Curriculum Vitae

ALICE MERNER AGOGINO

Roscoe and Elizabeth Hughes Professor of Mechanical Engineering
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Mechanical Engineering: http://www.me.berkeley.edu/faculty/agogino/index.html
Haas School of Business: http://facultybio.haas.berkeley.edu/faculty-list/agogino-alice
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Founder, Engineering Pathway educational digital library

Co-Founder, theDesignExchange

Director: BEST Lab: Berkeley Energy and Sustainable Technologies | Berkeley Expert Systems Technology | Berkeley Emergent Space Tensegrities

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Education

B.S. (1975), Mechanical Engineering, University of New Mexico
M.S. (1978), Mechanical Engineering, University of California, Berkeley
Ph.D. (1984), Engineering-Economic Systems (renamed Management Science and Engineering), Stanford University

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 lighting 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

Professional Employment

- Roscoe and Elizabeth Hughes Professor of Mechanical Engineering, University of California at Berkekley, 1998-present
- Chair, Faculty Academic Senate, Berkeley Division, 2005-2006; Vice Chair, 2004-2005
- Faculty Assistant to Executive Vice Chancellor & Provost Paul Gray (2000-2001) and Executive Vice Chancellor & Provost Carol Christ (1999-2000) in Educational Development and Technology, University of California at Berkeley
- Director, Instructional Technology Program, University of California at Berkekley, 1999-2001
- Associate Dean of Special Programs, College of Engineering, University of California at Berkekley, 1995-1999
- Professor of Mechanical Engineering, University of California at Berkeley, 1992-present
- Associate Professor of Mechanical Engineering, University of California at Berkeley, 1988-92
- Assistant Professor of Mechanical Engineering, University of California at Berkeley, 1984-1988
- Agogino Engineering, Principal of engineering and management consulting firm, 1979-present
- Director, Women-in-Engineering Program, University of Santa Clara, California, 1980-1981
- Systems Analyst, SRI International, Menlo Park, California, 1980
- Commercial Specialist, General Electric, San Jose, California, 1978-1979
- Mechanical Engineer, General Electric, San Jose and Sunnyvale, California, 1975-1978
- Project Engineer (Co-op), Dow Chemical, Freeport, Texas, 1972-1973

Honors and Awards

- 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 will be presented at the 2015 International Design and Engineering Technical Conference (IDETC).

- Faculty sponsor Big Ideas Competition, 2015: First Place in Global Health for the proposal: Visualize: Saving Lives with Training for Cervical Cancer Screening.
- 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".
- 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

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Professional Activities

- Registered Professional Mechanical Engineer in California (1978-)
- Member: AAAI, AAAS, ASEE, ASME, AWIS, ESW, IEEE, SWE
- Faculty Advisor, UC Berkeley Section of Pi Tau Sigma (Mechanical Engineering Honor Society), 2014-
- 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
- Member, Scientific Advisory Board, Singapore University of Technology and Design SUTD-MIT International Design Centre (IDC), 2014-2017.
- 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-present.
- 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.
- 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 Committeee, 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)

Major Administrative Roles

- **Director**, BEST Lab (1986-present) (Berkeley Expert Systems Technology / Berkeley Energy and Sustainable Technologies / Berkeley Emergent Space Tensegrities) Lab.
- **Chair**, Faculty Group in Development Engineering, Designated Emphasis (Ph.D. minor).
- **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 ad Mathematics Education (SESAME) chairs the SESAME Executive Committee with responsibilities for graduate admissions, awarding of fellowships, monitoring student progress, curriculum offerings, prelilminary 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

- **Academic Senate**
  - Chair of the Faculty, College of Engineering, (2014-16)
  - 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 Tsingua 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**

  - 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 (2009-2013)

  - 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-Chancelor Hardyck (1988/89)
- Served on ad hoc review committees for tenure and promotion cases

- **Administrative Committees, College of Engineering**
  - Member, Design Innovation Task Force on the Jacobs' Institute of Design Innovation (2013)
  - 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 (19987-88)
- Bioengineering Graduate Group (1990-91)
- Served on five faculty search committees

- **Administrative Committees, Department of Mechanical Engineering**
  - 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-Spring 2015)
  - Undergraduate Advising, (every semester, except on sabbatical)
  - Art, Technology and Culture Committee (2009-11)
  - Chair, Preliminary Exams, (Fall 2009-Spring 2011)
  - Member, Drake Scholarships, (Fall 2006, 2009-12)
  - Member, Preliminary Exams, (Fall 2006)
  - Chair, Committee on Seminars, (2002/04)
  - Chair, Committee on Industrial & Alunni 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)

- **Women and Minorities Recruitment/Retention**
  - 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. Website: http://best.me.berkeley.edu/%7Eaagogino/e10_agogino.htm

- Developed a new course (with Prof. Jennifer Mankof in Computer Science) called "Designing Technology for Girls and Women" that was co-listed with Womens Studies with a grant from the Anita Borg Institute of Women and Technology. Website: http://best.me.berkeley.edu/%7Eaagogino/e39d/index.html

- 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**

  - 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-Westinghouse 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-Westinghouse 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**

  - 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)

  - 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.

Personal

- **Family:** Married with two children
- **Hobbies:** Guitar, making, gardening, hiking, exploring

Appendices

1. Publications
2. Grants (1994-2014)
3. Teaching Record (1994-2014)
4. MS Theses/Projects Supervised
5. Ph.D. Dissertations Supervised
6. Other Ph.D. Dissertations (2nd or 3rd Reader)
7. Visiting Scholars Supervised

Last updated: 6 July 2015

PUBLICATIONS
ALICE M. AGOGINO

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. Download pdf of paper. Citations

J-2. "INFORM: An Architecture for Expert-Directed Knowledge Acquisition," (with E. A. Moore), *International Journal of Man- Machine Studies,* Academic Press, Litd (ISSN 0020-7373), 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.) Download pdf of paper. Citations

J-3. "IDES: Influence Diagram Based Expert System," (with A. Rege), *Mathematical Modelling*, Vol. 8, 1987, pp. 227-233. Download pdf of paper. Citations.

