

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. J. Sandhu, A.M. Agogino (2008). "Design First, Technology Second," ACM, Computer-Human Interaction Conference, CHI 2008 (Florence, Italy, April 5-10, 2008).
2. V. Borja, A.M. Agogino, S. Beckman, N. Shedroff, M. Lopz, A. Ramirez, "Teaching Multinational, Multidisciplinary Sustainable Product Development", DETC 2008, ASME.
3. C.L. Dym, A.M. Agogino, O. Eris, D.D. Frey, L.J. Leifer (2005). "Engineering Design Thinking, Teaching and Learning," *Journal of Engineering Education*, v. 94, no. 1, pp. 103-120.
4. J.L. Mathieu, A.J. Gadgil, A.M. Agogino, "Design strategies and preliminary prototype for a low-cost arsenic removal system for rural Bangladesh", International Conference WEDC (Water, Engineering and Development) - Water, Sanitation and Hygiene: Sustainable Development and Multisectoral Approaches". Updated version published by the Lawrence Berkeley National Laboratory as LBNL-2696E, September 14, 2009.
5. L. Oehberg, R. Shelby, A.M. Agogino (2010). "Sustainable Product Design: Designing for Diversity in Engineering Education," *Int. J. of Engineering Education*, **26** (2), pp. 489-498.
6. T.C. Schultz, R. Shelby, A.M. Agogino (2010). "The Co-Design of Water and Energy Efficient Sustainable Housing with the Pinoleville Pomo Nation", *Proceedings of the ASME International Sustainability Conferences*, May 17-22, 2010.
7. R. Shelby, A.M. Agogino (2011). "The Assessment and Prioritization Of User Needs With The Pinoleville Pomo Nation for The Development Of Sustainable And Renewable Energy Systems", *Proceedings of ASME DETC 2011*, ASME, CD ROM DETC2011-48661; pp. 515-526.
8. R. Shelby, Y. Perez, A.M., Agogino (2012). "Partnering with the Pinoleville Pomo Nation: Co-Design Methodology Case Study for Creating Sustainable, Culturally Inspired Renewable Energy Systems and Infrastructures," *Sustainability* **4** (5), 2012, pp. 794-818.
9. L. Oehlberg, C. Bayley, C. Hartman, A.M. Agogino, "Mapping the Life Cycle Analysis and Sustainability Impact of Design for Environment Principles", in *Leveraging Technology for a Sustainable World*, Proceedings of the 19th CIRP Conference on Life Cycle Engineering (Eds., D. A. Dornfeld and B. S. Linke), ISBN 978-3-642-29068-8), 2012, pp. 221-226.
10. J. Vechakul, A.M. Agogino (2013). "A Comparison of Two Transdisciplinary Human-Centered Design Approaches for Poverty Alleviation," *Proc. The Future of Transdisciplinary Design (TFTD13)*, 2013.
11. Y. Perez, A.M. Agogino, "Information and Communication Technologies as a Bridge between Global Designers and Local Users", *Proceedings of The Future of Transdisciplinary Design (TFTD13)*, June

2013. Also in *The Future of Transdisciplinary Design*, eds. L. Blessing, A.J. Qureshi and K. Gericke, Springer Publishing, 2016.
12. P. Gordon, M. Fuge A.M. Agogino (2014). "Design for Development Online: A Human-Centered Design Analysis of OpenIDEO", *Proceedings of the ASME International Mechanical Engineering Congress & Exposition*.
 13. M. Fuge, K. Tee, A.M. Agogino, N. Maton (2014). "Network Analysis of Collaborative Design Networks: A Case Study of Open IDEO", *ASME Journal of Computing and Information Science in Engineering*, **14** (2) 2014.
 14. Y. Perez, R. Shelby, D. Edmunds, A. James, A.M. Agogino, "Social Factors in the Age of Social Media – A Multidisciplinary Approach," special chapter in *Death and Life of Social Factors* (eds., Georgia Lindsay and Lusi Morhayim), Cambridge Scholars Publishing, 2015, pp. 166-187. ISBN (10): 1-4438-7734-4
 15. M. Fuge, A.M. Agogino (2015). "Pattern Analysis of IDEO's Human-Centered Design Methods in Developing Regions", *ASME Journal of Mechanical Design*, **138** (4).
 16. D. Levine, M. A. Lesniewski, A.M. Agogino (2016). "Design Thinking in Development Engineering", *International Journal of Engineering Design*, **32** (3B), pp. 1396-1406.
 17. D.I. Levine, A.M. Agogino, M.A. Lesniewski (2016). "Design for Impact: A Development Engineering Graduate Program at UC Berkeley," accepted for the *Journal of Development Engineering*.
 18. S. Samiphak, A.M. Agogino, S.L. Syme, R. H. Lamoreaux (2016). "Design and Systems Thinking in Development Engineering: A Case Study of Liver Infection in Khon Kaen, Thailand", to appear in the *Proceedings of ICEER 2016*.

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 (2007-2010); 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).
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).
6. Affiliated faculty: Studies in Engineering, Science and Math Education (SESAME); Designated Emphasis in Computational Science and Engineering; Development Engineering; Haas School of Business; Gender and Women's Studies; Berkeley Institute of Design.