

ALICE MERNER AGOGINO

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Alice M. Agogino is the Roscoe and Elizabeth Hughes Professor of Mechanical Engineering at the University of California at Berkeley and is affiliated faculty at the Haas School of Business, Energy Resources Group and Women & Gender Studies. She is currently Chair of the Graduate Group in Development Engineering and Education Director at the Blum Center for Developing Economies. She has served as Chair of the UC Berkeley Academic Senate and Associate Dean of Engineering. She works with over 100 companies and nonprofits on research and educational projects in product design, design for impact and sustainability. She has supervised 156 MS projects/theses, 46 doctoral dissertations and numerous undergraduate researchers. Agogino has authored over 280 peer-reviewed publications and has won numerous teaching, mentoring, best paper and research awards. She is a member of the National Academy of Engineering (NAE) and has served on a number of committees of the National Academies.

AREAS OF RESEARCH

Sustainable and strategic product design; development engineering; intelligent learning systems; multimedia and computer-aided design; design databases; design theory and methods; MEMS synthesis and computer-aided design; information retrieval and data mining; probabilistic modeling; smart products for smart grids, intelligent control and manufacturing; sensor validation, fusion and diagnostics; wireless sensor networks; artificial intelligence, decision and expert systems; tensegrity robotics; gender/ethnic equity in engineering & technology.

EDUCATION

Ph.D. (1984), Engineering-Economic Systems (now, Management Science & Engineering), Stanford University

M.S. (1980), Mechanical Engineering, University of California at Berkeley

B.S. (1975) Mechanical Engineering, University of New Mexico.

APPOINTMENTS

Education Director, Blum Center for Developing Economies (2016-present)

Chair, Development Engineering Graduate Group (2013-present)

Roscoe and Elizabeth Hughes Chair of Mechanical Engineering, UC Berkeley (1998-present)

Chair (2005-06); Vice Chair (2004-05) Faculty Academic Senate at UC Berkeley

Chair, Instructional Technology for the Chancellor's Computing and Communications Policy Board (1993-2001)

Faculty Assistant to Executive Vice Chancellor & Provost, Educational Development and Technology (1999-2001)

Associate Dean, College of Engineering: Center for Underrepresented Engineers; Distance Learning and Instructional Technology, UC Berkeley (1995-1999)

Professor (1992-present), Associate Professor (1988-92), Assistant Professor (1984-1988) of Mechanical Engineering, University of California at Berkeley

Systems Analyst, SRI International (Summer 1980)

Engineer and Business Specialist, General Electric (1975-1980)

Director, Women-in-Engineering Program, University of Santa Clara, California, 1980-1981

HONORS AND AWARDS

- Best Paper Award (with Euiyoung Kim, Jaewoo Chung and Sara Beckman), Design Theory and Methods (DTM), International Design Engineering Technical Conference (IDETC), 2016. Paper title: "Design Roadmapping: A Framework and Case Study of Planning Development of High-Tech Products in Silicon Valley".
- 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.* The award was presented at the 2015 International Design and Engineering Technical Conference (IDETC).
- Reviewers' Favourite award at ICED15 for paper titled "Design Roadmapping: Challenges and Opportunities (with Euiyoung Kim and Shun Yao), 2015.
- Reviewers' Favourite award at ICED15 for paper titled "Design Talking: An Ontology of Design Methods to Support a Common Language of Design" (with Celeste Roschuni, Julia Kramer, Qian Zhang and Lauren Zakshorn), 2015.
- Faculty sponsor Big Ideas Competition, 2015: First Place in Global Health for the proposal: Visualize: Saving Lives with Training for Cervical Cancer Screening, (Julia Kramer, student lead), 2015.
- Finalist (of four) for Best Student Paper Award (doctoral student Kyunam Kim was the lead author), 2014 IEEE International Conference on Robotics and Biomimetics, 2014 for paper: "Rapid Prototyping Design and Control of Tensegrity Soft Robot for Locomotion", 2014.
- IEEE Senior Member, 2014.
- Awardee and Keynote Speaker at Assemblymember Nancy Skinner STEM Women of the Year, 2014.
- "Reviewers' Favourite Award" at the 2013 International Conference on Engineering Design for paper "Human-Centric Study of Digital-Paper Transitions: Framing Design Opportunity Spaces" (with E.Y. Kim, V.S. Kocsik, C.E. Basnage), 2013.
- Lifetime Mentor Award, AAAS, 2012. Citation: *for efforts to significantly increase the number of women and African- and Hispanic-American doctorates in mechanical engineering.*
- Faculty Sponsor of student team in the Max Tech and Beyond Appliance Design Competition: Ultra-Low Energy Use Appliance Design Competition. Project title: "User-Centric And Self-Commissioning Predictive-Model-Based Lighting Retrofit System", LBNL, Department of Energy, 2012-13.
- Academy of Distinguished Alumni, University of New Mexico, 2012.
- Leon Gaster Best Paper Award for Lighting Technology for 2011 for the paper "Control of Wireless-networked Lighting in Open-plan Offices" (with Yao-Jung Wen) published in Volume 43 Issue 2 of *Lighting Research & Technology*. The award was announced at the Society of Light and Lighting's Annual General Meeting and Awards evening on 29 May 2012 at ZSL, Regent's Park, London.
- Professor of the Year, UC Berkeley Pi Tau Sigma, 2011. Citation: *demonstrated time and again her commitment to high academic standards and improving the undergraduate experience for Mechanical Engineering students.*

- Faculty sponsor for Co-Winner, First Place in Social Entrepreneurship Competition, "Class Projects to Social Ventures", Big Ideas Contest, 2011
- Faculty sponsor for Co-Winner, Second Place in Social Justice, Community Engagement Competition, "Students-Community Collaborative Design Challenge", Big Ideas Contest, 2011
- Best Note Honorable Mention, (with Kimiko Ryokai, Lora and Michael Manoochehri) ACM CHI (Conference on Human Factors in Computing Systems), 2011
- Chancellor's Awards for Public Service. CARES (Community Assessment for Renewable Energy and Sustainability) Team wins the 2010 Chancellor's Award for Campus-Community Programs.
- Honorable Mention, Curricular Innovations, Bears Breaking Boundaries Competition, the Pinoleville Pomo Nation project; Finalist in the Information Technology for CARES (Community Assessment of Renewable Energy and Sustainability), Spring 2009.
- Finalist, Smart Lighting Project, Venture Lab Competition, Center for Entrepreneurship and Technology, 2007.
- Faculty Award for Excellence in Graduate Student Mentoring, Mechanical Engineering Graduate Student Council, 2007.
- Chancellor's Award for Advancing Institutional Excellence, 2006.
- Elected Fellow of the American Society of Mechanical Engineers, 2005
- IEEE Robotics & Automation Society Best Paper Award at the Symposium of Micro- and Nano-Mechatronics for Information-based Society (with R. Kamalian and Y. Zhang), 2005
- ASME Xerox Best Paper Award, ASME Design Engineering Technical Conference in Salt Lake City (with Shuang Song), 2004
- NSF Director's Award for Distinguished Teaching Scholars, 2004
- Fellow, Association for Women in Science (AWIS), 2003
- Elected to the European Academy of Sciences with the citation "*for outstanding and influential contributions to engineering science and fundamental developments in the field of expert systems applied to manufacturing problems,*" 2002
- First Runner-up for the Novel Smart Engineering System Design Award (with Ningning Zhou, Bo Zhu and Kris Pister) in 2001, ASME/IEEE
- IEEE Helen Plants Award for "Best Non-Traditional Session at Frontiers in Education" 1998
- Best Overall Paper Award, ASEE 1998 (with Ann McKenna)
- Roscoe and Elizabeth Hughes Chair of Mechanical Engineering (1998-2014)
- Best Paper Award (with Ann McKenna), ASEE/IEEE Frontiers in Engineering Education Conference, 1997
- John Wiley & Sons Premier Courseware Award (with D. Yu) for "Virtual Disk Drive Design Studio" CD ROM, 1997
- Elected to the National Academy of Engineering with citation: *for applications of artificial intelligence to manufacturing, and for reform efforts in engineering education,* 1997

- Best Paper Award (with A. Dong), Artificial Intelligence in Design '96 Conference (Stanford, CA), 1996
- Fellow, American Association for the Advancement of Science, 1994
- Best Paper at the Conference on AI Applications (with Bob Paasch), 1992
- Most Outstanding Alumnus, Dept. of Mechanical Engineering, University of New Mexico, 1992
- Best Paper Award (with S. Bradley), ASME Design, Theory and Methods Conference, 1990-91
- Young Manufacturing Engineer of the Year, 1987-88, Society of Manufacturing Engineers
- Ralph R. Teetor Educator Award, Society of Automotive Engineers, 1987
- Pi Tau Sigma Award for Excellence in Teaching, 1986
- IBM Faculty Development Award, 1985-1986
- National Science Foundation Presidential Young Investigator, 1985
- Chancellor's Honorary Fellow in Mechanical Engineering at the UC Berkeley, 1977
- Pi Tau Sigma Academic Honor Award, 1973
- Honorary Membership: Tau Beta Pi, Phi Kappa Phi, Pi Tau Sigma

TOTAL PUBLICATIONS – ALICE M. AGOGINO[†]

CATEGORY A: REFEREED PUBLICATION

Peer-Reviewed Journal Publications

- J-1 "Notch Effects, Stress State and Ductility," *ASME Trans., Journal of Engineering Materials and Technology*, Oct. 1978, pp. 348-355.
- J-2 "INFORM: An Architecture for Expert-Directed Knowledge Acquisition," (with E. A. Moore), *International Journal of Man-Machine Studies*, Vol. 26, No. 2, February 1987, pp. 213-230. (Also published as book chapter in *Knowledge Acquisition Tools for Expert Systems*, ed. by J. Boose and B. Gaines, Vol. 2, pp. 227-244, Academic Press, 1988.)
- J-3 "IDES: Influence Diagram Based Expert System,"(with A. Rege), *Mathematical Modelling*, Vol. 8, 1987, pp. 227-233.
- J-4 "Techniques for Integrating Qualitative Reasoning and Symbolic Computation in Engineering Optimization," (with A. Almgren), *Engineering Optimization*, Vol. 12(2), Sept./Oct. 1987, pp. 117-135.
- J-5 "Multiobjective Hydraulic Cylinder Design," (with N. Michelena), *ASME Trans., Journal of Mechanisms, Transmissions, and Automation in Design*, Vol. 110, March 1988, pp. 81-87.
- J-6 "Topological Framework for Representing and Solving Probabilistic Inference Problems in Expert Systems," (with A. Rege), *IEEE Trans., Journal of Systems, Man, and Cybernetics*, Vol. 18 (3), May/June 1988 , pp. 402-414.
- J-7 "Innovative Design of Mechanical Structures from First Principles," (with J. Cagan), *AI in Engineering, Design, Analysis, and Manufacturing*, Vol. 1 (3), 1987, pp. 169-189.
- J-8 "Multiple Sensor Expert System for Diagnostic Reasoning, Monitoring, and Control of Mechanical Systems," (with S. Srinivas and K. Schneider), *Mechanical Systems and Signal Processing*, Vol. 2(2), 1988, pp. 165-185.
- J-9 "A Generalization and Correction of the Welded Beam Optimal Design Problem Using Symbolic Computation," (with A. Almgren), *ASME Journal of Mechanisms, Transmissions, and Automation in Design*, Vol. 111 (1), March 1989, pp. 137-140.
- J-10 "Theory of Design: An Optimization Perspective," (with P. Jain), *Journal of Mechanism and Machine Theory*, Vol. 25, No. 3, 1990, pp. 287-303.
- J-11 "Use of Influence Diagrams and Neural Networks in Modeling Semiconductor Manufacturing Processes," (with F. Nadi and D. Hodges), *IEEE Transactions on Semiconductor Manufacturing*, Vol. 4, No. 1, Feb. 1991, pp. 52-58.
- J-12 "Design Capture and Information Management for Concurrent Design," (with S. Bradley), *International Journal of Systems Automation: Research & Applications*, Vol. 1, No. 2, 1991, pp. 117-141.
- J-13 "Inducing Constraint Activity in Innovative Design", (with J. Cagan) *AIEDAM (Artificial Intelligence in Engineering Design, Analysis and Manufacturing)*. Vol. 5, No. 1, pp. 47-61.

[†] Links to digital copies of publications at: <http://best.berkeley.edu/alice-m-agogino-publications/>

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- J-14 "Dimensional Variable Expansion - A Formal Approach to Innovative Design", (with J. Cagan), *Research in Engineering Design*, Vol. 3, No. 3, 1991.
- J-15 "Decision-Analytic Methodology for Cost-Benefit Evaluation of Diagnostic Testers," (with O. Nour-Omid, W. Imano and S.S. Wang), *IIE Trans.*, Vol. 24, No. 1, March 1992, pp. 39-54.
- J-16 "Global Optimization Using the Multistart Method," (with P. Jain), *ASME Trans. Journal of Design.*, Vol. 115, No. 4, Dec. 1993, pp. 770-775. (Also published in *Advances in Design Automation - 1989*, Vol. 2, DE-Vol. 19-2; *Proceedings of the 1989 ASME Design Automation Conference*, Sept. 17-20, 1989, Montreal, Canada, 1989, pp. 39-44.)
- J-17 "Real-Time Expert Systems for Fault Tolerant Supervisory Control", (with K. Ramamurthi), *ASME Transactions, Journal of Systems, Dynamics and Control*, Vol. 115, June 1993, pp. 219-227. (Also published in *Proceedings of the 1988 ASME International Computers in Engineering Conference*, Vol. 2, pp. 333-339.)
- J-18 "A Structural and Behavioral Reasoning System for Diagnosing Large-Scale Systems,"(with R.K. Paasch), *IEEE Expert*, Vol. 8, No. 4, Aug. 1993, pp. 31-36. (Best of 5 papers from CAIA, previously published in *Proceedings of the CAIA-92*, March 2-6, 1992, Monterey, California), IEEE Computer Society, 1992, pp. 74-80.)
- J-19 "Formal Solution of N-type Taguchi Parameter Design Problems with Stochastic Noise Factors,"(with N. Michelena), *ASME Trans., Journal of Mechanical Design*, Vol. 116, No. 2, June 1994, pp. 501-507. P-31. (Also published in *ASME '91 Design Theory and Methods*, ASME DE-Vol. 31, 1991, pp. 13-20.)
- J-20 "Monotonic Influence Diagrams: Foundations and Application to Optimal Design," (with N. Michelena), *Engineering Optimization*. Vol. 21, No. 2, pp. 79-97, July 1993.
- J-21 "Monotonic Influence Diagrams: Extension to Stochastic Programming and Application to Probabilistic Design," (with N. Michelena), *Engineering Optimization*, Vol. 21, No. 2, pp. 99-120, July 1993.
- J-22 "An Intelligent Real Time Design Methodology for Catalog Selection," (with S. Bradley). *ASME Trans., Journal of Mechanical Design*, Dec. 1994, Vol. 116, pp. 980-988. (Also published in *ASME '91 Design Theory and Methods*, ASME DE-Vol. 31, 1991, pp. 201-208; Winner of ASME DTM '91 Best Paper Award).
- J-23 "The Impact and Instructional Benefit of Using Multimedia Case Studies to Teach Engineering Design," (with Sherry Hsi), *Journal of Educational Hypermedia and Multimedia*, Vol. 3, No. 3/4, 1994, pp. 351-376.
- J-24 "A Case-based Conceptual Design Information Server for Concurrent Engineering," (with W.H. Wood), *CAD (Computer-Aided Design) Journal*, Vol. 28, No. 5, pp. 361-369, 1996.
- J-25 "Engineering Courseware Content and Delivery: the NEEDS Infrastructure for Distance-Independent Education" (with W.H. Wood), *Journal of the American Society for Information Science*, Vol. 47, No. 11, 1996, pp. 863-869.
- J-26 "Text Analysis for Constructing Design Representations," (with A. Dong), *Artificial Intelligence in Engineering.*, Vol. 11 (2), pp. 65-75, 1997. (Previously published in *Artificial Intelligence in Design '96*, Kluwer Academic Publishers, pp. 21-38, 1996. Winner 1996 "Best Paper" award.)
- J-27 "Managing Design Information in Enterprise-Wide CAD using 'Smart Drawings'," (with A. Dong), *CAD (Computer-Aided Design) Journal*. (Updated version of P-43), 30(6) (1998) 425-435.

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- J-28 "The National Engineering Delivery System (NEEDS): A Multimedia Digital Library of Courseware," (with B. Muramatsu) *International Journal on Engineering Education* Vol. 13 No. 5, 1997, pp. 333-340.
- J-29 "Examples of Freshman Design Education," (with Sheppard, S., R. Jenison, M. Bereton, L. Bucciarelli, J. Dally, J. Demel, C. Dym, D. Evans, R. Faste, M. Henderson, P. Minderman, J. Mitchell, A. Oladipupo, M. Picket-May, R. Quinn, T. Reagan, and J. Wujek), *International Journal on Engineering Education*, vol. 13, no. 4. pp. 248-261, 1997.
- J-30 "Bridging Diverse Institutions, Multiple Engineering Departments, and Industry: A Case Study in Developing an Assessment Plan for the Synthesis Coalition," (with Flora McMartin and Eric Van Duzer), *Journal of Engineering Education*, Vol. 87, No. 2, April 1998, pp. 157-163.
- J-31 "A Web-based Module for Teaching Middle School Students Engineering Design with Simple Machines," (with A. McKenna), *Journal of Engineering Education*, Oct. 1998, pp. 437-444. (Updated version of Proceedings Paper P-56; Won 'best paper' award at FIE '97.)
- J-32 "Fuzzy Belief Nets," (with K. Goebel), *International Journal of Uncertainty, Fuzziness, and Knowledge*, Vol. 8, No.4, pp.453-469, 2000.
- J-33 "Sensor Validation and Fusion for Gas Turbine Power Plants Using Fuzzy Techniques," (with K. Goebel), accepted for publication in the *Mechanical Systems and Signal Processing*, 2001. (Also available as paper #2001CRD023, Feb. 2001, General Electric Corporate R&D Technical Information Series.)
- J-34 "Sensor Validation and Fusion for Automated Vehicle Control Using Fuzzy Techniques," (with K. Goebel, *ASME Trans, Journal of Dynamic Systems, Measurement and Control*, Vol. 123, March 2001, pp. 145-146.
- J-35 "A Methodology for Intelligent Sensor Measurement, Validation, Fusion, and Fault Detection for Equipment Monitoring and Diagnostics," (with S. Alag and M. Morjaria), to appear in *AIEDAM (Artificial Intelligence for Engineering Design, Analysis and Manufacturing)*, Special Issue on AI in Equipment Service, Vol. 15, No. 4, April 2001, pp. 307-319.
- J-36 "Guest Editorial", (Piero Bonissone, Kai Goebel, And George Vachtsevanos,) *AIEDAM (Artificial Intelligence for Engineering Design, Analysis and Manufacturing)*, Special Issue on AI in Equipment Service, Vol. 15, No. 4, April 2001, pp. 265-266.
- J-37 "Modeling Engineering Information Needs", (with Shuang Song and Andy Dong), *Journal of Computing and Information Science in Engineering*, 2, No. 3, Sept. 2002, pp. 199-207.
- J-38 "Document Analysis as a Means for Predicting Design Team Performance," (with A. Dong, and A.W. Hill), *ASME Journal of Mechanical Design*, Vol. 126, May 2004, pp. 378-385.
- J-39 "Perceptions of the Design Process: An Examination of Gendered Aspects of New Product Development" (with C. Newman, M. Bauer and J. Mankoff), *International Journal of Engineering Education*, Vol. 20, No.2, pp. 452-460, 2004. (Revision of paper P-82 published in *Designing Engineering Education*, Proceedings of the Mudd Design Workshop IV).
- J-40 "Supporting Mechanical Reasoning with a Representationally-Rich Learning Environment", (with A. McKenna), *Journal of Engineering Education*, ASEE, Vol. 93, No. 2, pp. 97-104, April 2004.
- J-41 "Decision-Based Conceptual Design: Modeling and Navigating Heterogeneous Design Space," (with W.H. Wood), *ASME Journal of Mechanical Design*, Vol. 127, Issue 1, Jan. 2005, pp. 2-11.