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. Download pdf of paper. Citations

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. Citations

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 (ISSN: 0018-9472),* , Vol. 18 (3), May/June 1988 , pp. 402-414. Download pdf of paper. Citations

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. Download pdf of paper. Citations.

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. Download pdf of paper. Citations

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. Citations.

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. Download pdf of paper. Citations

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. Citations

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. Citations

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. Download pdf of paper. Citations

J-14. "Dimensional Variable Expansion - A Formal Approach to Innovative Design", (with J. Cagan), *Research in Engineering Design*, Vol. 3, No. 3, 1991, pp. 75-85. Download pdf of paper. Citations

J-15. "Decision-Analytic Methodology for Cost- Benefit Evaluation of Diagnostic Testers," (with O. Nour-Omid, W. Imaino and S.S. Wang), *IIE Trans.,* Vol. 24, No. 1, March 1992, pp. 39-54. Download pdf of paper. Citations

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.) Downloard pdf of journal. Citations

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.) Citations

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.) Download pdf copy of paper. Citations

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.) Download pdf of paper. Citations citations.

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. Download pdf of paper. Citations

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.

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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. Download pdf of paper. Citations

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. Download pdf of paper. Citations

J-26 "Text Analysis for Constructing Design Representations," (with A. Dong), *Journal of 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 " *AI in Design 1996* "Best Paper" award.) Citations

J-27 "Managing Design Information in Enterprise-Wide CAD using 'Smart Drawings'," (with A. Dong), *CAD (Computer-Aided Design) Journal*, special issue on network- centric CAD, Vol. 30 (6), pp. 425-435, 1998. Download final pdf of paper. Citations

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, 199, 1997, pp. 333-340. Citations.

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McMartin and Eric Van Duzer), *Journal of Engineering Education,* Vol. 87, No. 2, April 1998, pp. 157-163. Citations

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J-35 "A Methodology for Intelligent Sensor Measurement, Validation, Fusion, and Fault Detection for Equipment Monitoring and Diagnostics," (with S. Alag and M. Morjaria), *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. Citations

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J-43 "Engineering Design Thinking, Teaching, and Learning," (with C. Dym, O. Eris, D.D. Frey,and L.J. Leifer), *Journal on Engineering Education*, ASEE, Jan. 2005, v. 94, no. 1, pp. 103-120. Citations.

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. Citations.

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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. Citations.

J-47 "Self-Reflection: Lessons Learned in a New Product Development Class", (with J.H. Hey, A.P Van Pelt and S. Beckman), *Journal of Mechanical Design,* ASME, Vol. 129, No. 7, July 2007, pp. 668-676. Citations

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. Citations.

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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. Citations.

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. (Updated version of P-127.) Citations.

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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. Pre-publication version of paper. Citations

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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, *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.

R-12. "Hypermedia History for the Design of a Computer Workstation for the Disabled: Application of the DesignSCRIBE (Structured Capture and Retrieval Information Base for Engineering Design) System", (with Bradley, S., B. Kuo and C. Johnson) HyperCard(TM) 2.0 stack.

R-13. "Research on Integrating Neural Networks with Influence Diagrams," (with M.-L. Tseng), Final report to the Institute for Scientific Computing Research, Lawrence Livermore National Laboratory, Nov. 1990.

R-14. "Final Report to the Department of Education: Expert Systems Applied to Rehabilitation Engineering: A New Approach to the Evaluation of Control", (with S. Hsi), 1990.

R-15. "Systematic Curricular Reform", Annual Report, Vol. III, May 15, 1991; Annual Report to NSF for Synthesis: A National Engineering Education Coalition.

R-16. "Development of an On-Line Expert System: Cycle Chemistry and Demineralizer Operation Advisor," (with D.M. , R.E. Henry, Y.-J. Kim, B. Frogner, M. A. Blanco, and S.M. Divakaruni) ISA/90 International Conference (Oct. 14-19, 1990, New Orleans, LA), Instrument Society of America.

R-17. "Signal Validation for Expert System Development," (with Y-J. Kim), in *Proceedings of Expert System Applications for the Electric Power Industry* (Sept. 9-11, 1991; Boston, MA), Electric Power Research Institute.

R-18. Agogino, A.M., K. Naassan, and M.L. Tseng, "Intelligent Sensor Validation for Process Monitoring and Control," MICRO Report 90-003, 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), 1992.

R-19. "Concurrent Design Concept Database," (with S. R. Bradley), MICRO Report 90-004,*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), 1992.

R-20. "Retaining Female Engineering Students; Will Early Design Experiences Help?," (with M.C. Linn), Viewpoint Editorial, *NSF Directions,* National Science Foundation, Vol. 5, No. 2, May-June 1992, pp. 8-9. Citations

R-21 "Quality in Engineering Education," Report of NSF Workshop, Dec. 1992. (Co-chaired with Bob Ritchie, HP; published by the National Science Foundation.)

R-22. "The Synthesis Coalitions Experiments in Information Technology," with A.P. Ingraffea), *Proceedings of the Eighth National Conference on Computing in Civil*

Engineering and Geographic Information Systems Symposium, (Hyatt Regency Dallas Hotel, Dallas, Texas, June 7-9, 1992.

R-23. "Final Report for Sensor Validation for HEATXPRT(TM) (Heat Rate Degradation Expert System Advisor," (with Y.J. Kim, B. Wood, and P. Jain) June 1, 1992.

R-24. "Review of HEATXPRT(TM) Knowledge Base Design Documentation", Final Report, (with Y.J. Kim, B. Wood, and P. Jain) Feb. 25, 1993.

R-25. " National Engineering Education Delivery System (NEEDS)", (with S. Sheppard, J. Harris, L. Genalo, K. Mink, J. Krishnagopalan, L. Genalo, D. Martin and J. Saylor), *Proceedings of the Frontiers in Education `93 Conference*, (Ed., Lawrence P. Grayson), IEEE and ASEE, 1993, pp. 592-600.

