984-1988)
- Education Director (2016-), Blum Center for Emerging Economies, UC Berkeley
- President and Chief Technology Officer, Squishy Robotics (2017-), Skydeck Accelerator, Berkeley, CA
- Chair (2005-06), Vice Chair (2004-05) Faculty Academic Senate at UC Berkeley
- Faculty Assistant to EVC & Provost, Educational Development and Technology (1999-2001)
- Associate Dean, Engineering: Center for Underrepresented Engineers; Distance Learning and Instructional Technology, UC Berkeley (1995-1999)
- Engineer and Business Specialist, General Electric (1975-1980)
- Director, Women-in-Engineering Program, University of Santa Clara, California, 1980-1981

SELECTED PUBLICATIONS

1. Y.-J. Wen, A.M. Agogino (2011). "Control of Wireless-Networked Lighting in an Open-plan Office", *Journal of Lighting Research and Technology*, **43** (2), pp. 235-248.
2. K. Ryokai, A.M. Agogino (2013). "Off the Paved Paths: Exploring Nature with a Mobile Augmented Reality Learning Tool", *Journal of Mobile HCI (IJMHCI)*, Vol. 5 (2), pp. 21-49.
3. K. Kyunam, A.K. Agogino, D. Moon, L. Taneja, Al. Toghyan, B. Dehghani, V. SunSpiral, A.M. Agogino (2014). "Rapid Prototyping Design and Control of Tensegrity Soft Robot for Locomotion." *Proceedings of the 2014 International Conference on Robotics and Biomimetics (ROBIO 2014)*, pp. 7-14.
4. M. Fuge, A.M. Agogino, "Pattern Analysis of IDEO's Human-Centered Design Methods in Developing Regions", *ASME Journal of Mechanical Design*, **138** (4), July 2015.
5. A.P. Sabelhaus, J. Bruce, K. Caluwaerts, P. Manovi, R. G. Firoozi, S. Dobi, A.M. Agogino, V. SunSpiral (2015). "System Design and Locomotion of SUPERball, an Autonomous Tensegrity Robot." *Proceedings of 2015 IEEE International Conference on Robotics and Automation (ICRA)*.
6. K. Kim, K., A.K. Agogino, A. Toghyan, D. Moon, L. Taneja, A.M. Agogino (2015). "Robust Learning of Tensegrity Robot Control for Locomotion through Form-Finding," International Conference on Intelligent Robots and Systems (IROS 2015).
7. L.-H. Chen, K. Kim, E. Tang, K. Li, R. House, A.M. Agogino, A.K. Agogino, V. Sunspiral, E. Jung, "Soft spherical tensegrity robot design using rod-centered actuation and control," *ASME Journal of Mechanisms and Robotics*, 9 (2), pp. 0205001-1-9.
8. "Design Roadmapping: A Framework and Case Study of Planning Development of High-Tech Products in Silicon Valley (2016), (with E. Kim, J. Chung, S. Beckman), *ASME Transactions, Journal of Design*, **138** (1) 2016. doi: 10.1115/1.4034221.
9. K. Kim, K., A.M. Agogino, (2016). "Spin Axis Stabilization about Arbitrary Axis Using Two Reaction Wheels for Hopping Tensegrity Robots," *Proceedings of the Conference on Decision and Control*.
10. C. Zhang, Y.P. Kwon, J. Kramer, E. Kim, A.M. Agogino (2017). "Using Machine Learning to Support Concept Clustering in Design Teams", to appear in a special issue of *ASME Journal of Mechanical Design on Data-Driven Design MD-17-1159*, 2017.

SELECTED SYNERGISTIC ACTIVITIES

1. Teaching and Mentoring: Advisor for 51 Ph.D. students and 187 M.S./MEng students. 2017 ASME Design Theory and Methodology Award: *to recognize sustained and meritorious contributions to research; education; service; training of researchers or practitioners; overall leadership in advancing the field; or any combination of these in the field of Design Theory and Methodology*. 2015 ASME Ruth and Joel Spira Outstanding Design Educator Award “for tireless efforts in furthering engineering design education including curriculum changes that blend cutting-edge design topics with state-of-the-art educational practices; promoting wide-ranging interaction between industry and students; performing game-changing design research; and mentoring the next generation of designers, educators, researchers and engineers”; Chair, Development Engineering Graduate Group, 2013-; Awardee & Keynote Speaker, STEM Women of the Year, 2014; AAAS Lifetime Mentoring Award, 2013; Pi Tau Sigma Professor of the Year, 2011; Faculty Award for Excellence in Graduate Student Mentoring, 2007. Faculty PI for successful student product design awards: Co-Winner, First Place in Social Entrepreneurship Competition, "Class Projects to Social Ventures" and Co-Winner, Second Place in Social Justice, Community Engagement Competition, "Students-Community Collaborative Design Challenge Big Ideas Contest, 2011; Max Tech and Beyond Appliance Design Competition 2012-13; five e-Teams with National Collegiate Inventors and Innovators Alliance (NCIIA) awards. Co-Founder of: Berkeley Institute of Design; Engineers and Business for Sustainability certificate program at UC Berkeley; Human-Centered Design Course Threads (undergraduate certificate program at UC Berkeley). Founder: Engineering Pathway educational digital library.
2. National Academies: Member, Committee on Women in Science, Engineering, and Medicine (CWSEM) (2009-); Member, Committee on “Addressing the Impact of Sexual Harassment in Academia on the Career Choices of Women in Science, Engineering, and Medicine” (2016-17); Council, National Academy of Engineering (elected), 2008-2014; Co-Chair, Nomination Committee, Section 10, National Academy of Engineering (2007-2010); Chair (2005-2006), Vice-Chair (2004-2005) Section 10 Peer Committee; Chair, Gordon Prize Committee, National Academy of Engineering, 2003; Committee on Engineering Education (1998/2002); Engineer of the Year 2020 (2001/2002); Technology Literacy Standards (1997/2000).
3. K-12, Community Service and Diversity: Faculty sponsor Big Ideas Competition, 2015: First Place in Global Health for the proposal: Visualize: Saving Lives with Training for Cervical Cancer Screening; Chancellor’s Community Service Award, 2010; Co-Chair, Chancellor's Berkeley Diversity Research Initiative, UC Berkeley (2005-2006); Member, National Academies Board on Science Education (BOSE, 2005-2007); Member, Women in Academic Science Engineering Committee of the National Academies Committee on Science, Engineering, and Public Policy (COSEPUP; 2005-2013); Chair, Executive Committee, SESAME (Studies in Engineering, Science and Mathematics Education) doctoral program, UC Berkeley (Chair, 2003-2004; Member, since 1998).
4. Advisory Service: MIT (2001-03); Jet Propulsion Laboratory (2003-05); CMU (2004, 2017); NIST Manufacturing Engineering Laboratory (2004-05); ASME, Education Board (2004-2006); Radcliffe Institute, Harvard (2003-2006); Darfur Stove/ Technology Innovation for Sustainable Solutions (2008-11); UC Berkeley Energy Resources Group (2011-2013); KAUST President’s International Advisory Board (2011-15); UnaMesa Association (2008-2015); Singapore University of Technology and Design SUTD-MIT International Design Centre (2014-17); De Novo Group (2013-15) Director’s Advisory Committee, Jacobs Institution of Design Innovation (2016-).
5. Affiliated faculty: Studies in Engineering, Science and Math Education (SESAME); Designated Emphasis in Development Engineering; Designated Emphasis in Computational Science and Engineering; Development Engineering; Haas School of Business; Gender and Women’s Studies; Berkeley Institute of Design.