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- J-42 Resonant Accelerometer with a Two-stage Microleverage Mechanisms Fabricated by SOI-MEMS Technology," (with Su, S.X.P., H.S. Yang and A.S. Hou), *IEEE Sensors Journal*, Dec. 2005.
- J-43 "Engineering Design Thinking, Teaching and Learning," (with Dym, C.L., O. Eris, D.D. Frey and L.J. Leifer), *Journal of Engineering Education*, Jan. 2005, v. 94, no. 1, pp. 103-120.
- J-44 "Triangulation of Indicators of Successful Student Design Teams," (with S. Song and J. Hey), *International Journal of Engineering Education*, ISSN 0949-149X, vol. 22 (3), 2006, pp. 617-625.
- J-45 "Intelligent Office Lighting: Demand-Responsive Conditioning and Increased User Satisfaction", (with J. Granderson), *LEUKOS Journal*, IESNA (Illuminating Engineering Society of North America) vol. 2 (3), Jan. 2006.
- J-46 "Designing Mobile Digital Library Services for Pre-Engineering and Technology Literacy", (with J. Hey, C. Newman, J. Sandhu, C. Daniels and J.-S. Hsu), *International Journal of Engineering Education*, Special Issue on Mobile Technologies for Engineering Education, , Vol. 23 (3), pp. 441-453, 2007.
- J-47 Hey, J.H., A.P Van Pelt, A.M Agogino, and S. Beckman, "Self-Reflection: Lessons Learned in a New Product Development Class," *Journal of Mechanical Design*, ASME, Vol. 129, No. 7, pp. 668-676, July 2007.
- J-48 "Enabling and Characterizing Twenty-First Century Skills in New Product Development Teams", (with C. Cobb, S. Beckman and L. Speer), *International Journal of Engineering Education*, Vol. 24 (2), February 2008, pp. 420-433.
- J-49 "Analogies and Metaphors in Creative Design", (with J. Hey, J. Linsey, and K.L. Wood), *International Journal of Engineering Education*, Vol. 24 (2), February 2008 pp. 283-294.
- J-50 "Tangible Interactions in a Digital Age: Medium and Graphic Visualization in Design Journals," (with L. Oehlberg and K. Lau), *Engineering Design, Automation and Manufacturing (AIEDAM)*, Vol. 23 (3), 2009, pp. 237-249.
- J-51 "Sketching in Design Journals: An Analysis of Visual Representations in the Product Design Process" (with K. Lau and L. Oehlberg), *Engineering Design Graphics Journal*, Vol. 73 (3), pp. 23-29, 2009.
- J-52 "Designing for Diversity in Engineering Education" (with L. Oehlberg and R. Shelby), *International Journal of Engineering Education*, No. 2 of Vol. 26, 2010, pp. 489-498. (Updated version of P-131.)
- J-53 "Hierarchical Component-Based Representations for Evolving Micro-electromechanical Systems Designs", (with Y. Zhang), *AI EDAM*, Vol. 25, 2011, pp. 41-55.
- J-54 "Case-based Reasoning for Evolutionary MEM Design," (with C.L. Cobb), *ASME Journal of Computing and Information Science in Engineering*, Vol. 10 (3), September 2010, pp. 031005-1-031005-10.
- J-55 "Control of a Wireless-Networked Lighting System in an Open-plan Office", (with Y.-J. Wen), to appear in the *Journal of Lighting Research and Technology*, Vol. 43 (2), June 2011, pp. 235-248.
- J-56 "Interactive Hybrid Evolutionary Computation for MEMS Design Synthesis", (with Y. Zhang), *Mathematics and Computers in Simulation* (Journal version of book chapter B-15), V. 86, December 2012, pp. 32–38.

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- J-57 "Personalized Dynamic Design of Networked Lighting for Energy-Efficiency in Open-Plan Offices " (with Y.-J. Wen), *Energy and Buildings*, Vol. 43 (8), August 2011, pp. 1919-1924.
- J-58 "Intelligent Systems in Product Development: A Retrospective", (with C.C. Hayes, A. Goel, Irem Tumer, W. Regli), *Journal of Computing and Information Science in Engineering*, ASME, Vol. 11 (2) June 2011, pp. 021007-1/9.
- J-59 "Diversity in Design Teams: An Investigation of Learning Styles and their Impact on Team Performance and Innovation," (with K. and S. Beckman), *International Journal of Engineering Education*, Special Issue on Design Education: Innovation and Entrepreneurship, Vol. 28 (2), 2012, pp. 293-301.
- J-60 "Multidisciplinary Human-Centered Design: Fostering Innovation Across Engineering, Humanities and Social Sciences," (with L. Oehlberg, I. Leighton, and B. Hartmann), *International Journal of Engineering Education*, Vol. 28, No. 2, 2012.
- J-61 "Mobile and Augmented Reality Cyberlearning with the Engineering Pathway Digital Library," (with K. Ryokai and L. Oehlberg), *International Journal of Engineering Education*, Vol. 28 (5), 2012, pp. 1119-1126.
- J-62 "Hybrid Evolutionary Optimal MEMS Design," (with Y. Zhang), *International Journal of Advanced Manufacturing Technology*, November 2012, Volume 63, Issue 1-4, pp. 305-317.
- J-63 "Partnering with the Pinoleville Pomo Nation: Co-Design Methodology Case Study for Creating Sustainable, Culturally Inspired Renewable Energy Systems and Infrastructures," (with R. Shelby and Y. Perez), Special Issue of Sustainability: Changing the Energy Systems to Renewable Energy Self-Sufficiency, Vol. 4 No. 5, 2012, pp. 794-818. doi:10.3390/su4050794.
- J-64 "Communicating Human-Centered Design Research: Empirical Study of the Design Community of Practice," (with Roschuni, C., E. Goodman), *AI EDAM*, Special Issue on Studying and Supporting Design Communication, Vol. 27 (Special Issue 02, 2013), pp. 143-154. doi:10.1017/S0890060413000048.
- J-65 "Off the Paved Paths: Exploring Nature with a Mobile Augmented Reality Learning Tool", (with K. Ryokai, D. Subramanian, R. Kowalski), *Journal of Mobile HCI (IJMHCI)*, April 2013, Vol. 5 (2), pp. 21-49. doi:10.4018/jmhci.2013040102.
- J-66 "What Alumni Value from New Product Development Education: A Longitudinal Study," (with Cobb, C.L. J. Hey, S.L. Beckman and S.-Y. Kim), *Advances in Engineering Education*, special issue on Innovation and Entrepreneurship, ASEE, 5 (1), pp. 1-37, 2016.
- J-67 "Network Analysis of Collaborative Design Networks: A Case Study of Open IDEO". (with M. Fuge, K. Tee, and N. Maton), *ASME Journal of Computing and Information Science in Engineering (JCISE)*, 14 (2), 2014. doi:10.1115/1.4026510
- J-68 "Sensor-Based Predictive Modeling for Smart Lighting in Grid-Integrated Buildings", (with C. Basu, J. Caubel, K. Kim, E. Cheng, A. Dhinakaran, R. Martin), *IEEE Sensors*, special issue on Sensing Technologies for Intelligent Urban Infrastructures, IEEE, December 2014, pp. 4216-4229. 10.1109/JSEN.2014.2352331
- J-69 "Machine Learning Algorithms for Recommending Design Methods", (with M. Fuge, B. Peters), *ASME Journal of Mechanical Design*, 136 (10), Oct. 2014 (MD-14-1013; doi: 10.1115/1.4028102).
- J-70 "Pattern Analysis of IDEO's Human-Centered Design Methods in Developing Regions" (with M. Fuge), *ASME Journal of Mechanical Design*, 137 (7), MD-14-1571, 2015.

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- J-71 "Design Thinking in Development", (with D. I. Levine, M.A. Lesniewski), *International Journal of Engineering Education*, 32 (3B), pp. 1396-1406, 2016.
- J-72 "Design Practitioners' Perspectives on Methods for Ideation and Prototyping", (with S. Beckman, C. Castaños, J. Kramer, C. Roschuni, M. Yang), *International Journal of Engineering Education*, 32 (3B), pp. 1428-1437, 2016.
- J-73 "Design Roadmapping: A Framework and Case Study of Planning Development of High-Tech Products in Silicon Valley", (with E. Kim, J. Chung, S. Beckman), *ASME Transactions, Journal of Design*, 138 (1) 2016. doi: 10.1115/1.4034221

Peer-Reviewed Foreign Language Journals

- FJ-1 "Topological Framework for Representing and Solving Probabilistic Inference Problems in Expert Systems," (with A. Rege), *Computer Systems and Control* (in Russian), Institute of Systems and Control, Soviet Academy of Science, Vol. 2, 1990, pp. 17-30. (Foreign translation of journal publication J-6).
- FJ-2 "Calibration of Fuzzy Linguistic Variables for Expert Systems," (with P. Jain), in *Computer Systems and Control* (in Russian), Institute of Systems and Control, Soviet Academy of Science, Vol. 3, 1990, pp. 37-45. (Foreign translation of conference proceedings paper P-12).

Peer-Reviewed Books or Book Chapters

- B-1 "Meta-Design: Reflections on a Graduate Course in Design Theory and Methodology," (with J. Cagan and M.J. Molezzi), *Design Theory '88*, (eds., S.L. Newsome, W.R. Spillers, and S. Finger) Springer-Verlag Publishers, 1989, pp. 18-28.
- B-2 "Reasoning about Mechanical Structures from First Principles," in *IMACS Transactions on Scientific Computation - 1988*, (with J. Cagan), ed. by J.M. David, R. Huber, J.P. Krivine and C. Kulikowski, Vol. 2: AI and Expert Systems in Scientific Computation, J.C. Baltzer AG, Scientific Publishing Company, Wettsteinplatz 10, CH-4058 Basel, Switzerland, pp. 91-98, 1989.
- B-3 "Real Time Influence Diagrams for Monitoring and Controlling Mechanical Systems," (with K. Ramamurthi) in *Influence Diagrams, Belief Nets and Decision Analysis* (ed., R.M. Oliver and J.Q. Smith), John Wiley & Sons, 1990, Chap. 9, pp. 199-228.
- B-4 "Inducing Optimally Directed Non-Routine Designs", (with J. Cagan) in *Modeling Creativity and Knowledge-Based Creative Design* (Gero, J.S. and M.L. Maher, eds.), Lawrence Erlbaum Associates, 1993, pp. 273-293.
- B-5 Agogino, A.M. (editor), *Design for Manufacture: Reducing Life Cycle Costs While Improving Time to Market and Product Quality*, ASME, DE-Vol. 51, 1992.
- B-6 *Information Technology (IT)-Based Educational Materials: Workshop Report with Recommendations*, National Academy Press, 2004. (Committee on Engineering Education)
- B-7 *The Engineer of 2020: Visions of Engineering in the New Century*, National Academy Press, 2004. (NAE Committee Report).
<http://www.nap.edu/books/0309091624/html/>
- B-8 "Optimized Design of MEMS by Evolutionary Multi-objective Optimization with Interactive Evolutionary Computation," (with R. H. Kamalian and H. Takagi), *Lecture Notes in Computer Science*, Springer-Verlag GmbH ISSN: 0302-9743, vol. 3103, pp. 1030 - 1041, Feb., 2004. Archival version of P-87.

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- P-97 "Integrating Education, Research, and Outreach: Exemplars from the NSF Distinguished Scholars Program," (with L. Jamieson, G. Kalonji, D.F. Ollis, H.V. Poor, S.E. Powers, and C. Rodgers), Extended Abstract in *Proceedings of the Frontiers in Education Conference 2005*, ASEE/IEEE, Session T1A (October 19-22, 2—5, Indianapolis, IN).
- P-98 "Improving Evolutionary MEMS Synthesis through Fabrication and Testing Feedback", (with R. Kamalian), *Proceedings of the IEEE International Conference on Systems, Man and Cybernetics, SMC2005* (Oct. 10-12, 2005), IEEE, pp 1908-1913.
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- P-101 "Comparison of Event Detection Methods For Centralized Sensor Networks", (J. Sauvageon, A.M. Agogino, A.F. Mehr and I. Tumer), *Proceedings of the Sensors Applications Symposium 2006*, 7-9 Feb. 2006 CD ROM, Paper # 6028, IEEE and Instrumentation & Measurement Society, IEEE Catalog Number: 06EX1234C; ISBN: 0-7803-9581-6, pp. 93-100.
- P-102 "Towards Embedded Wireless-Networked Intelligent Daylighting Systems for Commercial Buildings," (with Y.-J. Wen and J. Granderson), *Proceedings of the IEEE International Conference on Sensor Networks, Ubiquitous, and Trustworthy Computing*, IEEE Computer Society, #0-7695-

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- P-108 "Unblinking in Mobile Learning," (with J.-S. Hsu, C. Daniels, C.-E. Montgomery, P. Mackinney, and A. A. Gieringer), *UnBlinking: New Perspectives on Visual Privacy in the 21st Century*, A Cross-Disciplinary Symposium at UC Berkeley, 3-4 November 2006.
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- P-111 "Analogies and Metaphors in Creative Design", (with J. Hey, J. Linsey, and K.L. Wood), *Proceedings of the 2007 Mudd Engineering Design Conference*, CD ROM. Archival version published in the *International Journal of Engineering Education*.
- P-112 "Longitudinal Study of Learning Outcomes: A Comparison of Lessons Learned in a New Product Development Class with Impact after Professional Experience", (with C. Cobb and S. Beckman), *Proceedings of the ASME DETC (Design Engineering Technical Conference)*, CD ROM, ISBN 07-7918-3806-4, Paper# DETC2007-34456, 2007.
- P-113 "Metaphors and Conceptual Design", *Proceedings of the ASME DETC (Design Engineering Technical Conference)*, CD ROM, ISBN 07-7918-3806-4, Paper# DETC2007- 34874, 2007.
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- P-117 "Mobile Learning and Digital Libraries: Designing for Diversity," (with E. Datta), *Proceedings of the ASME Congress*, 2007 (ISBN 0-7918-3812-9).
- P-118 "Design First, Technology Second," (with J. S. Sandhu), ACM, Computer-Human Interaction Conference, CHI 2008 (Florence, Italy, April 5-10, 2008).
- P-119 "Academic Climate and Advisor Support Affect the Quality of Womens' Experiences in Graduate School," (with Carolyn J. Sparrey, Beth Lopour, and Jenni M. Buckley), WEPAM (Women in Engineering Proactive Network), National Conference, 2008.
- P-120 "Broadening Participation in Computing with the K-Gray Engineering Pathway Digital Library", (with M. Smith), abstract for poster session at JCDL 2008 (June 16-20, 2008, Pittsburgh, PA) ACM 978-1-59593-998-2/08/06.
- P-121 "Educating the Engineer of 2020," Keynote Talk, abstract in the *Proceedings of the 9th Biennial ASME Conference on Engineering Systems Design and Analysis*, ESDA08 (July 7-9, 2008, Haifa, Israel).
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- P-123 "Design Team Framing: Paths And Principles", (with J. Hey and J. Yu), *Proceedings of the Design Engineering Technology Conference*, ASME, 2008.
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- P-127 "Sketching in Design Journals: Visual Representations in the Product Design Process," (with K. Lau and L. Oehlberg), *Proc. ASEE Engineering Design Graphics Division Midyear Conference*, 2009.
- P-128 "Design strategies and preliminary prototype for a low-cost arsenic removal system for rural Bangladesh", (with J.L. Mathieu, A.J. Gadgil, K. Kowolik, S. Qazi), *Proceedings of the International Conference WEDC (Water, Engineering and Development) - Water, Sanitation and Hygiene: Sustainable Development and Multisectoral Approaches*.
- P-129 "Framing Sustainability in Human-Centered Product Design," (with L. Oehlberg and S. Beckman), *Proceedings of the ASME 2009 International Design Engineering Technical Conference*.
- P-130 "Relationship Conflict and Feeling Communication in Design Teams," (with C. Roschuni, L. Oehlberg and S. Beckman), *Proceedings of the ASME 2009 International Design Engineering Technical Conference*.
- P-131 "Sustainable Product Design: Designing for Diversity in Engineering Education," (with L. Oehlberg and R. Shelby), *Proceedings of the Mudd Design Conference*, May 2009.