R-26. "NEEDS: Expanding the Role of the Computer in Engineering Education," (with A.R. Ingraffea and Sheri Sheppard), *Computer Methods and Advances in Geomechanics, Proceedings of the Eight International Conference of the Association for Computer Methods and Advances in Geomechanics*, (Siriwardane & Zaman (eds., Balkema, Rotterdam, ISBN 90 5410 380 9), 1994, pp. 189-195.

R-27 "Concept Database: A Design Information System for Concurrent Engineering with Application to Mechatronics Design", (with W.H. Wood, A. Varma, B. Chidambaram, and Z. Huang), *Proceedings of the 1995 NSF Design and Manufacturing Grantees Conference*, Society of Manufacturing Engineers, 1995, pp. 1-2. Citations

R-28 " Conceptual Design Database To Support Life Cycle Design Of Mechatronic Products: Integrating Design Tools From Industry," (with W.H. Wood), Final Report 1993-94 for MICRO Project 93-003, 1995.

R-29 " Intelligent Sensor Validation For On-Line Process Monitoring, Diagnosis And Control", (with S. Alag), Final Report 1993-94 for MICRO Project 93-004, 1995.

R-30 "Engineering Education Reform in the 1990s," *Syllabus*, Vol. 8, No. 6, 1995, pp. 38-40.

R-31 "A Methodology for Intelligent Sensor Validation, Sensor Fusion, and Sensor Fault Detection for Dynamic Systems: Application to Power Plants - Part I & II," (with S. Alag), Final Report to GE, 95-0301-1, 1995.

R-32 "Intelligent Sensor Validation and Sensor Fusion for Reliability and Safety Enhancement in Vehicle Control", (with S. Alag and K. Goebel), MOU132, Final Report, UCB-ITS-PRR-95-40, California PATH Research Report, 1995. (Download ps or pdf version of report. Citations.

R-33 "Synthesis Coalition: Summary Progress Report, Year 5 (1994-1995)," submitted to the National Science Foundation, 1995.

R-34 "Sharing Courseware Resources through the NEEDS (National Engineering Education Delivery System) Database," (with B. Muramatsu, P.A. Eibeck, M. Ramirez, A. O. Oladipupo, and J. Huston), *Proceedings of Frontiers in Education FIE95*, ASEE/IEEE, pp. 3b5.1-3b5.3. Citations.

R-35 " Conceptual Design Database to Support Life Cycle Design of Mechatronic Products: Integrating Design Tools From Industry," (with W. H. Wood, A. Varma, and B. Chidambaram), Final Report to Micro 1994/95, 1996. Also see "Web-Based Tools for Engineering Design", (with A. Varma, A. Dong, B. Chidambaram and W. H. Wood), in Workshop on Agents and Web-based Design at the Fourth International Conference on Artificial Intelligence in Design, Stanford University, 1996. Citations.

R-36 "Concept Database: A Design Information System for Concurrent Engineering with Application to Mechatronics Design," (with W. H. Wood, A. Varma, and B. Chidambaram), Proceedings of the 1996 NSF Design and Manufacturing Grantees Conference, Jan. 2-5, 1996, NSF, pp. 1-2. (See accompanying presentation slides.)

R-37 "A Comprehensive Strategy for Longitudinal Vehicle Control with Fuzzy Supervisory Expert System," (with Pushkin Kachroo, Masayoshi Tomizuka), 1995 IEEE International Conference on Systems, Man and Cybernetics. Citations.

R-38 "Redesign in a Manufacturing Environment," (with B. Chidambaram), *Proceedings of the Conference on Agile and Intelligent Manufacturing Systems*, RPI (CD ROM and WWW versions: http://www.eamri.rpi.edu), 1996.

R-39 "Learning Synthesis Knowledge for Rapid Product Design," (with A. Varma), *Proceedings of the Conference on Agile and Intelligent Manufacturing Systems*, Electronics Agile Manufacturing Research Institute, RPI (CD ROM and WWW versions: http://www.eamri.rpi.edu), 1996.

R-40 "Synthesis Coalition: Annual Report, Year 1 (1996-1997)," submitted to the National Science Foundation, Oct. 1, 1996.

R-41 " The Concept Database: A Design Information System for Concurrent Engineering with Application to Mechatronics Design," (with J. Enrique Barreto, Bala Chidambaram, Andy Dong, Anil Varma and William H Wood III, Ph.D.), *Proceedings of 6th Conference on Design Engineering & System Division,*, No. 96-45, p. 89-92, 1997. http://best.me.berkeley.edu/~bala/nsf-97.html.

R-42 "Intelligent Sensor Validation and Fusion for Vehicle Guidance Using Probabilistic and Fuzzy Methods," (with Kai Goebel and Satnam Alag), Final Report for PATH MOU 157, PATH Report #D97-29, 1997.

R-43 "Synthesis Coalition: Annual Report, Year 2 (1997-1998)," submitted to the National Science Foundation, Oct. 1, 1997.

R-44 "Intelligent Diagnosis Based on Validated and Fused Data for Reliability and Safety

Enhancement of Automated Vehicles in an IVHS," (with Susan Chao, Kai Goebel, Satnam Alag, Bradley Cammon and Jiangxin Wang,) Final Report for PATH MOU 231, PATH Report #UCB-ITS-PRR-98-17. Citations.

R-45 "Using the Internet to Learn Engineering Design with Simple Machines: Results of a Pilot Study with Middle School Students," (with A. McKenna), presented at AERA 98 (San Diego).

R-46 "The Concept Database: A Design Information System for Concurrent Engineering with Application to Mechatronics Design," Final Report to NSF Grant No. DDM-9300025, 1998.

R-47 "Final Project Report for Interactive MESA: A K-12 Interactive University Project," July 1998. URL: http://best.me. berkeley.edu/~aagogino/IU/IU.final.report.html.

R-48 Agogino, Alice, "A Hands-On Discussion of Dissection: Coalitions Lessons Learned," FIE 98, IEEE 0-7803-4762-5/98, Nov. 1998, p. 700. Citations

R-51 "The National Engineering Education Delivery System: A National Digital Library for Engineering Education," (with B. Muramatsu), D-Lib Magazine, April 1999, Vol. 5, Issue 4, ISSN: 1082-9873. Citations

R-52 "Innovative Uses of Engineering Courseware Available through NEEDS-The National Engineering Education Delivery System". (with Flora McMartin and Brandon Muramatsu). *Proceedings of FIE99,* (Frontiers in Education Conference; San Juan, Puerto Rico; 10-14 November 1999), ASEE/IEEE, CD ROM ISBN #0-7803-5646-2, pp. 12a2-13. (extended abstract only).

