Alice Merner Agogino

Roscoe and Elizabeth Hughes Chair of Mechanical Engineering
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EDUCATION

- 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, UC Berkeley (1998-present)
- Education Director, Blum Center for Developing Economies (2016-present)
- Founder and Graduate Field Advisor, Product Design, MEng Concentration (2013-present)
- Chair (2013-present), Graduate Group, Development Engineering, UC Berkeley
- Chair (2005-06), Vice Chair (2004-05) Faculty Academic Senate at UC Berkeley
- Faculty Assistant to Executive Vice Chancellor & Provost (1999-2001)
- Associate Dean, College of Engineering (1995-1999)
- Professor (1992-present), Associate Professor (1988-92), Assistant Professor (1984-1988)
- Engineer and Business Specialist, General Electric (1975-1980)
- Director, Women-in-Engineering Program, University of Santa Clara, California, 1980-1981

SELECTED PUBLICATIONS

1. S. Chao, A. M. Agogino (1998). “Hazard Diagnosis in Advanced Vehicle Control Systems,” *Proc. IASTED International Conference on Applied Modelling and Simulation*, pp. 229-232.
2. S. Alag, A.M. Agogino, M. Morjaria, (2001). "A Methodology for Intelligent Sensor Measurement Validation, Fusion, and Sensor Fault Detection for Equipment Monitoring and Diagnostics ,” *AIEDAM Journal,* AI in Equipment Service, **15**(4), pp. 307-319.
3. Y.-J. Wen, A.M. Agogino (2011). “Personalized Dynamic Design of Networked Lighting for Energy-Efficiency in Open-Plan Offices ,” *Energy and Buildings,* Vol. 43 (8), August 2011, pp. 1919-1924
4. Y.-J. Wen, A.M. Agogino (2011). “Control of Wireless-Networked Lighting in an Open-plan Office”, *Journal of Lighting Research and Technology*, Vol. 43 (2), June 2011, pp. 235-248. (Won the Leon Gaster “Best Paper” Award).
5. J. Bruce, A.P. Sabelhaus, K. Caluwaerts, A. M. Agogino, V. SunSpiral (2014). “SUPERball: Exploring Tensegrities for Planetary Probes”, *Proc. 12th International Symposium on Artificial Intelligence, Robotics, and Automation in Space (i-SAIRAS).*
6. A.P. Sabelhaus, K. Caluwaerts, F. Bruce, A.M. Agogino, V. SunSpiral (2014). “SUPERball: Modular Hardware for a Mobile Tensegrity Robot,” *Proc. WCSCM6 (6th World Conference on Structural Control and Monitoring).*
7. Kim, E. Y., J. Jeong, Kathryun Mock, V. Kocsik, A.M. Agogino (2014). “Identifying Design Opportunity Spaces in New User Interfaces for Exoskeleton Mobility Devices,” *Proceedings of DESIGN2014* (International Design), (eds., M. Borian, S. Mario, P. Neven, B. Nenad), pp. 517-528.
8. K. Kyunam, A.M. Agogino, A.K. Agogino, et al. (2014) “Rapid Prototyping Kit for Tensegrity Robots,” International Conference on Robotics and Biomimetics (ROBIO 2014), Proceedings of the 2014 International Conference on Robotics and Biomimetics (ROBIO 2014), pp. 7-14.
9. C. Basu, B. Chu, J. Richards, A. Dhinakaran, A.M. Agogino, R. Martin (2014). “Affordable and Personalized Using Inverse Modeling and Virtual Sensors”, *Proceedings of the SPIE Smart Structures/NDE 2014*, 9-13 March 2014.
10. Basu, C., J. Caubel, K. Kim, E. Cheng, A. Dhinakaran, A.M. Agogino, R. Martin (2014). “Sensor-Based Predictive Modeling for Smart Lighting in Grid-Integrated Buildings,” in a special issue of IEEE Sensors on Sensing Technologies for Intelligent Urban Infrastructures, Vol. 14 (12), December 2014, pp. 4216-4229.

11. Sabelhaus, A.P., 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*.
12. Sabelhaus, A.P. P. Hylton, Y. Madaan, C.W. Yang, A.M. Agogino, J. Friesen, V. SunSpiral (2015). “Mechanism Design and Simulation of an Underactuated Spine-Like Tensegrity Robot”, ASME, Proceedings of the International Design Engineering Technical Conference.
13. Kim, K., A.K, Agogino, A.M. Agogino (2015). “Emergent Form-Finding for Center of Mass Control of Ball-Shaped Tensegrity Robots,” Proceedings of ARMS (Autonomous Robots and Multirobot Systems) workshop, Istanbul, Turkey, May 4-5, 2015.
14. 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),
15. Chen, L.-H., P. Keegan, M. Yuen, A.M. Agogino, R.K. Kramer, A.K. Agogino, V. Sunspiral (2015). “Soft Robots Using Compliant Tensegrity Structures and Soft Sensors”. ICRA Workshop on Soft Robotics,
16. L.-H. Chen, K. Kim, E. Tang, K. Li, R. House, A.M. Agogino, A.K. Agogino, V. Sunspiral, E. Jung (2016). "Soft spherical tensegrity robot design using rod-centered actuation and control," *Proceedings of the ASME IDETC 2016*.
17. Zampaglione, K., A.P. Sabelhaus, L.-H. Chen, A.K. Agogino, A.M. Agogino (2016). “DNA-Structured Linear Actuators,” *Proceedings of the ASME IDETC 2016.*
18. K. Kyunam, L.H. Chen, B. Cera, M. Daly, E. Zhu, J. Despois, A.K. Agogino, V. SunSpiral, A.M. Agogino (2016). “Hopping and Rolling Locomotion with Spherical Tensegrity Robots,”, IEEE, *Proceedings of IROS 2016*.
19. Kim, K., A.M. Agogino (2016). “Spin Axis Stabilization about Arbitrary Axis Using Two Reaction Wheels for Hopping Tensegrity Robots,” Conference on Decision and Control.

SELECTED PROFESSIONAL ACTIVITIES

1. Best Paper Awards: Won 13 best paper awards and 3 runner-up awards.
2. Teaching and Mentoring*:* ASME Ruth and Joel Spira Outstanding Design Educator Award, 2015; 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. 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. Founder & Major Field Advisor, Product Design, MEng concentration. Co-Founder of: Berkeley Institute of Design; Engineers and Business for Sustainability certificate program; Human-Centered Design Course Threads at UC Berkeley; *theDesignExchange.org*. Graduated 156 M.S. students and 46 Ph.D. students.
3. National Academy of Engineering: Council, National Academy of Engineering (elected), 2008-2014; Co-Chair, Nomination Committee, Section 10, National Academy of Engineering (2007-20010); 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).
4. K-12, Community Service and Diversity: 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, (Chair, 2003-2004; Member, since 1998).
5. Advisory Service: SUTD International Design Center (Chair, 2017+, Member 2012-present); MIT (2001-03); Jet Propulsion Laboratory (2003-05); CMU (2004); Manufacturing Engineering Laboratory of the NIST (2004-05); ASME, Education Board (2004-2006); Radcliffe Institute, Harvard (2003-2006), KAUST President’s International Advisory Board (2011-14); Darfur Stove/ Technology Innovation for Sustainable Solutions (2008-11); UnaMesa Association (2008-2014); UC Berkeley Energy Resources Group (2011-2013).