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- P-132 "The Co-Design of Water and Energy Efficient Sustainable Housing with the Pinoleville Pomo Nation", (with Tobias C. Schultz, Ryan Shelby), *Proceedings of the ASME International Sustainability Conferences*, May 17-22, 2010, Phoenix, Arizona.
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- P-134 "Sustainable Product Development Initiatives in the Footwear Industry Based on the Cradle to Cradle Concept," (with J.J. Jacques, L.M.B. Guimaraes), *Proceedings of the ASME 2010 International Design Engineering Technical Conferences & Computers and Information in 15th Design for Manufacturing and the Lifecycle Conference (DFMLC)*.
- P-135 "Green Hat: Exploring the Natural Environment Through Experts Perspectives," (with K. Ryokai, and L. Oehlberg), ACM CHI '11: *Proceedings of the 29th International Conference on Human factors in Computing Systems*, 2011, pp. 2149-2152. Received Best Note Honorable Mention.
- P-136 "Undergraduate Conceptions of the Engineering Design Process: Assessing the Impact of a Human-Centered Design Course", (with L. Oehlberg), *Proceedings of ASEE 2011*.
- P-137 "A Cross-National Investigation of Confidence in ABET Skills and Kolb Learning Styles: Korea and the United States," (with K. Lau and M.K. Thompson), *Proceedings of ASEE 2011*.
- P-138 "Multidisciplinary Human-Centered Design: Fostering Innovation Across Engineering, Humanities and Social Sciences", (with L. Oehlberg, I. Leighton, and B. Hartmann), *Proceedings of Mudd Design 2011*.
- P-139 "Diversity in Design Teams: An Investigation of Learning Styles and their Impact on Team Performance and Innovation", (with K. Lau and S. Beckman), *Proceedings of Mudd Design 2011*.
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- P-141 "Supporting the Design Community of Practice", (with C. Roschuni), *Proceedings of ICED 2011*.
- P-142 "A Descriptive Study of Designers' Tools for Sharing User Needs and Conceptual Design", (with L. Oehlberg and C. Roschuni), *Proceedings of ASME DETC 2011*.
- P-143 "Co-Design Methodology for the Development of Sustainable and Renewable Energy Systems for Underserved Communities: A Case Study With the Pinoleville Pomo Nation", (with R. Shelby and Y. Perez), *Proceedings of ASME DETC 2011*, ASME, CD ROM DETC2011-48661, pp. 515-526.
- P-144 "Mapping the Life Cycle Analysis and Sustainability Impact of Design for Environment Principles", (with L. Oehlberg, C. Bayley, C. Hartman), 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.
- P-145 "Dazzle: Supporting Framing in Co-Located Design Teams Through Remote Collaboration Tool", (with L. Oehlberg and B. Hartman), Interactive Poster, *Proceedings of the ACM 2012 Conference on Computer Supported Cooperative Work Companion*, (Feb. 11-15, 2012, Seattle Washington), ACM, pp. 183-186. (ISBN: 978-1-4503-1051-2; doi: 10.1145/2141512.2141573).
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- P-147 "Lessons Learned from Developing and Evaluating a Comprehensive Digital Library for Engineering Education", (with Y. Zhang and S. Li), *Proceedings of JCDL 2012, ACM-IEEE CS Joint Conference on Digital Libraries*, (June 10-14, 2012, Washington D.C.), ACM, pp. 393-394, 2012. (doi: 10.1145/2232817.2232907).
- P-148 "Geocentric Contextualized Mobile Learning with the Engineering Pathway Digital Library," (with K. Ryokai), *Proceedings of the 2012 Australasian Association for Engineering Education (ASEE) Annual Conference*, 3-5 Dec. 2012.
- P-149 "Inverse Modeling Using a Wireless Sensor Network (WSN) for Personalized Daylight Harvesting", (with R. Paulson, C. Basu and S. Poll), n M. van Sinderen, O. Postolache, and C. Benavente-Peces (Eds.), *SENSORNETS 2013: Proceedings of the 2nd International Conference on Sensor Networks*, Barcelona, Spain, 19-21 February (pp. 213-221). SCITEPRESS.
- P-150 "Global Characterizations of Learning Styles among Students and Professionals," (with K. Lau and S. Beckman), Paper I.D. 8345, *Proceedings of the ASEE International Forum*, Atlanta, GA, June 22, 2013.
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- P-154 "Automatically Inferring Metrics for Design Creativity," (with M. Fuge and J. Stroud), *Proceedings of ASME DETC, DTM 2013*, August 2013.
- P-155 "Cross-Community Design and Implementation of Engineering Tinkering Activities at a Science Center", (with J. Wang), *FabLearn*, (Stanford University, Oct. 27-28, 2013).
- P-156 "Affordable and Personalized Lighting Using Inverse Modeling and Virtual Sensors", (with C. Basu, B. Chu, J. Richards, A. Dhinakaran, and R. Martin), *Proceedings of the SPIE Smart Structures Technologies for Civil, Mechanical and Aerospace System*, Vol. 9061, 8 March 2014. doi:10.1117/12.2048681
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- P-158 "SUPERball: Modular Hardware for a Mobile Tensegrity Robot", (with A.P. Sabelhaus, A.P., K. Caluwaerts, J. Bruce and V. SunSpiral) to appear in *Proceedings of the WCSCM6 (6th World Conference on Structural Control and Monitoring)*, July 2014.
- P-159 "Identifying Design Opportunity Spaces in New User Interfaces for Exoskeleton Mobility Devices", (with E.Y. Kim, J. Jeong, K. Mock, and V. Kocsik) to appear in *Proceedings of the International Design Conference - Design 2014, Bubrovnik, Croatia*, May 2014.

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- P-160 "How Online Design Communities Evolve Over Time: The Birth and Growth of OpenIDEO", (with M. Fuge and N. Maton) to appear in *Proceedings of ASME Design Engineering Technical Conference (DETC)*, Design, Theory and Methods, August 2014.
- P-161 "User Research Methods for Development Engineering: A Study of Method Usage with IDEO's HCD Connect", (with M. Fuge and S. Hewens) to appear in *Proceedings of ASME Design Engineering Technical Conference (DETC)*, Design, Theory and Methods, August 2014.
- P-162 "Learning about Learning and Engineering: Engineers, Students and Educators Co-Design Challenges for a Science Museum", (with J. Wang), *Proceedings of ASEE Annual Conference*, Paper ID #10509 June 2014.
- P-163 "Design for Development Online: An HCD Analysis of OpenIDEO", (with P. Gordon and M. Fuge), *Proceedings of the ASME International Mechanical Engineering Congress*, 2014.
- P-164 "Rapid Prototyping Design and Control of Tensegrity Soft Robot for Locomotion", (with K. Kyunam, A.K. Agogino, D. Moon, L. Taneja, Al. Toghyan, B. Dehghani and V. SunSpiral), *Proceedings of the 2014 International Conference on Robotics and Biomimetics (ROBIO 2014)*, 2014. Finalist for Best Student Paper Award.
- P-165 "Co-Creation of Culinary Experience Design in the Chez Pansse Open Innovation Ecosystem," (with S. Kim and H. Chesbrough), 1st Annual World Open Innovation Conference, Dec. 4-5, 2014.
- P-166 "System Design and Locomotion of SUPERball, an Autonomous Tensegrity Robot," (with A.P. Sabelhaus, J. Bruce, K. Caluwaerts, P. Manovi, R. G. Firoozi, S. Dobi, and V. SunSpiral), *Proceedings of 2015 IEEE International Conference on Robotics and Automation (ICRA-2015)*, May 26-30, 2015, Washington State Convention Center, Seattle, Washington.
- P-167 "Emergent Form-Finding for Center of Mass Control of Ball-Shaped Tensegrity Robots," (with K. Kim and A.K. Agogino), ARMS (Autonomous Robots and Multirobot Systems) workshop, (affiliated with the 14th International Conference on Autonomous Agents and Multiagent Systems - AAMAS 2015). Istanbul, Turkey, May 4-5, 2015.
- P-168 "Design Roadmapping: Challenges and Opportunities," (with E.-Y. Kim and S. Yao), *Proceedings of the International Conference in Engineering Design – Part 2*, pp. 85-94, 2015. (Won Reviewer's Favourite Award).
- P-169 "Design Talking: A Taxonomy of Design Methods in theDesignExchange," (with C. Roshuni, J. Kramer, Q. Zhang and L. Zaksorn), *Proceedings of 2015 International Conference on Engineering Design (ICED15)*, July 27-30, 2015. (Won Reviewer's Favourite Award).
- P-170 "Design Practitioners' Perspectives on Methods for Ideation and Prototyping," (with S. Beckman, J. Kramer, C. Roschuni and M. Yang), *Proceedings of the 2015 Mudd Design Workshop*, Center for Design Education of Harvey Mudd College, May 2015.
- P-171 "Design Thinking in Development Engineering," (with D. Levine and M. Lesniewski), *Proceedings of the 2015 Mudd Design Workshop*, Center for Design Education of Harvey Mudd College, May 2015.
- P-172 "Detection of Chiller Energy Efficiency Faults Using Expected Maximization," (with R.L. Hu and J. Granderson), *Proceedings of the International Design Engineering Conference IDETC/CIE 2015*, Computers and Information in Engineering Conference (CIE), ASME.
- P-173 "Mechanism Design and Simulation of an Underactuated Spine-Like Tensegrity Robot," (with A.P. Sabelhaus, P. Hylton, Y. Madaan, C.W. Yang, J. Friesen and V. SunSpiral), *Proceedings of*

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- P-174 "Design Talking: How Design Practitioners Talk About Design Research Methods," (with C. Roschuni and J. Kramer), *Proceedings of the International Design Engineering Conference IDETC/CIE 2015, International Conference on Design Education, ASME.*
- P-175 "Robust Learning of Tensegrity Robot Control for Locomotion through Form-Finding," (with K. Kim, A.K. Agogino, A. Toghyan, D. Moon, L. Taneja), *Proceedings of the International Conference on Intelligent Robots and Systems (IROS 2015), IEEE,* DOI: 10.1109/IROS.2015.7354204, pp. 5824 - 5831.
- P-176 "Design Roadmapping: A Framework and Case Study of Planning Development of High-Tech Products in Silicon Valley", (with E. Kim, S. Beckman), *Proceedings of the ASME 2016 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference Design Theory and Methods, American Society of Mechanical Engineers, August 21-24, Charlotte, NC, USA (2016).* Won DTM Best Paper Award. Also published in the *Journal of Mechanical Design, J-73.*
- P-177 "Characterizing Skills for Human-Centered Design," (with J. Kramer and C. Roschuni), *Proceedings of the ASME 2016 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference Design Education, American Society of Mechanical Engineers, August 21-24, Charlotte, NC, USA (2016).*
- P-178 "Soft Spherical Tensegrity Robot Design using Rod-centered Actuation and Control," (with L.-H. Chen, K. Kim, E. Tang, K. Li, R. House, A.K. Agogino, V. Sunspiral, E. Jung), *Proceedings of the ASME 2016 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference 40th Mechanisms and Robotics Conference, American Society of Mechanical Engineers, August 21-24, Charlotte, NC, USA (2016).*
- P-179 "DNA-Structured Linear Actuators," (with K. Zampaglione, A.P. Sabelhaus, L.-H. Chen, A.K. Agogino), *Proceedings of the ASME 2016 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference 40th Mechanisms and Robotics Conference, American Society of Mechanical Engineers, August 21-24, Charlotte, NC, USA (2016).*
- P-180 "Diagnosing Wind Turbine Faults Using Machine Learning Techniques Applied to Operational Data", (with K. Leahy, R.Lily Hu, I. C. Konstantakopoulos, C. Spanos), *Proceedings of the 2016 IEEE International Conference on Prognostics and Health Management, Ottawa, Canada, Carleton University, June 20-22, 2016.*
- P-181 "Hopping and Rolling Locomotion with Spherical Tensegrity Robots," (with K. Kyunam, L.H. Chen, B. Cera, M. Daly, E. Zhu, J. Despois, A.K. Agogino, V. SunSpiral), to appear in *Proceedings of 2016 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS2016), Daejeon, Korea, Oct 9-14, 2016.*
- P-182 "Spin-Axis Stabilization of a Rigid Body about an Arbitrary Direction using Two Reaction Wheels," (with K. Kim), to appear in *Proceedings of 2016 IEEE Conference on Decision and Control (CDC2016), Las Vegas, NV, USA, Dec 12-14, 2016.*
- P-183 "Design and Systems Thinking in Development Engineering: A Case Study of Liver Infection in Khon Kaen, Thailand, (with S. Samiphak, S.L. Syme, R. H. Lamoreaux) to appear in the *Proceedings of ICEER 2016.*

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- P-184 "Using Domain Knowledge Features for Wind Turbine Diagnostics," (with R. Lily Hu, Kevin Leahy, Ioannis Konstantakopoulos, David Auslander, Costas Spanos), to appear in the *Proceedings to the 15th IEEE International Conference on Machine Learning and Applications*, IEEE ICMLA 2016 (Anaheim, CA, Dec. 18-20, 2016).

Peer-Reviewed Foreign Language Conference Proceedings

- FC-1 "Fuzzy Optimization Using Monotonic Influence Diagram with Fuzzy Languages", (with M. Arakawa, in Japanese), *Proc. of 72th General Conference of the Japanese Society of Mechanical Engineers*, Vol. IV, p. 337-338, 1995.
- FC-2 "Introduction of Concept Database", (with M. Arakawa, in Japanese), *Proc. of 6th ASME-Japan Conference on Design Engineering & System Division*, No. 96-45, p. 89-92, 1996.
- FC-3 "Collaborative Research in Engineering Education: Synthesis Coalition Study Case," (with Akamatsu, Janio, Galeno José Itiro e Sena and Flora McMartin), COBENGE 99 - XXVII Congresso Brasileiro de Ensino de Engenharia (City: Natal; State: Rio Grande do Norte; Sep. 12 - 15, 1999), pp. 2241-2248.
- FC-4 "Cooperative Learning: Multimedia Case Studies of Engineering Design," (with Akamatsu, Janio, Rosa Maria Itiro e Bittencourt and Brandon Muramatsu), COBENGE 99 - XXVII Congresso Brasileiro de Ensino de Engenharia (City: Natal; State: Rio Grande do Norte; Sep. 12 - 15, 1999), pp. 1636-1641.

CATEGORY B: NON-REFEREED PUBLICATIONSTechnical Reports

(Note: Technical reports associated with professional employment as a practicing engineer prior to joining the faculty at UC Berkeley are not listed due to their proprietary nature.)

- R-0 "The Mexican Church at Catorce: Temple of Miracles," (with George Agogino and Mercedes Agogino), *Pursuit*, Vol. 18, No. 4, 1985, pp. 181-183.
- R-1 "Research on Expert Systems in Flexible Manufacturing," in *Progress Report: The Microelectronics Innovation and Computer Research Opportunities (MICRO) Program*, (MICRO Executive Committee, 7514 Boelter Hall, UCLA, Los Angeles, CA 90024, 1985-86), 1987, pp. 1-7.
- R-2 "Object-Oriented Data Structures for Reasoning about Functionality, Manufacturability, and Diagnosability of Mechanical Systems," (with R. Guha), prepared for presentation at the 1988 NSF Workshop on Features in Design and Manufacturing, University of California at Los Angeles, Feb. 26-28, 1988; based on an invited presentation at the 1987 ASME Design Automation Conference, Boston, MA, August 29, 1987.
- R-3 "Research on Expert Systems in Automated Manufacturing and Process Control," in *1986-87 Progress Report: The Microelectronics Innovation and Computer Research Opportunities (MICRO) Program*, (MICRO Executive Committee, 7514 Boelter Hall, UCLA, Los Angeles, CA 90024, 1986-87), 1988, pp. 5-12.
- R-4 "Object-Oriented Data Structures for Designing by Features: Integrating Functionality and Geometry," (with R. Guha), prepared for presentation at: Design Theory '88: 1988 NSF Grantee Workshop on Design Theory and Methodology, June 2-4, 1988.
- R-5 "AI/OR Hybrid Systems for Optimal Design," (J. Cagan and P. Jain), *Proceedings of the KOREA-U.S.A. Engineering Design Seminar* (Oct. 13-19, 1988, Seoul National University, Korea), pp. 29-45.
- R-6 "Dynamic Mechanical System Design using Qualitative and Symbolic Reasoning," (with Y.-J. Kim), Research Report to the Lawrence Livermore National Laboratory, Dec. 1988.
- R-7 "A Fault Location System for a Time of Flight Detector Array," (with Hall, D, W. Greiman, D. Olson, R. Paasch, A. Padganokar, and E. Schroeder), LBL Report #27482, Also appeared in *Computing in High Energy Physics 1989*.
- R-8 "Research in Intelligent Manufacturing Systems, Knowledge Acquisition and Representation, and Design Theory and Methods," NSF Presidential Young Investigator Award, 1987/88 Progress Report, July 1988.
- R-9 "Research in Intelligent Manufacturing and Design Methods," NSF Presidential Young Investigator Award, 1988/89 Progress Report, July 1989.
- R-10 "Research on Influence Architectures for Distributed Real Time Control," (with K. Ramamurthi), in *1988/89 Progress Reports: The Microelectronics Innovation and Computer Research Opportunities (MICRO) Program*, (ed., Prof. William S.C. Chang, Chairman, MICRO Executive Committee, Mail Code R-009, UC San Diego, La Jolla, CA 92093-0409), May 1990, pp. 5-8.
- R-11 "Research in Intelligent Manufacturing and Design Methods," NSF Presidential Young Investigator Award, 1989/90 Progress Report, July 1991.

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- R-107 Final Report, "Invention and Innovation in New Product Development: Freshman/Sophomore, Junior/Senior, Graduate Course Sequence," (with Co-PI Sara Beckman), NCIIA grant, November 2011.
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- R-115 Chez Panisse: Building an Open Innovation Ecosystem, (with Henry Chesbrough and Sohyeong Kim), Berkeley-Haas Case Series and also in the Harvard Business Review, 2014.
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- R-119 Annual Report, "TheDesignExchange, an Interactive Portal for the Design Community of Practice, (with S. Beckman and M. Yang), NSF, August 2014.
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- R-121 Annual Report, "TheDesignExchange, an Interactive Portal for the Design Community of Practice, (with S. Beckman and M. Yang), NSF, June 2015.
- R-122 Annual Report, "Precision Hopping/Rolling Robotic Surface Probe Based on Tensegrity Structures," (with A.K. Agogino), NASA, Oct. 2015.
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- CW-7 "Disk Drive Case Study," (with S. Nagaraj), Synthesis Coalition, (<http://www.needs.org> on the NEEDS Database), 1995 (v. 0.5).
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- CW-11 "People, Product and Strategies," on the NEEDS Database; direct link at:

<http://best.me.berkeley.edu/~pps/pps/>), v. 3, 1998.

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Published Invited Talks

- T-1 "Integrating Design and Manufacturing Education within Broader Societal Goals," Testimony to the House of Representatives, Committee on Science, Space, and Technology, May 12, 1992. (Published in the *Congressional Record*).
- T-2 "Improving Retention through Curricular Reform, *Proceedings of the Engineering Education: Curriculum Innovation and Integration*, (eds., E. Aung and S. Carmi, Jan. 5-10, 1992, Santa Barbara, CA), Engineering Foundation, pp. 27-32.
- T-3 "The Synthesis Coalition: Information Technologies Enabling a Paradigm Shift in Engineering Education," (with W.H. Wood), Keynote talk, *Proceedings of Hyper-Media in Vaasa'94*, Vassa Finland, pp. 3-10.
- T-4 "The National Engineering Delivery System (NEEDS): A Multimedia Digital Library of Courseware," (with B. Muramatsu), *Proceedings of the 1996 ASEE International Conference on Engineering Education and Practice*, ASEE CD-ROM, 1996.
- T-5 "Information in the Design Process," *Proceedings of the Frontiers of Engineering: Reports on Leading Edge Engineering Research*, National Academy of Engineering, Sept 19-21. 1996, pp. 13-16.
- T-6 "Concepts for the SMETE (Science, Mathematics, Engineering, Technology Education) Library," *Report of the NSF Science, Mathematics, Engineering, and Technology Education Library Workshop* (July 21-23, 1998), NSF 99-112, pp. 32-33.
- T-7 "Invited Panel - Engineering and Computer Science Education in the Era of Globalization", (with Ted E. Batchman, Frank Bullen, Leah H. Jamieson, Wayne C. Johnson and Arthur B. Western), Extended Abstract in *Proceedings of the Frontiers in Education Conference 2005*, ASEE/IEEE, Session F2B (October 19-22, 2-5, Indianapolis, IN).
- T-8 "Finding One's Way," Keynote talk at Mudd Design Workshop, May 2011. Published in the *International Journal of Engineering Education*, Special Issue on Design Education: Innovation and Entrepreneurship, Vol. 28, No. 2, 2012, pp. 249-250.