R-53 "Warranty and Maintenance Decision Making for Gas Turbines," (with Susan Y. Chao and Zu-Hsu Lee), *Proceedings of AI in Equipment Maintenance, Service & Support,* (AAAI Spring Symposium, March 22-24, 1999; Stanford, CA). Citations.

R-54 "Using the National Engineering Education Delivery System as the Foundation for Building a Test-Bed Digital Library for Science, Mathematics, Engineering and Technology Education," Final Report for NSF Grant IIS-9817406, May 31, 2000. (See Findings and Activities.)

R-55 "What Students Say About Learning Physics, Math and Engineering," (with Ann McKenna and Flora McMartin), Proceedings of the 30th ASEE/IEEE Frontiers in Education Conference, Oct. 18-21, 2000, pp. T1F-9. ISBN # 0-7803-6424-4/00. Citations.

R-56 "Towards a Digital Learning Community for Engineering Education," (with Brandon Muramatsu Flora McMartin), Proceedings of the 30th ASEE/IEEE Frontiers in Education Conference, Oct. 18-21, 2000, pp. F3D-13. ISBN # 0-7803-6424-4/00.

R-57 "Aggregation of Direct and Indirect Positioning Sensors for Vehicle Guidance," (with S. Chao, J. Wang and X. Deng), PATH Final Report, MOU 322, UCB-ITS-

PRR-2000-24, Dec. 2000.

R-58 "How Can Information Technology (IT) Enhance Undergraduate Science, Mathematics, Engineering & Technology (SME&T) Education?", PKAL 2001 Change Agents Roundtable, jointly sponsored by Sigma Xi, The Scientific Research Society, March 2 - 4, 2001, Exxon/Mobil Corporate Headquarters, Irving, Texas.

R-59 "Using Interactive Theater to Enhance Classroom Climate," (with Edith Ng and Carla Trujillo), *Proceedings of WEPAN/NAMEPA 01* (April 21 - 24, 2001, Alexandria, Virginia).

R-60 "Creating Online Faculty Collaboration to Develop Engineering Education Computer Learning Materials," (with Andrew Hill and Flora McMartin), *Proceedings of FIE 01*, 2001, CD ROM 0-7803-6669-7, IEEE/ASEE, p. F3F-10. .

R-61 "Descrip tions of Engineering Education: Faculty, Student and Engineering Practitioner Perspectives," (with Sheri Sheppard and M. Kathleen Silva), FIE 2001 Workshop, Reno, Nevada.

R-62 "The Development of a National Science, Mathematics, Engineering and Technology Education Digital Library,"(with Andy Dong, Flora McMartin and Brandon Muramatsu) *Global Digital Library Development in the New Millennium: Fertile Ground for Distributed Cross-Disciplinary Collaboration*, (Ching-chih Chen, Ed., Beijing, China: Tsinghua University Press), 2001, pp. 1-12.

R-63 "Interactive Theater Program, Final Report for Grant # EIF98.5 of the Engineering Information Foundation", (with Carla Trujillo), November 5, 2001.

R-64 Final Report NSF Grant IIS-9980116, "Developing a Prototype National Digital Library for Science, Mathematics, Engineering and Technology Education," Oct. 22, 2002.

R-65 "Gender Bias in Faculty Hiring, Retention and Promotion", Feb. 18, 2002. Symposium Session, Co-Chaired with S. Malcom (Director, Directorate for Education and Human Resources, American Association for the Advancement of Science) Co-Chairs AAAS 2002 Symposium, *AAAS 2002 Proceedings*.

R-66 "Bringing the Educational Experience of NEEDS and SMETE.ORG to NSDL", AAAS Annual Meeting: Science as a Way of Life, (13-18, Feb. 2003, Denver, CO), CD ROM.

R-67 Heroes, Gender and Ethics, AAAS Annual Meeting: Science as a Way of Life, (13-18, Feb. 2003, Denver, CO), CD ROM.

R-68 A Web Services Approach to Federated Search Across Digital Libraries, (with Dong, A., E. Fixler, M.J. Koning-Bastiaan, and S. Shamseldin). Working Paper # 03-0103-3. Berkeley Expert Systems Technology Laboratory, 6102 Etcheverry Hall, UC Berkeley, Berkeley, CA 94720-1740.

R-69 Wu, J., E. Fixler, and A.M. Agogino, Translating Between Native Java Objects and LOM: A Tools to Assist Digital Libraries Exchange Information. Working Paper # 03-0203-3. Berkeley Expert Systems Technology Laboratory, 6102 Etcheverry Hall, UC Berkeley, Berkeley, CA 94720-1740.

R-70 MEMS Smart Dust Motes for Designing, Monitoring and Enabling Efficient Lighting. Final report to UC Project MICRO (2002-03), 2004.

R-71 Expanding the National Engineering Education Delivery System as the Foundation for an On-Line Engineering Education Community. Final Report for NSF Grant # EEC-9872570 (1998-2003), 2004.

R-72 "Characterizing and Enhancing Team Performance in Cross-Functional Student Design Teams", (with S. Beckman, J. Creech, S. Song, and L. Speer), extended abstract to the NCIIA 2004, National Collegiate Inventors and Innovators Alliance Conference.

R-73 "Enhancing Interoperability of Collections and Services," Final Report, NSF Award DUE-0127580, December 2004.

R-74 "Developing a Learner-Centered Metathesaurus for Science, Mathematics, Engineering and Technology Education," Final Report, NSF Award DUE-0121743, December 2004.

R-75 " Year 2 Annual Report for NSF Grant NSF Grant # CCR-DES/CC-0306557, "MEMS/NEMS Design Automation and Synthesis," (with C. Sequin), March 2005.

R-76 "Interim Report for NCIIA (National Collegiate Inventors and Innovators) grant, "Invention and Innovation in New Product Development: Freshman/Sophomore, Junior/Senior, Graduate Course Sequence (with S. Beckman), Nov. 2005.

R-77 "Intelligent Commercial Lighting: Demand-Responsive Conditioning and Increased User Satisfaction", University of California Energy Institute. Development & Technology. Paper EDT-007, September 26, 2005.

R-78 "Optimized Design of MEMS by Evolutionary Multi-objective Optimization with Interactive Evolutionary Computation, (with. R. Kamalian and T. Takagi) GECCO 2006. Late breaking research session.

R-79 "Integrated Systems Health Monitoring Using Smart Dust Mote Sensor Network," (with I. Tumer, NASA Collaborator), Final Report to NASA AMES, 2006. BEST Lab Working Paper #06-0304-P. Citations

R-80 "Year 3 Annual Report for NSF Grant NSF Grant # CCR-DES/CC-0306557, "MEMS/NEMS Design Automation and Synthesis," (with C. Sequin), March 2006.

R-81 "Year 1 Annual Report for NSF Grant NSF Grant # DUE-0532922, "A Comprehensive Pathway for K-Gray Engineering Education", June 2006.

R-82 "Final Report: Cost-Effective Shuttle Tracking Services," (with Berkeley Innovation student E-Team), National Collegiate Inventors and Innovators Alliance.

R-83 "Gender Bias in Academe", Last Word: Editorial, *ASEE Prism Magazine*, November 2006, Vol. 16, No. 3. (invited)

R-84 "Efficient Lighting by Sensing and Actuating with MEMS 'Smart Dust Motes': A Feasibility Study", (with J. Granderson and Y.J. Wen), Final Report, Energy Innovations Small Grant (EISG) Program, Grant #03-20, 2006.

R-85 Year 2 Annual Report for NSF Grant # DUE-0532922, "A Comprehensive Pathway for K-Gray Engineering Education", June 2007.

R-86 Year 2 Summary Updates and Accomplishments, Pathway PIs/ Core Integration Meeting, August 1-2, 2007.

R-87 Annual Report Nuggets for the Practices, Aggregation, Infrastructure, and Retrieval Service (PAIRS), Demonstration Project, NSF Grant # CNS 0634338, April 2008.

R-88 "A Comprehensive Pathway for K-Gray Engineering Education", Year 3 Annual Report for NSF Grant # DUE-0532922, July 2008.

R-89 Poster Session, NSDL Grantees Meeting, Engineering Pathways 2008 Highlights, (with J. Tront) September 30 - October 2, 2008. Download flyer.

R-90 Agogino, A.M.and J. Sullivan, Year 3 Summary Updates and Accomplishments, Pathway PIs/ Core Integration Meeting, 2008.

R-91 "A Human Centered Approach to Co-design Culturally-Sensitive and Sustainable Housing with the Pinoleville Pomo Nation", (with R. Ryan), Abstract and Presentation, American Indian Science and Engineering Society National Conference.

R-92 CARES: Community Assessment of Renewable Energy and Sustainability, Interim Report, (with Berkeley Innovation student E-Team), National Collegiate Inventors and Innovators Alliance (NCIIA), April 2008.

R-93 Year 4 Annual Report for NSF Grant # DUE-0532922, "A Comprehensive Pathway for K-Gray Engineering Education", (with Co-PIs), June 2009.

R-94 "Teaching and Designing Technology for Diversity", final report for the National Science Foundation Director's Award for Distinguished Teaching Scholars, NSF DTS Grant: DUE-0428935.

R-95 "Design strategies and preliminary prototype for a low-cost arsenic removal system for rural Bangladesh", (with J.L. Mathieu, A.J. Gadgil, S. Qazi and K. Kowolik), Lawrence Berkeley National Laboratory as LBNL-2696E, September 14, 2009. Updated version of P-128.

R-96 Annual Report, "Expanding the Accessibility of NSDL for Mobile Learning," (with K. Ryokai), NSF, September 2009.

R-97 Annual Report, NSF, "Collaborative Proposal: BPC-DP: Practices Aggregation, Infrastructure, and Retrieval Service for Broadening Participation in Computing (PAIRS)" (with Co-PIs), March 2010.

R-98 Year 5 Annual Report for NSF Grant # DUE-0532922, "A Comprehensive Pathway for K-Gray Engineering Education", (with Co-PIs), June 2010.

R-99 Annual Report, "Pilot: Meta4acle - A Software Tool for Generating Metaphors, Stimulating Creativity and Framing Solutions," NSF, July 2010.

R-100 Annual Report, "Expanding the Accessibility of NSDL for Mobile Learning," (with K. Ryokai), NSF, September 2010.

R-101 Annual Report, "Collaborative Research: Sustaining the Pathway for K-Gray Engineering Education," (with Co-PIs), September 2010.

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R-103 Annual Report, "Pilot: Meta4acle - A Software Tool for Generating Metaphors, Stimulating Creativity and Framing Solutions," NSF, July 2011.

R-104 Final Report for NSF Grant # DUE-0532922, "A Comprehensive Pathway for K-Gray Engineering Education", (with Co-PIs), September 2011.

R-105 Annual Report, "Expanding the Accessibility of NSDL for Mobile Learning," (with K. Ryokai), NSF, September 2011.

R-106 Annual Report, "Collaborative Research: Sustaining the Pathway for K-Gray Engineering Education," (with Co-PIs), September 2011.

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.

R-108 Final Report, Center and Green IT for Native CARES (Native American Community Assessment for Renewable Energy and Sustainability), CITRIS Seed Grant, March 2012.

R-109 Annual Report, "Pilot: Meta4acle - A Software Tool for Generating Metaphors, Stimulating Creativity and Framing Solutions," NSF, July 2012.

R-110 Final Report, "Expanding the Accessibility of NSDL for Mobile Learning," (with

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R-111 Final Report, "Collaborative Research: Sustaining the Pathway for K-Gray Engineering Education," (with Co-PIs), September 2012.