Unpublished Invited Talks

- U-1 "1stPRINCE: Innovative Design from First Principles," (with J. Cagan) presented at AAI88 AI in Design Workshop, Fall 1988.
- U-2 "Deterministic Monotonic Influence Diagram," (with N. Michelena), presented at the 1989 TMS/ORSA meeting, NY, Fall 1989.
- U-3 "Comments on *The Competitive Edge: Research Priorities for U.S. Manufacturing and Improving Engineering Design: Designing for the Competitive Advantage*," Manufacturing Studies Board, National Research Council, National Academy of Sciences Building, Washington, D.C., July 16, 1991.
- U-4 "Women, Engineering and Project Synthesis," Committee on the Role and Status of Women in EDUCOM, San Diego, California, Oct. 17, 1991.

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- U-5 "The National Science Foundation Engineering Education Coalitions," ASEE Pacific Southwest Section Annual Meeting and Conference, UC Berkeley, Oct. 24, 1991.
 - U-6 "Synthesis: An NSF Coalition to Improve Undergraduate Engineering Education and Develop a National Engineering Education Delivery System," MacSciTech Scientific and Engineering Applications of the Macintosh Technical Conference & Exposition, Sir Francis Drake Hotel, San Francisco, California, Jan. 15-17, 1992.
 - U-7 "Synthesis Coalition," (with A.P. Ingraffea and T. Henderson), National Science Board, Education Committee, NSF Headquarters, March 19, 1992.
 - U-8 "Integrating the Undergraduate Engineering Curriculum," ASME International Conference, Honolulu, Hawaii, April 5-8, 1992.
 - U-9 "The Impact of Demographic Change on Students Engineering and Graduating From Engineering Programs," 44th California Symposium on Transportation Issues, Oakland Airport Hilton, May 14, 1992.
 - U-10. "Integrating Science and Technology Education and Research," Statement before the President's Council of Advisors on Science and Technology (PCAST), University of California at Berkeley, July 15, 1992.
 - U-11. "Multimedia Case Studies Project of the Synthesis Coalition," Computing: The Transformation of Engineering Exhibits, National Academy of Engineering Annual Meeting, National Academy of Sciences Building, Washington, D.C., Sept. 29-30, 1992.
 - U-12 Agogino, A.M. and J. Evans, "Multimedia Case Studies of Design in Industry," presented at ASME Design Theory and Methodology '93 Conference, Albuquerque, New Mexico, Fall 1992.
 - U-13 "A Networked Multimedia Courseware Database for Engineering Education," Keynote talk at TBEEC '93 (Technology Based Engineering Education Conference), Santa Fe, New Mexico, Nov. 19-20, 1993.
 - U-14 "The Role of Multimedia in Design Education and Research," Overview for '94 DTM, American Society of Mechanical Engineers, Minneapolis, MN, Sept. 11-14, 1994.
 - U-15 "Engineering Education for 2020 and Beyond," Workshop on Systematic Engineering Education Reform: An Action Agenda, Sponsored by the National Science Foundation, Arlington Renaissance Hotel, Arlington, Virginia, July 11, 1995.
 - U-16 "National Engineering Education Delivery System (NEEDS)," Workshop on Re-Engineering Education, Rensselaer Polytechnic Institute, Troy, NY, Aug. 22, 1995.
 - U-17 "NEEDS - The National Engineering Education Delivery System, 1995 NTU Engineering Faculty Forum, Satellite Broadcast, October 10, 1995, 1-2 p.m. PDT (video tape available). <http://needs.org/needsinfo/presentations/NTU95/index.html>
 - U-18 "Multimedia Case Studies to Teach Engineering Design/ Digital Library of Engineering Courseware," Presentation to UC Regents, Oct. 19, 1995.
 - U-19 "Information Technologies Enable a Paradigm Shift in Engineering Education," International Symposium on Engineering Education and Evaluation, Osaka, Japan, Nov. 27, 1995.
 - U-20 "Reforming Undergraduate Engineering," plenary lecture at the UC Science, Engineering and Mathematics Education Conference, Arnold and Mabel Beckman Center of the National

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- Academies of Science and Engineering, Jan. 26-27, 1996.
- U-21 "Multimedia and Internet: Enabling New Modes of Learning," Chancellor's Forum, Feb. 2 1996.
- U-22 "Engineering Education: Can we Make Changes," (with Joseph Bordogna, Assistant Director of Engineering, NSF; John H. McMasters, Senior Principal Engineer, Boeing Commercial Airplane Group; Winfred M. Phillips, Dean, College of Engineering, University of Florida and President of Accreditation Board for Engineering and Technology), The Annual Convocation of Professional Engineering Societies and the National Academy of Engineering, National Academy Building, Washington D.C., May 21, 1996.
- U-23 "Synthesis Coalition Initiatives in Mechanical Engineering at U.C. Berkeley," Workshop on Mechanical Engineering Undergraduate Education for the Next Twenty Years, Royal Sonesta Hotel, Cambridge, Massachusetts, Oct. 8, 1996.
- U-24 "Instructional Technology and the Use of the WWW for Improving K-12/Undergraduate Education," UC President Atkinson's visit to UC Berkeley campus, Nov. 21, 1996.
- U-25 "Research on Distributed Intelligence: Sensor Fusion and Design Information Environments," NSF Director Neal Lane's visit to the UC Berkeley campus, Dec. 5, 1996.
- U-26 "Integration of Research and Education," (with Angelica Stacy, Prof. of Chemistry), NSF Director Neal Lane's visit to the UC Berkeley campus, Dec. 5, 1996.
- U-27 "Multimedia and Internet Enabling New Modes of Learning in K-14," Colloquium on Using the Internet for Instruction and Outreach, January 14, 1997.
http://www1.needs.org/~agogino/IU/IU.presentation_ToC.html
- U-28 "A Multimedia Digital Library of Courseware, 1997 Berkeley Multimedia Research Center," Retreat on New Media Teaching and Learning Techniques, Berkeley, California, January 15-16, 1997.
URL: <http://needs.org/needsinfo/presentations/BMRC97/index.html>
- U-29 "Issues in Engineering Education," National Academy of Engineering, Commission on Engineering and Technical Systems, Arnold and Mabel Beckman Center, Irvine, California, Feb. 11, 1997.
- U-30 "Research on Distributed Intelligent Systems: Information Value Theory Applied to Mechatronic Design," Industrial Liaison Program, College of Engineering, UC Berkeley, March 12, 1997.
- U-31 "Synthesis Coalition: Multimedia and the Internet Enabling New Modes of Learning," (with Brandon Muramatsu, NEEDS Project Manager), 1997 All University Conference on Teaching and Learning, Los Angeles, California, March 24-25, 1997.
URL: <http://www.needs.org/needsinfo/presentations/AUC97/index.html>
- U-32 "Effective Processes to Give Engineering Educators Easy Access to Quality-Reviewed Electronic Courseware," (with B. Muramatsu, P. Eibeck, and J. Stern), Engineering Education Innovators' Conference, Arlington, Virginia, April 7, 1997.
- U-33 "Music and Mechanics: Instructional Technology on Display," UC Alumni Legislative Conference, Sacramento, California, April 15, 1997.
- U-34 "Internet and Multimedia Enabling New Modes of Learning and Outreach to K-12," Keynote Speaker at the UC Technology & Outreach Conference, UC Irvine, May 21, 1997.

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- U-35 "Instructional Technology and Distance Learning at Cal," presentation at Cal Parents' Weekend, Sept. 27, 1997.
 - U-36 "The Synthesis Coalition's Assessment Strategy", NACME Forum '97: Crisis and Commitment — Engineering Strikes Back, Seattle, WA., Oct. 3, 1997.
 - U-37 "The Future of Instructional Technology at Berkeley: CCCPB-IT Committee's Goals", Berkeley Multimedia Research Center Retreat, Jan. 12-13, 1998.
 - U-38 "The Synthesis Coalition's Curricular Innovations for the Freshman Year," (with Edgar Blevins), NSF Engineering Coalitions Conference, Feb. 27-28, 1998, Orlando, FL.
 - U-39 "Intelligent Computer-Aided Mechatronic/MEMS Design," talk at UC Berkeley ILP '98, March 11, 1998.
 - U-40 Discussant, Center for Innovative Learning Technologies Panel, AERA (American Educational Research Association), April 13, 1998.
 - U-41 "Engineering Education Goes Multimedia", (with B. Muramatsu), talk at Cal Day '98 (April 18, 1998).
 - U-42 "Interactive MESA", Interactive MESA Seminar, April 23, 1998.
 - U-43 "Post-Proposition 209: Admissions, Outreach and Student Services for Underrepresented Engineering Students", Engineering Advisory Board meeting, May 19, 1998. Also presented at the Berkeley Engineering Fund, Board of Directors, June 3, 1998.
 - U-44 "The Concept Database: A Web-based Design Information System for Mechatronics and MEMS Design," Harbin Institute of Technology, China, June 10, 1998.
 - U-45 "Multimedia Case Studies of Engineering Design: Synthesis Engineering Education Innovations," Harbin Institute of Technology, China, June 11, 1998.
 - U-46 "Diversity in Engineering Education", talk for the NSF New Century Scholars Workshop at Stanford University, Aug. 6, 1998.
 - U-47 "Educational Technology and Distance Learning at UC Berkeley," Invited presentation to Chancellor Berdahl and distinguished visitors from Saudi Arabia, Nov. 30, 1998.
 - U-48 "CCCPB – IT Committee Goals for 1998-99," Berkeley Multimedia Research Center Retreat, Jan. 14, 1999.
 - U-49 "Overview of Instructional Technology on Campus" and "Use of Instructional Technology in the School of Engineering," Undergraduate Affairs Leadership Meeting, March 15, 1999.
 - U-50 "Balancing Work and Family", panel speaker at the NSF New Century Scholars Workshop at Stanford University, Aug. 5, 1999.
 - U-51 "Visions for a Digital Library for Science, Mathematics, Engineering and Technology Education (SMETE), Fourth ACM Conference on Digital Libraries, Berkeley, CA, Aug. 11-14, 1999.
 - U-52 "A National Digital Library for Science, Mathematics, Engineering, and Technology Education," Educause '99, Teaching and Learning Poster Session, Oct. 27, 1999.
 - U-53 "Using the National Engineering Education Delivery System as the Foundation for Building a Test-Bed Digital Library for Science, Mathematics, Engineering and Technology Education,"

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- (with Flora McMartin), NSF Digital Library Initiative 2 Meeting, Cornell University, Oct. 17-18, 1999.
- U-54 “Teaching, Learning and Libraries on Internet Time,” Society of Women Engineers – Evening with Industry, Nov. 19, 1999, Berkeley, CA.
- U-55 “Teaching, Learning and Using Libraries on Internet Time,” Coalition for Networked Information, Phoenix, Arizona, Dec. 14, 1999.
- U-56 “A Prototype National Digital Library for Science, Mathematics, Engineering and Technology Education”, TechEd 2000, Las Vegas, Nevada, March 7, 2000.
- U-57 “Information Technology and the Digital Divide” at the Berkeley Pledge Spring Roundtable for Academic Support and Enrichment Services, “Student Services and New Technology: Time to Get Real!” May 4, 2000.
- U-58 “Developing a Prototype National Digital Library for Science, Mathematics, Engineering and Technology Education,” NSF DLI All-Projects Meeting, June 12-13, 2000.
- U-59 “A National Digital Library for Science, Mathematics, Engineering and Technology Education,” International Conference at Stratford-upon-Avon, England, Coalition for Networked Information, 2000.
- U-60 “Women in Engineering — 21st Century”, International Forum on Women in Engineering and Science, World Engineers’ Convention, 19-21 June 2000, Hannover, Germany. (Invitation by German government and AAAS).
- U-61 “A National Digital Library for Science, Mathematics, Engineering and Technology Education,” Gordon Conference on Innovations in College Chemistry Teaching, Clarion Ventura Beach Hotel, Jan. 6-11, 2001.
- U-62 “Demystifying Copyright and ‘Fair Use’ for Teaching,” (with Brian Donohue and Gary Handman), UC Berkeley, March 13, 2001.
- U-63 “Women in Academia,” Women’s Faculty Club, UC Berkeley, March 22, 2001.
- U-64 “Demonstrating the Core Integration System for the National SMET Education Digital Library,” (with Andy Dong), Information Access Seminar, School of Information Management & Systems, UC Berkeley, March 23, 2001.
- U-65 “Demonstrating the Core Integration System for the National SMET Education Digital Library,” Coalition for Networked Information, April 9, 2001, Washington, D.C.
- U-66 “Gender and Science/Technology Digital Learning Resource Workshop”, (with O. Somolui), Association of Women in Science, 2001 (abstract published in AWIS Magazine, Vol. 31, No. 1, pp. 13-14).
- U-67 “Successful Partnering” at the “Forging Library Partnerships in the Networked Age,” (with L. Zia), Clark Kerr Campus, UC Berkeley, Nov. 2, 2001.
- U-68 “Evolutionary Synthesis of MEMS Design and Applications”, Distinguished Lecturer Series, Mechanical Engineering Department, University of Maryland, college Park, Feb. 19, 2002.
- U-69 “Gender Bias in Faculty Hiring, Retention and Promotion”, University of Maryland, Baltimore County, Feb. 20, 2002.
- U-70 Testimony to California State Senate Select Committee on Government Oversight: “A

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- Hearing to Assess Progress Made by the University of California to Reduce Gender Disparity in Faculty Hiring”, March 11, 2002.
- U-71 Testimony to California State Senate Select Committee on Government Oversight: “A Hearing to Assess Progress Made by the University of California to Reduce Gender Disparity in Faculty Hiring”, Feb. 19, 2003.
- U-72 “Engineer of 2020: Visions of Engineering Work and Education in the New Century,” Keynote talk to the Engineering Directorate, Lawrence Livermore National Laboratory as part of the *Engineering Opportunities in the 21st Century Conference*, March 12, 2003.
- U-73 “Engineer of 2020: Visions of Engineering Work and Education in the New Century,” Mechanical Engineering Departmental Seminar, Spring 2003.
- U-74 “Computer Aided Design for Microelectronic Mechanical Systems (MEMS): Designs that Learn From Nature”, Lecture for E92: Perspectives in Engineering, Oct. 27, 2003.
- U-75 “Research on Educational Digital Libraries,” Stanford University, Center for Design Research, Dec. 10, 2003.
- U-76 “Creativity in the Innovation Process,” ITRI Researchers, 290 HMB, Dec. 17, 2003.
- U-77 “National Academy of Engineering – Engineer of 2020,” Plenary Speaker, ASME Department Heads Conference, March 5-9, 2004.
- U-78 “Engineer of 2020: Women Engineers in the New Century,” Women in Science and Engineering Seminar, Foothill Residence Halls, March 11, 2004.
- U-79 “Design Theory & Methods: a Mechanical Engineering Perspective,” Berkeley Institute of Design, May 14, 2004.
- U-80 “Ubiquitous Wireless Infrastructure to Support Mobile Learning,” HP/CITRIS 2004 Workshop on Planetary-Scale Applications, Wed., May 26, UC Berkeley.
- U-81 “Development and the Design Process”, Engineers for a Sustainable World Internship Training, West Coast Session, June 17, 2004.
- U-82 “Review of Engineer 2020: Phase I Report”, National Academy of Engineering, July 22, 2004.
- U-83 “Engineer 2020 NAE Project: Implications for ABET”, ABET Industry Advisory Board meeting, August 27, 2004.
- U-84 “The Engineer of 2020: Global Visions of Engineering in the New Century,” Keynote Address to the SOMIM (Mexican Society of Mechanical Engineering) Conference, August 2004.
- U-85 “New Product Development: A UC Berkeley Perspective,” Universidad Nacional Autonoma de Mexico (UNAM), September, 2004.
- U-86 “The Engineer of 2020: Global Visions of Engineering in the New Century,” Keynote Address Georgia Tech Advisory Board (GTAB), October 2004.
- U-87 “Automating Keyphrase Generation for Text Document Collections,” (with Jia-Long Wu and William H. Wood), Poster Session, NSDL Grantees Meeting, November 2004.
- U-88 “The Next Phase of NAE’s Engineer of 2020 Project: Preparing Engineers for the Future”, Mechanical Engineering Conference, March 11-15, 2005, San Diego, California.

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- U-89 "The Engineer of 2020 Project: Global Visions of Engineering in the New Century," Colloquium, Department of Mechanical Engineering, March 18, 2005, UC Riverside, Riverside, California.
- U-90 "The Engineer of 2020", presented at The Jasper Summit – Consulting Engineering: the Next 15 Years, Association of Consulting Engineers of Canada, June 23-25, 2005, Jasper, Alberta.
- U-91 "Engineering Education – Present and Future", panel, National Science Board Workshop on "Engineering Workforce Issues and Engineering Education: What are the Linkages", October 20, 2005, M.I.T.
- U-92 "The Engineer of 2020: Global Visions of Engineering Practice and Education," Corporate Technical Fellows Meeting, Bechtel Engineering San Francisco Offices, March 2, 2006.
- U-93 "Women in Engineering in the Year 2020: Possible, Probable, and Preferable Scenarios," Stanford University, March 9, 2006.
- U-94 Customer/Community-Based Design", Presented at class on Design for Sustainable Communities, Spring 2006. Download slides on Customer/Community-Based Design.
- U-95 "Technology, Pedagogy and Design: Global Visions for the New Century", June 1, 2006, University of Michigan.
- U-96 Tribute to Chancellor Denise Denton, June 29, 2006 University of Santa Cruz. I was asked to provide a tribute to Chancellor Denton's technical and professional accomplishments at the USC-sponsored memorial.
- U-97 "Is Science Color-Blind?", Keynote Talk to the 2006 Summer Research Symposium: University of California, Berkeley's Leadership Excellence through Advanced Degrees Program & the NSF California Alliance for Minority Participation in the Sciences Program, August 10, 2006.
- U-98 "Understanding Women in Universities Around the Globe: Perspective from the University of California at Berkeley" (with M.A. Mason and A. Stacy). Presentation at the International Alliance of Research Universities (IARU), a consortium of 10 research-intensive institutions on four continents, September 9, 2006, St. Johns College, University of Cambridge, U.K.
- U-99 "Beyond Bias and Barriers: Women in Academic Science and Engineering". Presentation and discussion with the Society of Women in the Physical Sciences, Le Conte Hall, UC Berkeley, Oct. 10, 2006.
- U-100 "Beyond Bias and Barriers: Women in Academic Science and Engineering". Presentation and discussion at a campus-wide symposium at the University of Texas at Austin. Sponsored by the Office of the Provost, the Center for Women's and Gender Studies, Faculty Women's Organization, Women in Engineering, and Women in the Natural Sciences, Jan. 30, 2007.
- U-101 "Design for Sustainable Communities: User Needs", Presented at class on Design for Sustainable Communities, Spring 2007. Download slides on Customer/Community-Based Design.
- U-102 "K-12 Resources in the NSDL Engineering Pathway," AAAS Annual Meeting, Feb. 16, 2007.
- U-103 "Higher Education Resources in the NSDL Engineering Pathway," AAAS Annual Meeting, Feb. 17, 2007.
- U-104 "Women and Men in the Academy: Beyond Bias and Barriers", Yale University, April 12, 2007.