R-112 Annual Report, "EAGER: TheDesignExchange: Characterizing, Mapping and Interacting with Industry on User-Focused Design Methods," NSF, June 2013.

R-113 Final Report, "CNIC: U.S.-Danish Planning Visit for Research on Smart Products and People on the Smart Grid," NSF, June 2013.

R-114 Final Report, (co-authored with student team) "inSense: User-centric Model Predictive Lighting Commissioning System", Max Tech and Beyond Design Competition for Ultra-Low-Energy-Use Appliances and Equipment (AY 2012-2013), June 2013.

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.

R-116 *Chez Panisse: Building an Open Innovation Ecosystem*, (with Henry Chesbrough and Sohyeong Kim), California Management Review, Vol. 56, No. 4, Summer 2014, pp. 144-171.

R-117 "Model Predictive Smart Lighting Commissioning System for Emerging Demand Management", EISG Final Report, California Energy Commission, August 2014.

Courseware (Instructional Software) and Web Applications

W-1 "The 1991 Human Powered Vehicle: A Multimedia Case Study in Engineering Design," (with S. Hsi), Multimedia Multidisciplinary Case Studies CD ROM, HyperCard format, Synthesis Coalition 1993 (v. 1.0).

W-2 "The IBM Proprinter: A Multimedia Case Study in Engineering Design," (with J. Evans), Multimedia Multidisciplinary Case Studies CD ROM, Synthesis Coalition, 1993 (v. 1.0), 1995 (v. 2: http version).

W-3 "Blockstacking," (with S. Hsi and M. C. Linn), Multimedia Multidisciplinary Case Studies CD ROM, (http://www.needs.org on the NEEDS Database), Synthesis Coalition, 1993 (v. 1.3).

W-4 "Mattel Color Spin: A Multimedia Case Study in Engineering Design," (with A. Varma), Multimedia Multidisciplinary Case Studies CD ROM, Synthesis Coalition, 1993 (v. 0.75), 1995 (v. 1.0: http version).

W-5 "Saturn Automobile: A Multimedia Case Study in Engineering Design," (with I.

Zook), Multimedia Multidisciplinary Case Studies CD ROM, Synthesis Coalition, 1993 (v. 0.75), 1995 (v. 1.0: http version).

W-6 "Cyclone Grinder: A Multimedia Case Study in Engineering Design," (with C. Carlstrom), Multimedia Multidisciplinary Case Studies CD ROM, Synthesis Coalition, 1993 (v. 0.75), 1995 (v. 1.0: http version).

W-7 "Disk Drive Case Study," (with S. Nagaraj), HyperCard format, Synthesis Coalition, 1995 (v. 0.5).

W-8 "Motor Tutorial," (with Z. Huang), Synthesis Coalition, (NEEDS Database), 1995 (v. 1.0).

W-9 "Display Object," (with J. R. Osborn), Synthesis Coalition, 1996 (v. 1.43).

W-10 "Virtual Disk Drive Design Studio," (with D. Yu), CD ROM, Synthesis Coalition, 3112 Etcheverry Hall, UC Berkeley (Sampler and html version available on the NEEDS/Engineering Pathway Digital Library, 1997 v. 1.0b5. Winner of a 1997 Premier Courseware Award for instructional software, 1997.

W-11 "People, Product and Strategies," (with Robert Stanard), Case Study, v. 3, 1998.

W-12 "Matlab Extensions to the Virtual Disk Drive Design Studio," (with Rebecca Richkus and David Tang), 1999.

W-13 NEEDS - National Engineering Education Digital-library System. A digital library formed with links to online learning materials in engineering and related areas of science and math. NEEDS was developed by the Synthesis Engineering Education Coalition in the early 1990s prior to the WWW, using X-windows. We later merged with Teach Engineering to form the Engineering Pathway digital library. Based on its NEEDS foundation, the Engineering Pathway is the oldest educational digital Library in existence today.

W-14 SMETE.org. A digital library of resources in STEM (Science, Technology, Engineering and Mathematics) Education. Migrated to inform the National STEM Education Digital Library (NSDL) and was part of the merger that formed the Engineering Pathway digital library.

W-15 EngineeringPathway.com integrates the NEEDS.org digital library, with resources primarily for higher education, with the TeachEngineering K-12 digital library to develop the Engineering Pathway, a portal to the most comprehensive collection of resources for all types of K-Gray engineering education. The digital library also hosts engineering education community pages.

W-16 K-12EngineeringEducation.com. Engineering Education "Today in History" Blog.

Published Invited Talks (Not Peer-Reviewed)

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 Vaasa94*, pp. 3-10.
URL: http://best.me.berkele y.edu/~best/papers/finland/text.html

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," invited talk to and published in the *Proceedings of the Frontiers of Engineering: Reports on Leading Edge Engineering Research*, National Academy of Engineering, Sept 19-21. 1996.

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 Workshp, 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 (Not Peer-Reviewed)

(Papers, slides or handouts may be available upon request.)

U-1. "1stPRINCE: Innovative Design from First Principles," (with J. Cagan) presented at AAAI88 AI in Design Workshop.

U-2. "Deterministic Monotonic Influence Diagram," (with N. Michelena), presented at the

1989 TIMS/ORSA meeting, NY.

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-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.

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U-20 "Reforming Undergraduate Engineering," plenary lecture at the UC Science, Engineering and Mathematics Education Conference, Arnold and Mabel Beckman Center of the National Academies of Science and Engineering, Jan. 26- 27, 1996.

U-21 "Multimedia and Internet: Enabling New Modes of Learning," Chancellors 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.

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U-24 "Instructional Technology and the Use of the WWW for Improving K-12/Undergraduate Education," UC President Atkinsons visit to UC Berkeley campus, Nov. 21, 1996.

U-25 "Research on Distributed Intelligence: Sensor Fusion and Design Information Environments," NSF Director Neal Lanes visit to the UC Berkeley campus, Dec. 5, 1996.

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U-33 "Music and Mechanics: Instructional Technology on Display," UC Alumni Legislative Conference, Sacramento, California, April 15, 1997.