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- U-105 "Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering," Smith College, April 13, 2007.
- U-106 "Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering," APS (American Physical Society), April 15, 2007.
- U-107 "Interactive Evolutionary Computation for MEMS Design", Industrial Engineering Seminar, University of Oklahoma, April 20, 2007.
- U-108 "Educating the Engineer of 2020", College of Engineering Seminar, University of Oklahoma, April 20, 2007.
- U-109 Invited talk at the APS (American Physical Society) workshop titled: *Gender Equity: Strengthening the Physics Enterprise in Universities and National Laboratories*, Maryland, May 6, 2007.
- U-110 "Engineer of 2020 and the Gathering Storm", Opening Panel, Mudd Design Workshop VI , "Design and Engineering Education in a Flat World," 23 May 2007.
- U-111 "Teaching Women Engineering", ASME Think Tank Summit, June 10, 2007.
- U-112 "Engineering Pathway Education Digital Library", ABET Workshop at ASEE Annual Meeting, June 24, 2007.
- U-113 Tront, J., A.M. Agogino and B. Muramatsu, "Selecting and Evaluating Digital Learning Materials for Engineering and Pre-Engineering Education", Workshop at ASEE Annual Meeting, June 24, 2007.
- U-114 "Women and Men in the Globalizing University: Mapping Gender in University Data", Yale University, April 21, 2008.
- U-115 "Design for Sustainable Communities: User Needs," ER291-002/E 298A: Design for Sustainable Communities, (Dr. Ashok Gadgil), UC Berkeley, Spring 2008. Download Slides
- U-116 "Human-Centered Sustainable Product Design," Northwestern University, April 22, 2008.
- U-117 "Educating Engineers for a Flat World: Implications Across the Academy," Presidential Talk, Northwestern University, April 22, 2008.
- U-118 "Sustainable Product Design Using Project Based Learning", One week short course (20 segments) taught in India as part of the IUCEE project: Indo-US Collaboration for Engineering Education. Mysore, India, July 2008. (Download slides and links).
- U-119 "Interdisciplinary Opportunities for Women" (download slides). Panel on "A look into the future and the increasing complexity of interdisciplinary careers" at the National Academies Workshop From Doctorate to Dean or Director: Sustaining Women through Critical Transition Points in Science, Engineering, and Medicine September 18-19, 2008, Washington, DC.
- U-120 "Enabling the Adoption of ICT for Sustainable Business Transformations," Sustainable Innovations Workshop, HP Labs, October 20, 2008.
- U-121 "The Challenge of a Responsible Supply Chain," Symposium on Sustainability in Business, Science and Policy, Presidents' Circle, National Academies, Google Auditorium, November 6, 2008.
- U-122 "CARES, Community Assessment for Renewable Energy and Sustainability: CARES

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- Collection on the Engineering Pathway", Dar Al Hekma College, Saudia Arabia, January 6, 2009. Download slides.
- U-123 "Designing Technology for Girls and Women", Dar Al Hekma College, Saudia Arabia, January 6, 2009. Download slides.
- U-124 "Sustainable Product and Building Design", Dar Al Hekma College, Saudia Arabia, January 6, 2009. Download slides.
- U-125 "Research to Support the Development of a Sustainability Engineering Infrastructure in the Kingdom of Saudi Arabia", (with Nezar Alsayyad, Ryan Shelby, and Yael Perez), Poster Session, University of California at Berkeley, January 2009.
- U-126 "How to use the NAE Grand Challenges to Change the Diversity in the ME Discipline?" invited speaker at the 2009 International Mechanical Engineering Education Conference. http://www.asme.org/Education/College/Faculty/2009_Proceedings.cfm
- U-127 "Beyond Bias and Barriers: Fulfilling the Potential of Women to Meet the Grand Challenges of Engineering", SWE (Society of Women Engineers) Regional Awards Banquet, May 2009, University of California at Berkeley.
- U-128 "John McMasters - A Legacy of Sustaining Innovations in Biomimetic Aircraft Design and Engineering Education", Mudd Design Workshop VII, May 29, 2009.
- U-129 Keynote Talk at the WIRES (Connecting Women and Completing the Circuit of International Research Collaboration) Conference, June 3, 2009, Barcelona Spain.
- U-130 "CARES, Community Assessment for Renewable Energy and Sustainability," June 25, 2009, presentation to the Jordan, Renewable Energy Group, State Department arranged visit to UC Berkeley.
- U-131 "Green Hat & Engineering Pathway", (with K. Ryokai and L. Oehlberg), Session on Mobile & Augmented Reality Cyberlearning at the Cyberlearning Tools for STEM Education Conference, March 8, 2011, Berkeley, California. Green Hat was one of the mobile learning programs highlighted in the PBS KQED coverage: Video Games and Simulations Bring Science to Life, KQED, March 10, 2011.
- U-132 "Distributed AI and Sustainable Design: Smart Products for the Smart Grid", Keynote Presentation at the AAAI 2011 Spring Symposium on Artificial Intelligence and Sustainable Design. News story: A Role for Artificial Intelligence in Sustainable Design.
- U-133 "Greening The Internet of Things: Smart Products in a Smart Grid", Distinctive Voices talk at the National Academy of Engineering by Alice M. Agogino, August 2011.
- U-134 "Smart People, Products and Buildings on the Smart Grid: Case Study in Smart Lighting," Tyndall Research Center, Cork, Ireland, June 2012.
- U-135 "Communities that Enable Smart People, Products and Buildings on the Smart Grid," Panel on Nurturing the Computational Sustainability Community, 3rd International Conference on Computational Sustainability, July 4-6, 2012.
- U-136 "Enabling Smart People, Products and Buildings on the Smart Grid," 3rd International Conference on Computational Sustainability, July 4-6, 2012.
- U-137 "Human-Centered Design for Sustainability," presentation to UNESCO, Paris, France, August 22, 2012.

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- U-138 "Innovations in Context: Longitudinal Study of Alumni from a Multidisciplinary New Product Development Course," presentation to Frontiers of Engineering Education, National Academy of Engineering, Beckman Center, Irvine, CA, October 15, 2012.
- U-139 "Greening The Internet of Things: Smart Products in a Smart Grid," Distinguished Lecture, Singapore Institute of Design and Technology, Singapore, November 9, 2012.
- U-140 "Human-Centric User Research to Identify Disruptive Opportunities in Convergent Paper and Digital Use," Samsung Innovation Center, San Jose, CA, June 13, 2013.
- U-141 "Human-Centric User Research to Identify Disruptive Opportunities in Convergent Paper and Digital Use," Inria Saclay Ile-de-France Research Center, École Polytechnique Université, Paris-Sud, France, June 26, 2013.
- U-142 "History of Wicked Problems – Working with Horst Rittel on Interdisciplinary Design," Wicked Problems in Socio-Ecological Systems: Symposium and Workshop, Oct. 26-27, 2013, Berkeley, CA.
- U-143 "Sustainable Tribal Buildings and Renewable Energy Systems," CITRIS (Center for Information Technology in the Interest of Society) Research Exchange Seminar, Oct. 30, 2013, Berkeley, CA.
- U-144 Member, kick-off panel at Oakland's first Global Sustainability Jam, Nov. 23, 2013. The Jam is a non-profit activity organized by an international network of service and sustainability designers.
- U-145 Valuing Design, Spring Design Innovation Seminar Series, College of Engineering, UC Berkeley, May 2, 2014.
- U-146 Awardee and Keynote Speaker at Assemblymember Nancy Skinner STEM Women of the Year, June 26, 2014.
- U-147 "The Value of Design on Innovation", Roundtable Discussion, CEOs of InBeta Group, Brazil, July 16, 2014.
- U-148 "Framing Insights from Design Research", Lecture to engineers, designers and marketing, InBeta Group, Brazil, July 16, 2014.
- U-149 "Can Sustainable Design Drive Innovation, Reduce Costs and Increase Quality?", Innovation, Competitiveness and Design (ICS), Brazil, July 17, 2014.
- U-150 "Greening the Internet of Things: Smart Products in a Smart Grid", Innovation, Competitiveness and Design (ICS), Brazil, July 18, 2014.
- U-151 "Development Engineering", TechCon 2014: University Innovators Transcend Academic Silos to Present Cutting-Edge Collaborations for Global Development.
- U-152 "How Sustainable Design Can Drive Innovation Globally", Engineers for a Sustainable World, UC Berkeley, February 4, 2015.
- U-153 "Development Engineering: Graduate Academic Programs Start Up in the Center", Board of Trustees, Blum Center for Developing Economies April 20, 2015.
- U-154 "Soft Robots Using Compliant Tensegrity Structures and Soft Sensors", (with Chen, L.-H., P. Keegan, M. Yuen, R.K. Kramer, A.K. Agogino and V. Sunspiral) ICRA Workshop on Soft Robotics, Abstract.

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- U-155 "Seeking Solutions: Maximizing American Talent by Advancing Women of Color in Academia", ASEE Panel (with Valerie E. Taylor [Chair], Edward Lazowska, Lydia Vila-Komaroff), June 16, 2015.
- U-156 "National Academies Report on Career Choices of Women Engineers", ASEE Distinguished Lecture, June 17, 2015.
- U-157 "Tensegrity Robots for Space Exploration," Bay Area Robotics Symposium (BARS), Oct. 23, 2015.
- U-158 "BiD, Wicked Problems & Design Thinking," Talk at the 10th anniversary reunion of the Berkeley Institute of Design, UC Berkeley, De. 9, 2015.
- U-159 "Improving Innovation with Diversifying Engineering Career Choices," Keynote Speaker for National Engineers Week, Society of Women Engineers, Willamette Valley, Feb. 22, 2016.
- U-160 "Valuing Design," Seminar, School of Mechanical, Industrial and Manufacturing Engineering, Oregon State University, Feb. 23, 2016.
- U-161 "From Mobiles to Drones: The Next Leapfrog Technologies", Panel at the Clinton Global Initiative University (CGI U), April 2, 2016.
- U-162 "Introduction to FoodInno2016", Berkeley-Stanford Food Innovation & Design Symposium, (with L. Leifer), May 2016.
- U-163 "Precision Hopping/Rolling Robotic Surface Probe Based on Tensegrity Structures," (with A.K. Agogino), NASA Tensegrity and Soft Robotics Technical Exchange, NASA Ames, Intelligent Systems Division, July 14, 2016.
- U-164 "Tensegrity Robots with BEST Robotics", Summer Fun Weeks, Lawrence Hall of Science, Aug. 3 2016.
- U-165 "Development Engineering: Actionable Research and Global Impact," Keynote Speaker, Engineering for Global Development Research Forum, ASME International Design Engineering Technical Conference, Aug. 23, 2016.
- U-166 "Entrepreneurial Mindset", (with Ilya V. Avdeev and Leticia Britos Cavagnaro), 2016 Symposium: 21st Century Mindsets and Strategies for Career Advancement, Minority Faculty Development Workshop (MFDW16), UC Berkeley, Sep. 23, 2016.

Patents and Patent Citations

1. U.S. Patent 5043929: *Closed-form kinematics*, Kramer, Glenn A.; Barrow, Harry G.; Agre, Philip E.; Technologies ; 1991 **Cites J-7**
2. U.S. Patent 5410496: *Using degrees of freedom analysis to solve topological constraint systems for construction geometry in a computer aided design (cad)* , Bolon, Craig; Kanumury, Mahesh; Keyrouz, Walid T.; Kramer, Glenn A.; Moore, Eric A.; Pabon, Jahir A.; Schlumberger Technologies 1992 **Cites J-7**
3. U.S. Patent 5251144: *System and method utilizing a real time expert system for tool life prediction and tool wear diagnosis*, Ramamurthi, Krishnamoorthy; Texas Instruments ; 1993 **Cites J-3, J-8 and P-23**
4. U.S. Patent 5253189: *Qualitative kinematics* , Kramer, Glenn A., Schlumberger Technologies; 1993 **Cites J-7**
5. U.S. Patent 5297057: *Method and apparatus for design and optimization for simulation of motion of mechanical linkages*, Kramer, Glenn A.; Barrow, Harry G.; Turner, Patrick R.; Bodner, Michael E.; Cooper, Jeffrey G.; 1995 **Cites J-7**
6. U.S. Patent 5452238: *Method for solving geometric constraint systems*, Kramer, Glenn A.; Keyrouz, Walid T.; Pabon, Jahir A.; Schlumberger Technologies; 1995 **Cites J-7**
7. U.S. Patent 5510995: *Sculptured surface synthesis based on functional design constraints*, Oliver, James H.; Iowa State University; 1996 **Cites P-15**
8. U.S. Patent 6086617: *User directed heuristic design optimization search*, Waldon, Scott; Powell, Dave; Tong, Siu; Engineous Software; 2000 **Cites J-3**
9. German Grant DE200138094: "Apparatus and method for generating and expanding the knowledge base of an expert system" Wolfgang Baiert, Andreas Dr. Westendorf, Aug. 4, 2000. **Cited R-32**
10. U.S. Patent 6181975: *Industrial process surveillance system*, Gross, Kenneth C.; Wegerich, Stephan W; Singer, Ralph M.; Mott, Jack E.; ARCH Development Corporation; 2001 **Cites R-29**
11. U.S. Patent US7366639 B2 "Methods for establishing alerts and /or alert limits for monitoring mechanical devices," David Lacey Doel, Charles Eric Lethander, Heidi Leoti Davidz, General Electric Company, April 24, 2008. **Cites J-35**
12. U.S. Patent Application 11 / 099,786: Engineering design system using human interactive evaluation, Alice M. Agogino, Raffi Kamalian, Hideyuki Takagi, 2005. Patent was questioned for further investigation and the UC Berkeley campus decided not to pursue. Interestingly, the patent application has been cited in other patent applications.
13. U.S. Patent US20070005541 A1 Methods for Validation and Modeling of a Bayesian Network, Sarmad Sadeghi, Afseneh Barzi, Navid Sadeghi, Jan 4, 2007. **Cites Agogino (1998) but really should have cited P5 (1996)**
14. U.S. Patent US7366639 B2 "Methods for establishing alerts and /or alert limits for monitoring mechanical devices," David Lacey Doel, Charles Eric Lethander, Heidi Leoti Davidz, General Electric, Apr 29, 2008. **Cites J-35**
15. U.S. Patent US7398211 B2 "Method and apparatus for performing planbased dialog," Kuansan Wang, Microsoft, Jul 8, 2008. **Cites my course publication: "The Logic of Probability Theory"**

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16. U.S. Patent US7469547 B2 "Arrangement for detecting the position of a damper blade using a wireless communication sensor," Matthew D. Cook, Siemens Building Technologies, Inc., Dec. 30, 2008. **Cites P-90 and R-70**
 17. U.S. Patent US7552032 B2 "Method and system for automated design," Matthew D. Cook, Siemens Building Technologies, Inc., Jun 23, 2009. **Cites US20060225003 A1**
 18. U.S. Patent US7469547 B2 "Vehicle information processing system for content recommendation using Bayesian network models," Nobuhiro Mizuno, Hirotohi Iwasaki, Yoichi Motomura, Denso It Laboratory, Inc., Sep. 14, 2010. **Cites R-32**
 19. U.S. Patent //us7884732 B2 "Wireless network control for building facilities," Charles A. Huizenga, UC Berkeley, Feb 8, 2011. **Cites P-90**
 20. U.S. Patent US20110056294 A1 "MEMS resonant accelerometer having improved electrical characteristics," Claudia Comi, Alberto Corigliano, Barbara Simoni, STMicroelectronics, Milano, Italy, March 10, 2011. **Cites J-42**
 21. U.S. Patent US7925384 B2 "Location-based provisioning of wireless control systems," Charles A. Huizenga, Alex Do, Michael Corr, Dale Fong, Josh Mooney, Adura Technologies, Inc., Apr 12, 2011. **Cites P-90**
 22. U.S. Patent EP20110799844 "Resonant biaxial accelerometer structure of the microelectromechanical type," Claudia Comi, Alberto Corigliano, Barbara Simoni, STMicroelectronics, Milano, Italy, May 31, 2012. **Cites J-42**
 23. U.S. Patent US8239170 B2: Complex signal decomposition and modeling, Stephan W. Wegerich, Smartsignal Corporation, Aug 7, 2012 **Cites R-29**
 24. U.S. Patent WO2012070021 A1 "Intelligence in distributed lighting control devices," Charles Huizenga, Alex Do, Adura Technologies, Jan. 29, 2013. **Cites P-90**
 25. U.S. Patent US8593073 B2 "Apparatus and methods for interactive illumination," Matthew Aldrich, Mark Feldmeier, Joseph Paradiso, MIT, Nov. 26, 2013. **Cites P-102**
 26. U.S. Patent US20130339918 A1 "Microelectromechanical system design and layout," Jason V. Clark, Dec. 19, 2013. **Cites P-79, P-80, P-87**
 27. U.S. Patent US8620853 B2 "Monitoring method using kernel regression modeling with pattern sequences," James P. Herzog, Smartsignal Corporation, Dec. 31, 2013. **Cites R-29**
 28. U.S. Patent US8660980 B2 "Monitoring system using kernel regression modeling with pattern sequences," James P. Herzog, Smartsignal Corporation, Feb 25, 2014. **Cites R-29**
 29. U.S. Patent US8671756 B2 "MEMS biaxial resonant accelerometer," Claudia Comi, Alberto Corigliano, Barbara Simoni, STMicroelectronics, Milano, Italy, MAR 18, 2014 **Cites J-42**

PROFESSIONAL ACTIVITIES – ALICE M. AGOGINO

- Member: AAAI, AAAS, ASEE, ASME, AWIS, ESW, IEEE, SWE
- Faculty Advisor, UC Berkeley Section of Pi Tau Sigma (Mechanical Engineering Honor Society), 2014-Present
- Faculty Advisor, Engineers for a Sustainable World (UC Berkeley Chapter), 2014-Present
- Founding Faculty Advisor, Berkeley Innovation, an undergraduate human-centered design group at the UC Berkeley who teach the {design.} decal course on human-centered design
- Chair (2017+), Member (2012-2017), Scientific Advisory Board, Singapore University of Technology and Design SUTD-MIT International Design Centre (IDC),
- Member, International Review Panel, Ministry of Education, for the Singapore University of Technology and Design SUTD-MIT International Design Centre (IDC), 2017).
- Member, Advisory Board, Rangzen: Circumventing Government-Imposed Communication Blackouts and the Denovo Group. 2013-
- Member, President's International Advisory Council, King Abdullah's University of Science and Technology (KAUST), 2012-2013
- Member, Board of Directors, UnaMesa Association – Tools and Services for Learning and Caring. The UnaMesa Association is a non-profit, world-wide association of individuals from industry, academia, and NGOs that provides free software tools and web services for schools, clinics, and other community organizations, 2006-2016.
- Member, Board of Directors, Technology Innovation for Sustainable Solutions (TISS). The flagship project of TISS is the Darfur Stoves Project, 2008-2011.
- Counsellor, National Academy of Engineering (NAE), 2008-2014
- Member, Board of Trustees of the National Academy of Engineering Fund, National Academy of Engineering (NAE), 2012-2013
- Member, Committee on Women in Science, Engineering, and Medicine (CWSEM), National Academies, 2009-present.
- Reviewer for UNESCO, Panel review for Big Data Center in Hangzhou, China, Fall 2012
- Member, Committee for Assessing Foreign Technology Development in Human Performance Modification, National Research Council of the National Academies, 2011-2012
- Member, Advisory Board, Science and Math Informal Educators (SMILE), Lawrence Hall of Science, 2008-present
- Member, Advisory Group, Online Ethics Center, National Academy of Engineering (NAE), 2008-present
- Organizing Committee, Mudd Design Conferences, Harvey Mudd College, 2009-present.
- Member, Fellows Committee, American Society of Mechanical Engineers (ASME), 2008-2010
- Member, Advisory Committee, Mudd Design Conferences, 2004-11
- Co-Chair, Mechanical Engineering Nominating Committee for the National Academy of Engineering (NAE), 2007-2008
- Reviewer, and Secondary Education Program, National Aeronautics and Space Administration (NASA), 2007-2008
- Member, National Advisory Board, Prototype to Production (P2P), 2007-2008.
- Chair, Mechanical Engineering Peer Committee for the National Academy of Engineering (NAE), 2005-06; Vice Chair, 2004-05 (Member, Feb. 1, 2003-January 31, 2006)
- Member, Board of Directors, Center for Education, ASME (2004-06)
- Member, National Academies Board on Science Education (BOSE, 2005-2007)
- Member, Committee on Science, Engineering, and Public Policy (COSEPUP; 2007-2010).
- Member, Committee on Maximizing the Potential of Women in Academic Science and Engineering, Published: Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering, Committee on Science, Engineering, and Public Policy (COSEPUP; 2005-2007).
- Member, CMU Institute for Complex Engineered Systems (ICES) Advisory board (2004-2006)
- Member, Manufacturing Engineering Laboratory of the National Institute of Standards & Technology (NIST; 2004-2005)
- President, Association of Academic Women, University of California at Berkeley, 2002-2004.

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- Associate Editor, *Artificial Intelligence in Engineering. Design, Analysis and Manufacturing*, (AIEDAM), Academic Press, Limited, Harcourt Brace Javanovich, Publishers
 - Editorial Board, *Concurrent Engineering: Research and Applications* (CERA), Academic Press, Limited, Harcourt Brace Javanovich, Publishers
 - Associate Editor, Design Engineering Education and the Green Design and Sustainable Engineering Education communities on the Engineering Pathway digital library
 - Chair of the AAAS (American Association for the Advancement of Science) section on Engineering (Chair 2001-2002, Retiring Chair 2002-2003)
 - Member, MIT Corporation Visiting Committee in Mechanical Engineering (Presidential Nominee, 1999/2003)
 - Member of the CMU Institute for Complex Engineered Systems (ICES) Advisory board. (Appointed by the President of CMU)
 - Member of the Radcliffe Institute for Advanced Study. (Nominated by Dean of Engineering, Harvard University)
 - Member of the Jet Propulsion Lab Advisory Board, 2002-2008
 - Member, AAAS Committee on Opportunities in Science (1997-2003)
 - Member, National Academy of Engineering (NAE), Committee on Engineering Education (1999-2002)
 - Member, National Academy of Engineering (NAE), Bernard M. Gordon Prize for Innovation in Engineering and Technology Education (Gordon Prize) Committee, (2001-2002).
 - Member, Advisory Board for the National Digital Library for Technological Literacy project, ITEA (2001-2002).
 - International Co-Chair, 9th ISPE International Conference on Concurrent Engineering: Research and Applications (CE2002), Cranfield University, United Kingdom.
 - Member, Executive Committee, Digital Media Innovation Initiative, University of California System (2000-2002).
 - Member, ASEE Women and Minorities Task Force (2001/2002)
 - Academic Advisory Board, 13th International conference on Engineering Design: Unifying Engineering Design — Building a Partnership Between Research and Industry, 21-25 August 2001, Glasgow, Scotland.
 - Co-Chair, NAE Planning Committee on Engineering Education for the Year 2020 (1999-2000); Member, Engineer 2020 Committee (2004-2005).
 - Member, NAE Committee on Technology Literacy Standards (1997-2000)
 - Elected as Member-at-Large of the AAAS section on Engineering (1996-2000)
 - Member, National Academy of Engineering, Academic Advisory Board (1998-99)
 - Member, Addison Wesley Longman Higher Education Advisory Board, (1997-99)
 - NSF SMETE-LIB (Science, Mathematics, Engineering, Technology Digital Library) Study Steering Committee (1997-98)
 - Member, Guidance Committee, “Removing Barriers to Collaborative Research” project of the Government-University-Industry Roundtable of the National Research Council (1997-98)
 - Member, ASEE, Wickenden Award Committee (1997-98)
 - Member, Program Committee, ASME Design for Manufacture Conference (1997).
 - NSF Advisory Committee for Engineering, Engineering Directorate, (1991-96, Chair 1996-97)
 - Member, Faculty Advisory Committee, Boeing, Inc. (1996-98)
 - Chair, NSF Proposal Review Advisory Team (1996-97)
 - ASEE Fred Merryfield Design Award Committee (1993-96)
 - Elected as Member of the Electorate Nominating Committee of the AAAS section on Engineering (1994-96); Chair (1995).
 - Participated in “Forum on Science in the National Interest: World Leadership in Basic Science, Mathematics and Engineering,” Executive Office of the President, Office of Science and Technology Policy, Jan. 31-Feb. 1, 1994.
 - Proposal reviewer for National Science Foundation (NSF), UC Microelectronics Innovation and Computer Research Opportunities (MICRO), Electric Power Research Institute (EPRI), Australian Science Fund, Canadian National Science and Engineering Research Council, and Swedish Council of Higher Education
 - Reviewer for: *ASME Transactions, Journal of Optimization Theory and Applications, IEEE Transactions, IEEE Computer, AI in Engineering, Design, Analysis and Manufacturing, Research in Engineering Design, Journal of*

Intelligent Computing, ASEE Journal of Engineering Education, Engineering with Computers, and Advances in Engineering Software, and numerous technical conferences

- Organizing committee member on a number of technical conferences and workshops
- Invited to provide testimony to Congress with talk titled: “Integrating Design and Manufacturing Education within Broader Societal Goals,” Testimony to the House of Representatives, Committee on Science, Space, and Technology, May 12, 1992
- Invited to speak before the President’s Council of Advisors on Science and Technology with talk titled: “Integrating Science and Technology Education and Research,” University of California at Berkeley, July 15, 1992
- Invited speaker or chair of numerous panels at technical conferences
- Director (1983-1984) and Chair (1981-1982), ASME Santa Clara Valley Section
- Vice President, Society of Women Engineers, San Francisco Bay Area Section (1979-1980)

ADMINISTRATIVE ROLES – ALICE M. AGOGINO

- **Director**, BEST Lab (1986-present) (Berkeley Expert Systems Technology / Berkeley Energy and Sustainable Technologies / Berkeley Emergent Space Tensegrities) Lab.
- **Education Director**, Blum Center for Developing Economies (2016-present. Responsible for (1) The convening of a Curriculum Committee for the Global Poverty & Practice Minor and co-chairing it with Associate Dean of Global Studies. The purpose of this committee is to revitalize the curriculum of the minor and especially its core classes. (2) Continuing the evolution of the Development Engineering Designated Emphasis. (3) The development of a budget for the Global Poverty & Practice Minor and the Designated Emphasis in Development Engineering in coordination with the Blum Center Executive Director. (4) The visioning of the fund raising needed for the sustainability of the education programs in the Center including advising us about the balance between endowment needs of the Center and current use annual funds.
- **Chair**, Faculty Group in Development Engineering (2013-present)
- **Chair** (2005-06)/ **Vice Chair** (2004-05), Berkeley Division, Academic Senate (100% administrative appointment as Chair; 50% as Vice Chair). The Chair of the Division presides at meetings of the Division and the Divisional Council. Serves, *ex officio*, as a member of the Assembly of the Academic Senate and on the Systemwide Academic Council, and as Chair of the Divisional Committee on Assembly Representation. Refers matters to the officers or agencies of the Division and of the Administration, as appropriate. Chair of the Systemwide Academic Council Working Group on the California Teach Initiative. Meets regularly with the Chancellor and Executive Vice Chancellor and Provost. At UC Berkeley, joins the Council of Deans and other executive committee meetings, as appropriate. Supervises staff of the Berkeley Division of the Academic Senate. Sits, without vote, in deliberations of any committee of the Division. Berkeley Division Senate Committees are: Academic Freedom (ACFR), Academic Planning & Resource Allocation (CAPRA), Admissions, Enrollment & Preparatory Education (AEPE), American Cultures Breadth Requirement (AM CULT), Assembly Representation (AREP), Budget & Interdepartmental Relations (BIR), Committee on Committees (COMS), Computing & Communications (COMP), Courses of Instruction (COCI), Divisional Council (DIVCO), Educational Policy (CEP), Faculty Awards (FA), Faculty Rep to the ASUC (FREP), Faculty Research Lecture (FRL), Graduate Council (GC), International Education (IE), Library (LIBR), Memorial Resolutions (CMR), Ombudsperson for Faculty (OMB), Panel of Counselors (POC), Privilege & Tenure (P&T), Prizes (PRIZ), Protection of Human Subjects (CPHS), Research (COR), Rules and Elections (R&E), Student Diversity and Academic Development (SDAD), Status of Women & Ethnic Minorities (SWEM), Student Affairs (STA), Teaching (COT), Undergraduate Scholarship & Honors (CUSH), University-Emeriti Relations (UER), University Extension (UEXT), Faculty Welfare (FWEL). Operating budget was approximately \$3.9M.
- **Co-Chair** Steering Committee (2006), Working Group (2005), Berkeley Diversity Research Initiative. The initial priority of the BDRI is to strengthen the campus's research agenda on racial and ethnic diversity. Specifically, we wish to support research that will have a large impact on the ways in which multi-ethnic and multi-racial communities-at the local, state, national and international levels-can flourish as inclusive societies. Eventually, the initiative may encompass other research issues related to diversity. Formed in Spring 2006, the BDRI Steering Committee is charged with guiding the faculty FTE process, speaker series and developing a sustainable organizational structure.
- **Co-Chair** University Athletics Board, University of California at Berkeley (2005-6). The board has been charged with advising the Chancellor on all matters of policy related to Intercollegiate Athletics, with particular reference to the academic and personal well-being of student athletes and the accountability of the Athletic Department to the educational values and goals of the Berkeley Campus.) The board reports to the Chancellor, University of California at Berkeley.
- **Chair**, SESAME (Studies in Engineering, Science and Mathematics Education) Graduate Group, 2003-04. Chair of the Graduate Group in Science and Mathematics Education (SESAME) chairs the SESAME Executive Committee with responsibilities for graduate admissions, awarding of fellowships, monitoring student progress, curriculum offerings, preliminary and qualifying exams. SESAME offers a graduate program leading to a doctoral degree in science, mathematics, or engineering education. The program is designed to produce graduates who have advanced expertise in a scientific discipline as well as in educational theory and research methodologies. It produces scholars who can communicate well with

scientists and engineers as well as with educational researchers and practitioners. The program includes studies that connect human development, cognitive science, and educational technology with the learning of science, mathematics, and engineering.

- **President**, Association of Academic Women (AAW) at UC Berkeley, 2001-03. Campus organization that amplifies the voice of women faculty and academic associates.
- **Faculty Assistant** to Executive Vice Chancellor & Provost, Educational Development and Technology (100% administrative appointment; 1999-2001). Provided support to EVC&P Paul Gray in instructional technology, undergraduate education, WASC accreditation, and K-12 Outreach. Responsible for coordinating these activities with Chancellor's Cabinet, Council of Deans, Vice Chancellors' Academic Council, Academic Senate, Associate Vice Chancellor of Information Services & Technology and University Librarian. Co-Chair the E-Berkeley Implementation Task Force (1999/01), working with the Administrative and Student Services Computing Subcommittee (ASSCS), the Instructional Technology Subcommittee (IT) and the Information Technology Architecture Task Force (ITATF), to ensure as broad a range of representation as possible as they address policy concerns, guide the development of key projects, and maximize collaboration and resource sharing across the campus concerning enterprise-wide integration of internet services and technologies. Developed the CyberCentral virtual center (<http://cybercentral.berkeley.edu>) to assist faculty find resources for teaching, learning and educational technology. CyberCentral is organized around key areas of: pedagogy, course web sites, multimedia, classroom technology, intellectual property, recognition awards, grants, training, seminars, and evaluation. Created the Federation of Educational Technology Leaders to coordinate the following units: Berkeley Language Center, Center for Studies in Higher Education, GSI Teaching and Resource Center, Instructional Technology Program, IS&T Microcomputer Facilities, Office of Educational Development, Office of Media Services, Media Resource Center, Multimedia Research Center, Residence Hall Computing, School of Information Management and Systems, and the Teaching Library. Working with the Federation, CCCPB-IT Committee, CUE (Commission on Undergraduate Education), and Academic Senate, developed proposal for a Center for Teaching, Learning and Technology to improve teaching effectiveness and student learning and to promote innovations in the creative and effective use of both new and traditional educational methods, tools, and technologies.
- **Director**, Instructional Technology Program (1999-2001). Managed personnel, budget and programmatic needs of the Instructional Technology Program. ITP offers seminars, training workshops, consulting, and web-based courseware development services to faculty and their graduate student assistants. ITP provides the online information, training workshops, consulting services, computer resources, and software tools instructors need to establish their course newsgroups, e-mail lists, and web sites. ITP helps faculty create course web accounts and also supports faculty use of online course management tools such as WebCT and CourseInfo.
- **Chair**, Instructional Technology Committee of the Campus Computing and Communication Policy Board (CCCPB-IT) (1997/01), Co-Chair (1993/97). The CCCPB established the Instructional Technology Committee in September 1994 to provide guidance on instructional technology policy. The CCCPB-IT developed and implemented a four-tier architecture for course websites (1998-2000). Developed Information Literacy Expectations for Effective Use of Instructional Technology (1997-98). In coordination with the Divisional Council of the U.C. Berkeley Academic Senate, the CCCPB-IT conducted a survey of faculty needs regarding instructional technology in the spring of 1998. Initiated CyberSemester '97, a theme semester built around computation and the Internet in 1996/97. CCCPB-IT reports include:
 - Improving Instructional Technology at the University of California at Berkeley: Components of a New Initiative, Report to the University of California Office of the President, Oct. 18, 1996.
 - Steps Toward Becoming a Technologically Wise University, Strategic Planning for Technology's Use In Instruction at the University of California, Berkeley Aug. 25, 1996.
 - Instructional Technology at the University of California at Berkeley, Final Report of a Panel Chartered by the Academic Planning Board, April 27, 1994.
- **Associate Dean**, Instructional Technology / Distance Learning, College of Engineering (1996/99; 25% administrative appointment) Managed personnel, budget and programmatic needs of instructional technology and distance learning in the College of Engineering. Responsible for management of the BITS and Cal VIEW programs. The Berkeley Instructional Technology Studio (BITS) provides support for faculty in the College of Engineering. The Televised Instruction Program at the University of California at Berkeley – known as Cal VIEW – Video Instruction for the Engineering World – supports Berkeley's activity as a member school in the National Technological University, NTU, which is a consortium of 51 universities and colleges. UC Berkeley participates as a member school of NTU by videotaping select

engineering courses each semester and sending copies of those videotapes to Ft. Collins, Colorado for NTU to offer over a satellite broadcast system. Operating budget approximately \$400K per year.

- **Associate Dean**, College of Engineering, Special Programs (1995/99; 25% administrative appointment). Managed personnel, budget and programmatic needs of the College's Center for Underrepresented Engineering Students (CUES). CUES is the umbrella for MESA (Mathematics, Engineering, Science, Achievement Program), MEP (Multicultural Engineering Program), JMEP (Julia Morgan Engineering Program), GrAD (Graduate Academic Diversity) Program, and SUPERB (Summer Undergraduate Program of Engineering Research at Berkeley). Work with student organizations, submit and manage research proposals, and represent the College on affirmative action issues. Serve as faculty representative for the Coalition for Diversity and Excellence in Math, Science and Engineering. Operating budget \$1-2M per year, plus extracurricular grants.
- **Director**, Synthesis Coalition, an NSF Coalition for Undergraduate Engineering Education Coalition, 1994/97. Managed personnel, budget and programmatic needs of the Synthesis Coalition. Responsible for coordinating strategic planning and implementation efforts with over 200 faculty and administrators in the eight institutions of Synthesis: California Polytechnic State University at San Luis Obispo, Cornell, Hampton, Iowa State, Southern, Stanford, and Tuskegee Universities, and the University of California at Berkeley. Synthesis Coalition members were well-represented among the nation's leading institutions: three of the schools were in the top 10% of institutions in number of bachelor's degrees granted; three were in the top 10% for degrees granted to women; five for degrees granted to African-Americans; and four for degrees granted to Chicano/Hispanics. Synthesis produced computer-based instructional material that integrates the diverse analytic, design, experimental and intuitive skills that are required by a practicing engineer. Synthesis developed and continues to manage the National Engineering Education Delivery System (NEEDS). Operating budget approximately \$2M per year with matching funds from industry.
- **Director**, Curriculum Reform, Synthesis Coalition (1990-94). Responsible for coordinating strategic planning, budgeting, fund raising and implementation of Synthesis undergraduate curricular reform efforts. Synthesis developed new curricular and pedagogical models that emphasized multidisciplinary content, teamwork and communication, hands-on and laboratory experiences, open-ended problem formulation and solving, and examples of "best practices" from industry. The two major interdisciplinary theme areas were: (1) Mechatronics and (2) Architecture/Engineering/Construction. K-12 linkages were built on Synthesis information infrastructures and curricular modules. Synthesis was funded for \$15M during its first five years from the National Science Foundation and raised approximately \$10M from industry.