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U-35 "Instructional Technology and Distance Learning at Cal," presentation at Cal Parents Weekend, Sept. 27, 1997.

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98, March 11, 1998.

U-40 Discussant, Center for Innovative Learning Technologies Panel, AERA (American Educational Research Association), April 13, 1998.

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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.

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U-47 "Educational Technology and Distance Learning at UC Berkeley," Invited presentation to Chancellor Berdahl and distinguished visitors from Saudi Arabia, Nov. 30, 1998. URL: http://www.needs.org/engineering/info/presentations/ucb-etdl-1298/index.html

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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.

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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.

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U-71 "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.

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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. PDF version (12.9 MB); MS PowerPoint (2.2 MB without movies).

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U-85 "New Product Development: A UC Berkeley Perspective," Universidad Nacional Autonoma de Mexico (UNAM), September, 2004.

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U-87 "Automating Keyphrase Generation for Text Document Collections," (with Jia-Long Wu and William H. Wood), Poster Session, NSDL Grantees Meeting, November 2004.

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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.

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. Download slides.

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. Scroll down this link to get a copy of the slides and the poster for the event. 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. The talk concerned a recent National Academies' report of the same title. Press coverage: Women underrepresented in professorships despite high grad rates, study shows article in *The Daily Texan* by Philip Jankowski, January 26, 2007.

U-101 "Design for Sustainable Communities: User Needs", Presented at class on Design for Sustainable Communities, Spring 2007. Download slides.

U-102 "K-12 Resources in the NSDL Engineering Pathway," AAAS Annual Meeting, Feb. 16, 2007. Download Slides.

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U-104 "Women and Men in the Academy: Beyond Bias and Barriers,", Yale University, April 12, 2007.

U-105 "Beyond Bias and Barriers: Fulfilling the Potential of Women in Academic Science and Engineering," Smith College, April 13, 2007.

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U-108 "Educating the Engineer of 2020", College of Engineering Seminar, University of Oklahoma, April 20, 2007. Download Slides

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. Download Slides

U-110 "Engineer of 2020 and the Gathering Storm", Opening Panel, Mudd Design Workshp VI "Design and Engineering Education in a Flat World," 23 May 2007. Download slides

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 "Selecting and Evaluating Digital Learning Materials for Engineering and Pre-Engineering Education", (with Tront, J. and B. Muramatsu), Workshop at ASEE Annual Meeting, June 24, 2007.

U-114 "Women and Men in the Globalizing University: Mapping Gender in University Data," International Alliance of Research Universities (IARU), Yale University, April 21, 2008. Download Slides

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. Download Slides

U-117 "Educating Engineers for a Flat World: Implications Across the Academy," Presidential Talk, Northwestern University, April 22, 2008. Download Slides

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. Download Slides

U-121 "The Challenge of a Responsible Supply Chain", Presidents' Circle, National Academy of Engineering, Sustainability in Business, Science and Policy Google, Mountain View, CA, November 5-7. 2008. Download slides.

U-122 "CARES, Community Assessment for Renewable Energy and Sustainability: CARES 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, UC Berkeley, January 2009. Download slides.

U-126 "How to use the NAE Grand Challenges to Change the Diversity in the ME Discipline?", presented at the 2009 ASME International Mechanical Engineering Education Conference, March 28, 2009. Presentation Slides.

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. Presentation Slides.

U-128 "John McMasters - A Legacy of Sustaining Innovations in Biomimetic Aircraft Design and Engineering Education", Mudd Design Workshop VII, May 29, 2009. Abstract (with Mera Horne); Presentation Slides.

U-129 Keynote Talk at the WIRES (Connecting Women and Completing the Circuit of International Research Collaboration) Conference, June 3, 2009, Barcelona Spain. Download presentation slides (pdf).

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. Download Slides.

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, Denmark.

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U-137 "Human-Centered Design for Sustainability," presentation to UNESCO, Paris, France, August 22, 2012.

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 Series, 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, Ecole Polytechnique Universitee, 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. Slides with notes.

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. YouTube Video of Webcast.

U-144 Spoke at the 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. Slides, YouTube Video, and Abby Van Muijen's fab Visual Design Notes of the seminar.

U-146 Awardee and Keynote Speaker at Assemblymember Nancy Skinner STEM Women of the Year, June 26, 2014. Slides.

U-147 "The Value of Design on Innovation", Roundtable Discussion, CEOs of InBetta Group, Brazil, July 16, 2014. Slides

U-148 "Framing Insights from Design Research", Lecture to engineers, designers and marketing, InBetta Group, Brazil, July 16, 2014. Slides

U-149 "Can Sustainable Design Drive Innovation, Reduce Costs and Increase Quality?", Innovation, Competitiveness and Design (ICS), Brazil, July 17, 2014. Slides or Video.

U-150 "Greening the Internet of Things: Smart Products in a Smart Grid", Innovation, Competitiveness and Design (ICS), Brazil, July 18, 2014. Slides (pptx) or Slides (pdf) or Video Part 1 (YouTube) and Video Q&A (YouTube)

U-151 "Development Engineering", TechCon 2014: University Innovators Transcend Academic Silos to Present Cutting-Edge Collaborations for Global Development. Slides (pdf)

U-152 "How Sustainable Design Can Drive Innovation Globally", Engineers for a Sustainable World, UC Berkeley, February 4, 2015. Slides (pdf).

U-153 "Development Engineering: Graduate Academic Programs Start Up in the Center", Board of Trustees, Blum Center for Developing Economies April 20, 2015. Slides (pptx)

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.

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. Slides.

U-156 "National Academies Report on Career Choices of Women Engineers", ASEE Distinuished Lecture, June 17, 2015. Slides.

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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 Baierl, 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 249, 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 futher investigation and the UC Berkeley campus decided not to pursue. Interestingly, the patent application has been cited in other patent applications. Citations.
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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**

Last updated: 6 July 2015

RESEARCH AND EDUCATION GRANTS (1994-2014)

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.
Primary Author (Co-PIs, Paul Gray and Buford Price) 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.)	$450,000.
PI 1997/98	CALTRANS - PATH	PATH MOU-322: Intelligent Diagnosis Based on Validated Fused Sensor Data for	$177,903.