UNIVERSITY SERVICE – ALICE M. AGOGINO

ACADEMIC SENATE

- Chair of the Faculty, College of Engineering, (2015-16); Secretary (2014-15)
- Secretary of the Faculty, College of Engineering, (2013-15); Acting Secretary (Fall 2011)
- Chair, Senate Athletics Council on Intercollegiate Athletics, Berkeley Division, Academic Senate (2013-2014)
- Member, Committee on Rules and Elections (2007-12)
- Chair, Berkeley Division, Academic Senate (2005-06); Vice Chair (2004-05)
- Elected to Committee on Committees (COMS) (2004), Berkeley Division, Academic Senate, stepped down in order to serve as Vice-Chair of the Berkeley Division of the Academic Senate.
- Co-Chair (with Vice Provost Christina Maslach), University Athletics Board (2005-06)
- Co-Chair (with Executive Dean George Breslauer), Diversity Research Initiative Working Group (2005-06)
- Member, Senior Advisory Group on Diversity & Inclusion (SAGDI) (Fall 2005)
- Co-Chair (with Vice Provost Catherine Koshland), Professional Degree Fee Working Group (2004-05)
- Member, Southeast Quadrant Working Group (2004-06)
- Mentor, Regents' and Chancellor's Scholarship awardee, Academic Senate Committee on Undergraduate Scholarships and Honors (CUSH)
- Member, Committee on the Status of Women and Ethnic Minorities (SWEM) (2003-2004)
- Interviewer, Regents' and Chancellor's Scholarship applicants for the Academic Senate Committee on Undergraduate Scholarships and Honors (CUSH)
- Co-Chair (with Associate Vice Chancellor of IS&T, Jack McCredie), Academic Planning Board (APB) Task Force on Instructional Technology (1993/95)
- UCB Academic Senate, Chair (1993/95), Computing and Communications Committee (Member, 1991/93)

ADMINISTRATIVE COMMITTEES, UC OFFICE OF THE PRESIDENT

- Member, UC Berkeley-Chile (CONICYT) Seed Fund Competition (2013)
- Member, Review Committee, President's Postdoctoral Fellowships (2009-10)
- Member, Review Committee, University of California's Canada-California Strategic Innovation Partnership (2010)
- Member, Search Committee for the Chancellor of the University of California at San Francisco, (Chair, President Yudof), UC Office of the President (2009)
- Chair, Science and Mathematics Initiative Working Group, Academic Council (2005/2006); Member, Steering Committee, Science and Math Initiative, Office of the President (2004/05)
- Member, Academic Council (2005/2006), Academic Assembly (2005/2006); UC Office of the President
- Member, University-wide Advisory Committee to the Sloan-funded initiative "Developing a family Friendly Package for Ladder-Rank Faculty at the University of California" (2004-2006). This project led to a number of policy changes, including the 2006 Revised Academic Personnel Policies Related to Work and Family. Also see: UC's Family Friendly Policies for Faculty and Other Academic Appointees.
- Academic Planning Board, Office of the President, under Provost Jud King (2000/2001).
- Advisory Committee, NEXUS project, under Vice President Karl Pister. (1999/2000).
- Served on UCOP steering committee for the *All University Conference on Teaching and Learning Technologies and the Future of the University* (1996/97). Gave one presentation and coordinated a three-way broadcast over Internet between Chancellor Tien on the UCB campus, President Wang of Tsinghua University in Beijing, China and the participants of the All-University conference at UCLA.

- Member, CINITAP (Committee on Intercampus Networking and Information Technology for Academic Purposes, 1994-97)

ADMINISTRATIVE COMMITTEES, UNIVERSITY LEVEL

- Education Director, Blum Center for Emerging Economies (2016+)
- Chair, Development Engineering Graduate Group (2016+)
- Member, Executive Committee, Energy Resources Group (2010-2013)
- Affiliated Faculty, Li Ka Shing Gender & Science Program, a research program that supports conferences, lectures and collaboration across fields to address issues related to gender, science and technology (2012-2013)
- Member, Advisory Committee for the Cal Preparatory School (2009-2016)
- Member, Advisory Committee for the Advisory Committee of the Center for Race and Gender (2009-2013)
- Chair, SESAME (Studies in Engineering, Science and Mathematics Education) Graduate Group (2003-04)
- Member, Executive Committee, SESAME (Studies in Engineering, Science and Mathematics Education) Graduate Group (1999-)
- Member, Chancellor's Task Force on Outreach Activities, 2004
- Co-Chair, (with Assoc. Vice Chancellor James Hyatt), E-Business Implementation Task Force (2000)
- Member, Chancellor's Task Force on the Recruitment and Retention of Women and Underrepresented Minority Faculty.
- Chair, Instructional Technology Committee of the Campus Computing and Communication Policy Board (1997/2000), Co-Chair (1993/97)
- Member, Chancellor's Commission on Undergraduate Education (CUE), (1998/2000)
- Member, Chancellor's Advisory Policy Committee on Outreach (CAPCO), (1998/2000)
- Member, Faculty Advisory Committee on the Interactive University project, Chaired by TVC&P Carol Christ (1997/2003)
- Member, Service-Learning Faculty Policy Committee (1998-2005)
- Member, Advisory Board, Chaired by Ralph Hexter, Berkeley Language Center (1999/2001)
- Member, Advisory Board, Chaired by Nick Jewell, Geographical Information Sciences Center (1999/2000)
- Co-Chair, Chancellor's Committee on the Status of Women (2000/2001)
- Member, Advisory Committee for the Berkeley Multimedia Research Center (1997/99)
- Member, Lawrence Hall of Science Advisory Committee (1997/99)
- Member, Committee on Microcomputing under Vice-Chancellor Hardyck (1988/89)
- Served on ad hoc review committees for tenure and promotion cases

ADMINISTRATIVE COMMITTEES, COLLEGE OF ENGINEERING

- Faculty Director's Council, Jacobs Institute of Design Innovation, (2015-17)
- Art, Technology and Culture Committee (2009-17)
- Member, Design Innovation Task Force on the Jacobs' Institute of Design Innovation (2013-14)
- Member, Committee on Instructional Technology & Distance Learning (2009-13)
- Member, Common First Year Committee (2009-13)
- Member, Ad hoc Committee for SUPERB (Summer Undergraduate Program of Engineering Research at Berkeley), (1997/01)
- Member, Ad hoc Committee for Affirmative Action, (1997/99)
- Member, Ad hoc Interdisciplinary Committee for Management of Technology, (1994/2005)
- Member, Ad hoc Committee for Instructional Technology and Televised Instruction, (1988/99)
- Member, Ad hoc Committee on Student Relations (1988-91)
- Member, Ad hoc Committee for Robotics and Manufacturing (1990-91)
- Member, Ad hoc Committee on Knowledge Engineering in the Undergraduate Curriculum (1987-88)
- Bioengineering Graduate Group (1990-91)

ADMINISTRATIVE COMMITTEES, DEPARTMENT OF MECHANICAL ENGINEERING

- Member, Chair's Advisory Committee (Fall, Spring 2016)
- Member, Department's Standing Search Committee (Fall, Spring 2016)
- Committee on ABET and Undergraduate Study, (Spring 2013-Spring 2015)
- Committee on Master of Engineering, Lead Advisor and Founder of Product Design Concentration (Spring 2013+)
- Undergraduate Advising, (every semester, except on sabbatical)
- Chair, Preliminary Exams, (Fall 2009-Spring 2011); Member (2016-17)
- Member, Drake Scholarships, (Fall 2006, 2009-12)
- Member, Preliminary Exams, (Fall 2006)
- Chair, Committee on Seminars, (2002/04)
- Chair, Committee on Industrial & Alumni Relations- MEIA, (2002/05)
- Chair, Committee on Awards, (2002/05)
- Committee on Curriculum Review/Undergraduate Study, (2002/04)
- Committee on Graduate Study, (1998/99; 2002/04)
- Committee on Preliminary Exams, (1998/99)
- Committee on Internet Publications, (1997/98)
- Committee on Graduate Council Program Review, (1997/98)
- Committee on Faculty Affirmative Action (1987/95); Chair (1994-95)
- Member, Committee on Computers and Computation (1988-89)
- Chair, Ad hoc Committee on the Design Program (1988-89)
- Drake Scholarship Committee (1987/91)
- Committee on Undergraduate Advising (1987/91)
- Served on six faculty search committees

WOMEN AND MINORITIES RECRUITMENT/RETENTION

- Ran interactive session on "Entrepreneurial Mindset", (with Ilya V. Avdeev and Leticia Britos Cavagnaro), 2016 Symposium: 21st Century Mindsets and Strategies for Career Advancement, Minority Faculty Development Workshop (MFDW16), UC Berkeley, Sep. 23, 2016.
- UC Berkeley sponsor and speaker for Black Girls Code, December 13, 2014.
- Affiliated Faculty, Li Ka Shing Gender & Science Program, a research program that supports conferences, lectures and collaboration across fields to address issues related to gender, science and technology.
- Won AAAS Lifetime Mentor Award, 2012. Citation: for efforts to significantly increase the number of women and African- and Hispanic-American doctorates in mechanical engineering.
- Panel Speaker, Society of Women Engineers New Admit Overnight Program, Fall 2011.
- Berkeley PI, Broadening Participation in Computing grant, NSF: www.bpcportal.org, 2007-2012.
- Berkeley PI, NSF-Funded National Center for Women (NCWIT): www.ncwit.org, 2005-2012.
- Member, Advisory Committee, University-wide Advisory Committee to the Sloan-funded initiative "Developing a family Friendly Package for Ladder-Rank Faculty at the University of California", 2004-06. Became key component of UC's Family Edge policies.
- Mentor, Sponsored SUPERB (Summer Undergraduate Program of Engineering Research at Berkeley) students for diverse undergraduate research, 2004-present.
- Mentor, NERDS (New Experiences for Research & Diversity in Science) students for diverse undergraduate research, 2004-present.
- Co-Chair (with Executive Dean George Breslauer), Diversity Research Initiative Working Group, 2005-06. Co-Chair BDRI Steering Committee (Spring, Summer 2006). "Academic leadership welcomes research proposals from all disciplines to advance this crucial institutional effort. "Last week a working group led by Professors Alice Agogino and George Breslauer . . . began to craft procedural recommendations for the research initiative, setting the stage for what is hoped will be a prompt call for proposed topics of study, followed by the first new hires, possibly as early as this fall. The campus might decide to apply research expertise to health disparities, educational opportunity and achievement, the impact of the criminal-justice system on diverse communities, or political

participation and citizenship – to name just a few examples. But work proposed by experts in many other, less-obvious fields – from life sciences to engineering to art practice – will also be welcomed into the research initiative’s “big tent.” Mechanical engineering’s Agogino, for example, would like to see the campus undertake research on bridging the digital divide.” *The Berkeleyan*, May 4, 2005.

- Co-Instructor of Berkeley’s Research in Diversity and Inclusion: A Multi-disciplinary Survey Seminar, Spring 2006, with Evelyn Nakano Glenn, Director of the Center for Race and Gender.
- Chancellor’s Award for Advancing Institutional Excellence, 2006. The new award recognizes faculty providing leadership in research, education and public service in building an equitable and diverse learning environment. My work was described as “an extraordinary blend of research in mechanical engineering, inquiry into issues of gender and minority access and equity and the building of programs, resources and curricula to advance both causes.”
- Serve on the Women in Academic Science Engineering Committee of the National Academies Committee on Science, Engineering, and Public Policy (COSEPUP; 2005-2006). The committee was chaired by Donna Shalala, President of the University of Miami. The charge was to develop a report on maximizing the potential of women in academic science and engineering, including findings and recommendations for recruiting, hiring, promoting, and retaining women scientists and engineers. The committee focused on academe but also examined other research sectors for examples of effective practices. The report provided specific action points for the following groups: faculty, department chairs and deans, academic leaders, funding organizations, and government officials. The study was rolled out in two phases. Phase One was an NIH-sponsored convocation (open to the public), held in 2005, that reviewed current research on gender issues in science and engineering, including a discussion of the nature-nurture debate on cognitive development, as well as implicit bias and faculty diversity research. A workshop proceedings was published shortly following the event. The final report – Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering – received national attention and considerable press coverage.
- Developed diversity theme pages for the NEEDS (National Engineering Education Digital-library System): Celebrating African American Engineers and Gender Equity.
- Developed a new course module called “Community-Based Design” in E10 (Introduction to Engineering Design and Analysis) that was designed to attract underrepresented engineering students as well as students interested in the positive impact that technology can have on society. Students in this module go through a human-centered design process in which they co-participate with target community members to develop technological solutions to critical socio-technical problems. During the Spring 2005 semester the focus was on reducing toxins and toxic substances for low income rural agricultural workers in California. Students had the opportunity to present the results of their work at an international conference on design. This module benefitted from collaboration with the Engineers for a Sustainable World, Anita Borg Institute for Women and Technology, the California College of Arts and the P & G industry sponsor.
- Developed a new course (with Prof. Jennifer Mankof in Computer Science) called “Designing Technology for Girls and Women” that was co-listed with Women’s Studies with a grant from the Anita Borg Institute of Women and Technology.
- Co-PI on successful proposal submitted to NSF titled “The Berkeley Edge: Advancing Minorities through the Ph.D. and Beyond,” for \$2,500,000 over five years. (1999/2005)
- Served on the American Association for the Advancement of Science (AAAS) Committee for Opportunities in Science, a committee meeting twice a year to promote science and engineering careers to women, underrepresented minorities and persons with disabilities. (1997-2003)
- PI for Engineering Information Fund “Interactive Theater” grant to sensitive faculty to gender/racial issues in our teaching and learning climate. (1998-2000)
- Co-authored (with Prof. James Casey) a successful NSF grant to fund 9 bioengineering students each year for 5 years in SUPERB (Summer Undergraduate Program of Engineering Research at Berkeley). The proposal was targeted to underrepresented engineering students. The Summer of 1999 was the first year of the grant.
- Supported initiative with the National Academy of Engineering and the American Society of Engineering Education to conduct a retention study of women and minority faculty in Engineering Colleges.
- Keynote speaker at the UC Berkeley student chapter of the Society of Women Engineers’ Evening with Industry dinner, Nov. 19, 1999, Berkeley, CA. Title: “Teaching, Learning and Libraries on Internet Time.”

- Participated on the faculty panel and the engineering break-out sessions for targeted minority recruitment receptions: 1998-99.
- Coordinated the “Engineering Woman to Women” session at Cal Day ‘99.
- Completed an analysis of SAT scores and graduating GPA for students in our Minority Engineering Program (now called “Multicultural Engineering Program) and presented results: “Post-Proposition 209: Admissions, Outreach and Student Services for Underrepresented Engineering Students”, Engineering Advisory Board meeting, May 19, 1998. Also presented at the Berkeley Engineering Fund, Board of Directors, June 3, 1998.
- Invited speaker for NACME (National Action Council for Minorities in Engineering). “The Synthesis Coalition’s Assessment Strategy”, NACME Forum ‘97: Crisis and Commitment – Engineering Strikes Back, Seattle, WA., Oct. 3, 1997.
- Keynote speaker at the Third Annual California McNair Scholars Symposium, Aug. 10-12, 1995. The McNair Scholars program encourages underrepresented minorities and first-generation college students to participate in undergraduate research and prepare for graduate education.
- Keynote speaker at the Society of Women Engineers’ Evening with Industry program, Nov. 17, 1995.

SERVICE TO ELEMENTARY AND/OR SECONDARY EDUCATIONAL INSTITUTIONS

- “Tensegrity Robots with BEST Robotics”, Summer Fun Weeks, Lawrence Hall of Science, Aug. 3 2016.
- Member, Executive Committee of Graduate Group in Studies in Engineering, Science and Mathematics Education (SESAME).
- Member, Advisory Committee, Cal Prep, 2008-2012
- Member, Advisory Board, Science and Math Informal Educators (SMILE), Lawrence Hall of Science, 2008-2011
- Reviewer, and Secondary Education Program, National Aeronautics and Space Administration (NASA), 2007-2008
- Chair, Systemwide Academic Council Working Group on the California Teach Initiative. (2005/06)
- Member, Science and Math Initiative, Office of the President;. (2004/05).
- PI, Engineering Pathway, a portal to high-quality teaching and learning resources in applied science and math, engineering, computer science/information technology and engineering technology, for use by K-12 and university educators and students. You are entering the engineering “wing” of the National Science Digital Library (NSDL); \$2.9M, NSF.
- PI, “Ubiquitous Digital Library Infrastructure to Support Mobile Learning”, UC Discovery Grants (with industry co-sponsors HP and Ricoh International)
- PI on subcontract with the Exploratorium on the NSF grant “Exploratorium Online: Exhibit-based Science Learning and Teaching Digital Library”.
- Served on the Golden Apple Fellowship Selection Committee (2000). This is a collaboration between UC Berkeley, the San Francisco Unified School District and the San Francisco Education Fund. (1999-2000)
- Served as the UC Berkeley Liaison for the UC Nexus Advisory Committee (1999-2000). UC Nexus is a statewide University of California initiative carried out by the UC Office of the President to explore the effective uses of computer and Internet technologies for K-12 education by building on and extending curriculum development and student assessment, and distance learning tools and strategies.
- Served on the National Academy of Engineering’s study of K-12 Technology Literacy Standards. (1997-2000)
- Completed an Interactive University Project titled: “Interactive MESA”. The IU MESA Day Competition was held on April 4, 1998 and written up in the *Engineering News*:<http://www.coe.berkeley.edu/cues/news/mesaday98.html>.
- Initiated the process through CAPCO (Chancellor’s Advisory Policy Committee on Outreach) and helped write a campus proposal to Siemens to sponsor the Western Region Siemens-Westingshouse Science and Technology Competition at approximately \$100,000. The Berkeley funds were used to bring in targeted underrepresented students to the Berkeley campus and interact with the Siemens-Westingshouse Science and Technology Competition. The award was submitted by Vice Chancellor Genaro Padilla and was administered by the Coalition for Excellence and Diversity in Mathematics, Science and Engineering Education. The Pacific Region competition was held on Nov. 5&6, 1999 and

was viewed as quite a success with approximately 200 local students and advisors attending. All of the Siemens-Westinghouse competitors from California said that they would apply to UC Berkeley. Caroline Kane, Chair of the Coalition, took the lead in organizing the activities. Prof. Roger Falcone, Chair of Physics, was the lead judge for the competition. Agogino served as the judge representing Engineering.

- Primary author and PI on proposal submitted to NSF titled “GK-12: NSF Graduate Teaching Fellows in K-12 Education” for \$1,463,856. In this proposal, Graduate Teaching Fellows would work in K-12 partnerships aimed at (a) creating curriculum materials that increase scientific and mathematical understanding, (b) enabling schools to use technology to promote fluency for all students, (c) developing effective professional development activities aligned with curriculum improvement, and (d) providing role models and mentors for students. Proposal was not awarded but new K-12 partnerships were established. (1999)
- Presented invited talk titled “Multimedia and Internet Enabling New Modes of Learning in K-14” at the UCB Colloquium on Using the Internet for Instruction and Outreach, January 14, 1997. http://www1.needs.org/~agogino/IU/IU.presentation_ToC.html
- Provided workshops and hands-on exercises for the K-12 programs of the Santa Clara Valley Section of the Society of Women Engineers (SWE). Served as judge to the K-12 “Junior Solar Sprint Challenge,” with the Society of Women Engineers and the Lawrence Hall of Science, May 25, 1996.
- Served as: (1) member, Lawrence Hall of Science Advisory Council; (2) member, Faculty Advisory Committee for the Interactive University Project; (3) member, Chancellor’s Advisory Policy Committee on Outreach (CAPCO), (4) member, Service Learning Advisory Committee.
- Supervised PhD students in the SESAME (Studies in Engineering, Science, Mathematics Education) program, with a focus on K-12.
- Participated in a number of K-12 projects through the MESA (Mathematics * Engineering * Science Education) program.

PUBLIC OR COMMUNITY SERVICE

- “Tensegrity Robots with BEST Robotics”, Summer Fun Weeks, Lawrence Hall of Science, Aug. 3 2016.
- Provided Tensegrity Robot Demo, NASA Ames Research Center 75th Anniversary Open House, Oct. 18, 2014.
- Awardee and Keynote Speaker at Assemblymember Nancy Skinner STEM Women of the Year, 2014.
- Founder of the Engineering Pathway digital library in engineering education. Although NSF funding has ended, I continue to lead its operations and development as a service to the nation. Editor-in-Chief, Today in History Blog, Engineering Pathway. (2005-13). Continue as Co-Founder and PI for theDesignExchange.
- Worked with the Pinoleville Pomo Nation (PPN) to co-design culturally-sensitive sustainable housing on their reservation near Ukiah (2005-present). Co-sponsored international design competition for the PPN’s vision of a Living Culture Center (2011-12). See: <http://2012.participlace.org/>. Won Chancellor’s Award for Public Service in 2010 for the CARES (Community Assessment for Renewable Energy and Sustainability) project.
- Gave numerous talks on National Academy reports:
- Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering
- Educating the Engineer of 2020: Adapting Engineering Education to the New Century
- The Engineer of 2020: Visions of Engineering in the New Century
- Participated in many design for development projects and pesticide protection for farm workers.
- Provided numerous talks representing UC Berkeley, including an invited presentation to the UC Regents, “Multimedia Case Studies to Teach Engineering Design/ Digital Library of Engineering Courseware,” Oct. 19, 1995.

RESEARCH AND EDUCATION GRANTS (1994-2016)

PI Status/ Year	Agency	Grant Title	Award
PI 1994/97	NSF	Concept Database: A Design Information System for Concurrent Engineering with Application to Mechatronics Design	\$238,311.
PI 1994/95	NSF	Synthesis: Engineering Education Coalition grant (with 8 universities)	\$3,069,509.
PI 1995/96	NSF	Synthesis: Engineering Education Coalition grant (with 9 universities)	\$1,490,000.
PI 1995/96	CAL- TRANS (PATH)	PATH MOU-231: Intelligent Diagnosis Based on Validated Fused Sensor Data for Reliability and Safety Enhancement of Intelligent Vehicle Systems	\$136,903.
PI 1995/96	NEC	Various Donors Gift	\$10,000.
PI 1996/97	NSF	Synthesis: Engineering Education Coalition grant (with 9 universities)	\$1,400,000.
PI	John Wiley & Sons	Synthesis Gift	\$40,717.
PI 1997/98	NSF	Synthesis: Engineering Education Coalition grant (with 8 universities); NEEDS Supplement.	\$100,000.
PI 1997/2000	GE Fund	Integrating Calculus, Chemistry, Physics and Engineering Education through Technology Enhanced Visualization, Simulation and Design Cases and Outcomes Assessment. (\$450,000 over three years – 1997/98, 1998/99, 1999/2000; \$150,000 per year.) Co-PIs, Paul Gray and Buford Price.	\$450,000.
PI 1997/98	CALTRANS - PATH	PATH MOU-322: Intelligent Diagnosis Based on Validated Fused Sensor Data for Reliability and Safety Enhancement of Intelligent Vehicle Systems	\$177,903.
PI 1997/98	CA MICRO	"Development of Decision Strategies for Scheduling Outages of Power Plants"	\$14,426.

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PI 1997/98	General Electric	Industry match to MICRO: "Development of Decision Strategies for Scheduling Outages of Power Plants"	\$35,000.
PI 1998/2001	NSF	"NSF Action Agenda: Expanding the National Engineering Education Delivery System as the Foundation for an On-Line Engineering Education Community". (\$800,000 over 3 years, 1998-2001).	\$800,000.
PI 1998/99	CALTRANS - PATH	PATH MOU-322: Intelligent Diagnosis Based on Validated Fused Sensor Data for Reliability and Safety Enhancement of Intelligent Vehicle Systems	\$34,000.
PI 1998/2000	NSF	"Using the National Engineering Education Delivery System as the Foundation for Building a Test-Bed Digital Library for Science, Mathematics, Engineering and Technology Education".	\$200,000.
PI 1998/2000	Engineering Information Foundation (EIF)	"Interactive Theater Program at UC Berkeley". (\$73,020 over 2 years; \$40,000 in 1998/99, \$33,020 in 1999/00).	\$73,020.
PI 1999-2001	NSF	"Developing a Prototype National Digital Library for Science, Mathematics, Engineering and Technology Education". (\$400,000 over 2 years, 1999-2001).	\$400,000.
Primary Auth Co-PI with James Casey) 1999/2005	NSF	SUPERB (Summer Undergraduate Program of Engineering Research at Berkeley): A Proposal for an NSF REU in Bioengineering. (\$295,000 total — \$59,000 per year for 5 years).	\$295,000.
PI 2000/2003	NSF	"Developing a Core Integration System for a National Science, Mathematics, Engineering and Technology Education Digital Library at www.smete.org".	\$846,616.
PI 2001/2003	NSF/Merlot	"Developing a Vision Support Planning Tool". (Two year subcontract to the Merlot project at the California State University system-wide).	\$76,499.
PI 2001/2003	NSF	"Collaborative Research: Developing a Learner-Centered Metathesaurus for Science, Mathematics, Engineering and Technology Education". (Two year collaborative project, \$108,766).	\$108,766.
PI 2001/2003	NSF	"Enhancing Interoperability of NSDL Collections and Services". (Two year collaborative project, \$1,000,000).	\$1,000,000.

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PI 2001/2004	NSF/Merlot	"Online Tutorials for Peer Reviewers: Scaling the Peer Review Process for National STEM Education Digital Library Collections". (Two year subcontract to the Merlot project at the California State University System-wide, 2001/02, \$60,000).	\$60,000.
PI 2001/2004	NSF/Merlot	"The NSDL Collaboration Finder: Connecting Projects for Effective and Efficient NSDL Development". (Two year subcontract to the Merlot project at the California State University system-wide, 2001/02, \$130,000).	\$130,000.
PI 2002/2003	Discovery Grant, UC Office of the President	"Learning in the Palm of Your Hand: Workshop Opportunity Grant".	\$10,000.
PI 2002/2003	MICRO/GE	"MEMS "Smart Dust Motes" for Designing, Monitoring and Enabling Efficient Lighting". (\$27,000 UC Office of the President, Project MICRO; \$30,000 from General Electric, Corporate R&D; 2002/03).	\$57,000.
PI 2002/2010	NCIIA & Lemelson Foundation	"Invention and Innovation in New Product Development: Freshman/Sophomore/Junior/Senior/Graduate Course Sequence". (\$43,250 grant, 2002/2005).	\$43,250.
PI 2003/2007	NSF	"MEMS/NEMS Design Automation". (\$330,00 grant for three years).	\$330,000.
PI 2003/2005	NSF/ Exploratorium	"Exploratorium Online: Exhibit-based Science Learning and Teaching Digital Library". (Subcontract to the Exploratorium's NSF grant of the same title, \$126,597 2003/04 and \$31,929 2004/05).	\$158,526.
Sr. Personnel 2003/2005	NSF	"Targeted Research: Chemistry Digital Library". Two year grant with PI, Mark G. Kubinec and Co-PI, Alexander Pines, Chemistry. (My portion of the grant is \$66,224 (\$36,347 2003/04 and \$29,877 2004/05).	\$66,224.
PI 2004/2005	NCIIA & Lemelson Foundation	"The Shuttle-Tracking Service: Implementing Cost-Effective Location-Based Services"	\$19,989.
PI 2004-2009	NSF	Distinguished Teaching Scholar "Designing Technology for Diversity", 4 year award.	\$305,000.
PI 2004/2005	NASA AMES	"Integrated Systems Health Monitoring Using Smart Dust Mote Sensor Networks"	\$90,000.

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PI 2004/2005	UC Energy Institute (UCEI)	"Intelligent Commercial Lighting: Demand-Responsive Conditioning and Increased User Satisfaction"	\$35,000.
PI 2004/2005	California Energy Commission Energy Innovations Small Grant (EISG) Program	"Efficient Lighting By Sensing And Actuating With MEMS 'Smart Dust Motes': A Feasibility Study"	\$74,010.
PI 2004/06	UCOP Discovery Grant	"Ubiquitous Digital Library Infrastructure to Support Mobile Learning"	\$89,215.
PI 2004/06	HP Match to the UCOP Discovery Grant	"Ubiquitous Digital Library Infrastructure to Support Mobile Learning"	\$135,000.
PI 2004/06	Ricoh Match to the UCOP Discovery Grant	"Ubiquitous Digital Library Infrastructure to Support Mobile Learning"	\$20,000.
PI 2004/2005	NCIIA & Lemelson Foundation	"Wireless Crop Protection"	\$15,900.
PI (with Co- PI Leslie Speer from CCA) 2004/2005	Proctor and Gamble/IDSA gift	"Interdisciplinary Student Design Collaborative Underserved Markets: Migrant Communities/Workers (California Central Valley)"	\$40,000.
PI 2005	NASA AMES	"Agent-Based Modeling of Human Collaboration with Intelligent Sensor Networks"	\$8,830.
PI 2005/2009	NSF, NCWIT	"Digital Library for the National Center for Women in Information Technology"	\$72,322.
PI 2005/2006	CISCO Systems/ NCWIT Gift	"Digital Library for the National Center for Women in Information Technology"	\$8,000.
PI 2005/2009	NSF	"A Comprehensive Pathway for K-Gray Engineering Education"	\$2,850,000.

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PI 2006/2008	NAE/ NSF	"Pr2ove-IT Conversion to the Engineering Pathway"	\$50,000.
PI 2006/2008	NCIIA & Lemelson Foundation	"SEGURO: Pesticide Protection and Warning System"	\$20,000.
PI (for student team) 2006/2007	CITRIS "White Paper Competition"	"Mitigation of Water Scarcity in California Agriculture through Use of an Information Technology Platform for Environmental Data"	\$7,500.
PI, 2006/2007	Chancellor's Green Campus Fund Award	"Fifty Percent Energy Savings with Innovative Energy-Efficient Office Lighting"	\$4,700.
Co-PI (with Horvath, et al.)	Luce Foundation	"Sustainable Engineering through Green Design, Manufacturing and Social Infrastructures"	\$550,000.
PI, UCB 2007/2010	NSF	"BPC-DP: Practices, Aggregation, Infrastructure, and Retrieval Service (PAIRS) for Broadening Participation in Computing"	\$213,394.
PI 2008	Kauffman Foundation	"Evaluation of New Product Development and Sustainable Design"	\$28,645.
PI 2008/2010	NCIIA & Lemelson Foundation	"CARES: Community Assessment of Renewable Energy and Sustainability Project Proposal"	\$16,000.
PI	KAUST	"Research to Support the Development of a Sustainability Engineering Infrastructure in the Kingdom of Saudi Arabia"	\$120,000.
Co-PI 2008/2010	NSF	"Expanding the Accessibility of NSDL for Mobile Learning", PI, Kimiko Ryokai	\$150,000.
PI 2009/2011	NSF	"Expanding the Accessibility of NSDL for Mobile Learning"	\$470,997.
PI 2009/13	NSF	"Pilot: meta4acle - A Software Tool for Generating Metaphors, Stimulating Creativity and Framing Solutions"	\$237,159.
PI 2009/12	NSF	"Sustaining the Pathway for K-Gray Engineering Education"	\$470,997.

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PI 2010-12	CITRIS	Center and Green IT for Native CARES Native American Community Assessment for Renewable Energy and Sustainability	\$73,216.
PI 2010/11	NCIIA	Lochlorine Chlorine Producer and Doser: Saving Lives through Safe Water.	\$20,000.
PI 2011/12	NASA Ames	Expanding NASA's Capacity in Wireless Sensor Networks: Smart Buildings and Space Exploration	\$109,814.
PI 2011/12	NCIIA	Student Ambassador Grant	\$2,500.
PI 2012/13	NSF	CNIC: U.S.-Danish Planning Visit for Research on Smart Products and People on the Smart Grid	\$16,538.
PI 2012/14	NSF	EAGER: TheDesignExchange: Characterizing, Mapping and Interacting with Industry on User-Focused Design Method	\$73,538.
PI 2012/13	Samsung	Human-Centric User Research to Identify Disruptive Opportunities in Convergent Paper and Digital Use	\$111,610.
PI 2012/13	LBNL	USER-Centric Predictive - Model - Based Lighting Retrofit System	\$20,000.
PI 2013	NASA Ames	Supplement: Expanding NASA's Capacity in Wireless Sensor Networks: Smart Buildings and Space Exploration	\$19,508.
PI 2013	LBNL	India Building to Grid Collaborative Initiative	\$2,916.
PI 2013/14	CA Energy Commission (CEC)	Model Predictive Smart Lighting Commissioning System for Emerging Demand Management: A Feasibility Study	\$94,766.
PI 2012/13	Samsung Electronics	Human-Centric User Research to Identify Disruptive Opportunities in Convergent Paper and Digital Use	\$111,610.
PI 2013/16	NSF	TheDesignExchange, an Interactive Portal for the Design Community of Practice	\$487,091.
PI	Samsung	Advanced UX Development Based on Innovative	\$84,983.

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2013/14	Electronics	Technology: Integrating UX Design with the Internet of Things	
PI 2014/15	NCIIA/ Venture Well	Just Milk	\$19,997.
PI 2015/18	NASA, Early Stage Innovations	Precision Hopping/ Rolling Robotic Surface Probe Based on Tensegrity Structures	\$500,000.
PI 2015/16	Peder Sather Center for Advanced Study	Open Innovation in Food Innovation and Design: Comparative Case Study of California Cuisine and New Nordic Cuisine	\$20,000.
PI 2015/16	NSF I-Corp	<i>TheDesignExchange</i> : Nurturing a National Design Innovation Ecosystem	\$50,000.
PI 2015-19	NASA	Approximate Models for Closed-Loop Trajectory Tracking in Underactuated Systems, Fellowship for Andrew Sabelhaus	\$142,774.
PI 2015/16	Samsung Electronics	Human-Centered Design Research to Explore Disruptive Opportunities with Flexible/Stretchable Wearables and the Internet of Things	\$100,000
PI 2015+	Blum Center for Developing Economies	Big Ideas Award: Visualize: Saving Lives with Training for Cervical Cancer Screening, grant for student team led by Julia Kramer	\$5,893.
PI 2016/17	Peder Sather Center for Advanced Study	Implementing a Sustainable Aquaculture Strategy; Perceived Drivers and Challenges in Two Distinct Innovation Systems: Norway and California. What Can We Learn from Each Other?	\$23,500.
PI 2016-20	NASA	Design and Control of a Twelve-Bar Tensegrity Robot, Fellowship for Mallory Daly	\$73,336.
PI 2016-21	NSF	NRT-INFEWS: STEM Training for Actionable Research and Global Impact	\$2,976,889.

Grant Support and Operating Budgets – Alice M. Agogino

**Associate Dean of Special Programs
Extra-mural Grant Awards
Center for Underrepresented Engineering Students (CUES)**

Year	External Funding Agency	Proposal Title or Program	Award
1995/96	California State Legislature	Research Assistantships; California Legislative Grant (CLG)	\$245,000.
1995/96	NSF	Graduate Educational Grant	\$102,744.
1995/96	NSF	Summer Science Camp (\$305,011 over 3 years)	\$305,011.
1995/96	State-wide MESA	Secondary Program Grant	\$105,848.
1995/96	School Districts (Oakland Unified; Emeryville Unified)	Augmentation to MESA Secondary Program Grant	\$55,000.
1995/96	State-wide MESA (Mathematics, Engineering, Science Achievement) Program	Minority Engineering Program (MEP)	\$31,995.
1996/97	California State Legislature	Graduate Fellowships; California Legislative Grant (CLG)	\$245,000.
1996/97	NSF	Graduate Educational Grant	\$16,000.
1996/97	State-wide MESA	Minority Engineering Program (MEP)	\$32,955.
1996/97	State-wide MESA	Secondary Program Grant	\$140,000.
1996/97	School Districts (Oakland Unified; Emeryville Unified)	Augmentation to MESA Secondary Program Grant	\$47,500.
1996/2001	SLOAN Foundation	Engineering portion of campus grant was \$180,000 over a five year period (1996/2001)	\$180,000.
1997/98	California State Legislature	Graduate Fellowships; California Legislative Grant (CLG)	\$245,000.
1997/98	Grad Division	Diversity Grants	\$2,500.
1997/98	State-wide MESA	Minority Engineering Program (MEP)	\$32,955.
1997/98	Sega Foundation	Youth Education & Health Foundation	\$10,000.
1997/98	State-wide MESA	Secondary Program Grant	\$205,000.

Grant Support and Operating Budgets – Alice M. Agogino

1998/99	California State Legislature	Graduate Fellowships; California Legislative Grant (CLG)	\$245,000.
1998/99	ARCO Foundation	MEP Grant	\$35,000.
1998/99	State-wide MESA	Minority Engineering Program (MEP)	\$32,955.
1998/99	State-wide MESA	Secondary Program Grant (MSP)	\$226,978.
1998/99	School Districts (San Francisco Unified)	Augmentation to MESA Secondary Program Grant	\$234,650.
1998/99	School Districts (Oakland Unified)	Augmentation to MESA Secondary Program Grant	\$55,000.
1998/99	School Districts (Emery Unified)	Augmentation to MESA Secondary Program Grant	\$8,500.
1998/99	Margoes Foundation	Margoes Saturday Academy	\$20,000
1999/2005 (Co-PI, PI Buford Price)	NSF	“The Berkeley Edge: Advancing Minorities through the Ph.D. and Beyond”. \$500,000 (\$400,000 to UC Berkeley and \$100,000 to other UC campuses) per year for five years for a total of \$2.5 million	\$2,500,000

Grant Support and Operating Budgets – Alice M. Agogino

Associate Dean Program Operating Budgets (1995/99)

Assoc. Dean Programs	Budget	Budget	Budget	Budget
	1995/96	1996/97	1997/98	1998/99
GrAD and JMEP	\$461,221.	\$379,304.	\$400,000.	\$467,063.
MESA K-12	\$334,405.	\$444,244.	\$640,000.	\$722,824.
MEP	\$237,781.	\$246,126.	\$200,000.	\$201,450.
CUES Center	\$149,260.	\$191,854.	\$200,000.	\$262,000.
CUES Annual Subtotals	\$1,182,667.	\$1,261,528.	\$1,440,000.	\$1,653,337.
Cal VIEW – Televised Instruction Program	n/a	\$385,000.	\$385,000.	\$370,000.
Total Annual Subtotals	\$1,182,667.	\$1,646,528.	\$1,825,000.	\$2,023,337.

STUDENTS AND INSTRUCTION – ALICE M. AGOGINO

Current Students

<http://best.berkeley.edu/best-people/>

Ph.D. Dissertations

<http://best.berkeley.edu/best-director-alice-m-agogino/ph-d-theses-chaired-by-alice-m-agogino/>

Other Dissertations

<http://best.berkeley.edu/other-ph-d-theses/>

M.S. Theses/Reports

<http://best.berkeley.edu/best-director-alice-m-agogino/masters-theses-chaired-by-alice-m-agogino/>

Visiting Scholars, Students and Postdoctoral Researchers

<http://best.berkeley.edu/best-visiting-scholars-students-and-postdoctoral-researchers/>

Teaching Record and Awards

<http://best.berkeley.edu/best-director-alice-m-agogino/alice-m-agogino-instruction/>