		Reliability and Safety Enhancement of Intelligent Vehicle Systems	
PI 1997/98	CA MICRO	"Development of Decision Strategies for Scheduling Outages of Power Plants"	$14,426.
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 Autho 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	$846,616.

		www.smete.org".	
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.
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,	$43,250.

		2002/2005).	
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.
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	HP Match to the	"Ubiquitous Digital Library Infrastructure to	$135,000.

2004/06	UCOP Discovery Grant	Support Mobile Learning"	
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. (plus 1 intern in 2005)
PI 2005/2009	NSF	"A Comprehensive Pathway for K-Gray Engineering Education"	$2,850,000.
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	"Fifty Percent Energy Savings with Innovative Energy-Efficient Office Lighting"	$4,700.

	Award		
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 PI, Kimiko Ryokai	NSF	"Expanding the Accessibility of NSDL for Mobile Learning"	$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.
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	NASA Ames	Expanding NASA's Capacity in Wireless	$109,814.

2011/12		Sensor Networks: Smart Buildings and Space Exploration	
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 2013/14	Samsung Electronics	Advanced UX Development Based on Innovative Technology: Integrating UX Design with the Internet of Things	$84,983
PI 2014/15	NCIIA	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	*TheDesignExchange*: Nurturing a National Design Innovation Ecosystem	$50,000.

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	$180,000.

		(1996/2001)	
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.
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

Associate Dean Program Operating Budgets (1995/99)

Assoc. Dean Programs	Budget 1995/96	Budget 1996/97	Budget 1997/98	Budget 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.**

TEACHING AND MENTORING AWARDS

Alice M. Agogino

- **ASME Ruth and Joel Spira Outstanding Design Educator Award**, 2015. Citation: *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 will be presented at the 2015 International Design and Engineering Technical Conference (IDETC).

- **Lifetime Mentor Award**, AAAS, 2012. Citation: *for efforts to significantly increase the number of women and African- and Hispanic-American doctorates in mechanical engineering.*

- **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 Award for Excellence in Graduate Student Mentoring,** Mechanical Engineering Graduate Student Council, 2007.

- **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. Citation: *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.*

- **NSF Director's Award for Distinguished Teaching Scholars**, 2004. This award was considered "the foundation's highest honor for integrated teaching and research excellence".

- **IEEE Helen Plants Award for "Best Non-Traditional Session** at Frontiers in Education", 1998, American Association for Engineering Education.

- **Best Overall Paper Award**, 1998 (with Ann McKenna). Annual Conference of the American Association for Engineering Education.

- **Best Paper Award** (with Ann McKenna), 1997. ASEE/IEEE Frontiers in Engineering Education Conference.

- **John Wiley & Sons Premier Courseware Award** (with D. Yu) for "Virtual Disk Drive Design Studio" CD ROM, 1997.

- **Ralph R. Teetor Educator Award**, Society of Automotive Engineers, 1987.

- **Award for Excellence in Teaching**, 1986, Pi Tau Sigma, UC Berkeley.

TEACHING EVALUATIONS

Alice M. Agogino

Freshman/Sophomore Seminar Evaluations

Semester	Course Number	Overall Quality and Teacher Effectiveness (maximum 5.0) Agogino	Overall Quality of Course (maximum 5.0) ME Dept. Average
Spr '97	E24	4.6	4.32
Spr '97	ME39C	4.9	4.23
Spr '99	ME39C	4.6	4.32

Teacher Evaluations for ME110 Introduction to New Product Development

Semester	Instructor Effectiveness (max of 7.0; Agogino)	Course Worth (max of 7.0; Agogino)	Average of Classroom Presentation /Interaction with Students (maximum 5.0; Agogino)	Instructor Effectiveness (Department Average)	Course Worth (Department Average)	Average of Classroom Presentation /Interaction with Students (Department Average)
Spring 2003	6.0	5.3	4.5	5.61	5.75	4.34
Spring 2004	5.8	5.8	4.5	5.94	5.92	4.54
Spring 2010	5.7	5.3	N/A	5.43/6.02[1]	5.35/5.86[1]	N/A
Spring 2011	5.6	5.7	N/A	5.2/6.0[1]	5.0/6.0[1]	N/A
Spring 2013	5.8	5.6	N/A	5.6/5.9[1]	5.5/5.9[1]	N/A

Teacher Evaluations for E10 Introduction to Engineering Design and Analysis

Semester	Instructor Effectiveness (max of 7.0; Agogino)	Course Worth (max of 7.0; Agogino)	Instructor Effectiveness (Department Average)	Course Worth (Department Average)
Spring 2008	6.0	5.3	5.61	5.75
Spring 2009	5.4	4.5	5.42	5.32

[1] The first number is for the ME departmental average for required undergraduate courses; the second number is for elective undergraduate courses. ME110 has elements of both, as it is one of a few technical electives that satisfies the ABET design requirement.

Teacher Evaluations for ME290P/BA290N
Managing the New Product Development Process: Design Theory & Methods

Semester	Instructor Effectiveness (max of 7.0)	Course Worth (max of 7.0)	Instructor Effectiveness (Department Average)	Course Worth (Department Average)
Fall 1995	5.9	5.5	5.6	5.6
Fall 1996	5.0	5.6	5.8	5.9
Fall 1997	6.2	5.9	5.8	5.7
Fall 1998	6.0	6.2	5.6	5.6
Fall 2002	5.9	6.2	5.86	5.75
Fall 2004	5.2	5.74	5.2	5.75
Fall 2006	5.8	5.4	5.8	5.7
Fall 2007	5.7	5.7	5.48	5.57
Fall 2008	6.0	5.8	5.7	5.6
Fall 2009	5.9	6.3	5.92	5.86
Fall 2010	6.0	6.0	5.89	5.88
Fall 2011	5.2	5.7	5.8	6.0
Fall 2013	6.4	5.9	6.0	5.0

Teacher Evaluations for Haas School of Business ME290P/BA290N/SIMS290P
(7.0 maximum)[2]
Managing the New Product Development Process: Design Theory & Methods

Semester	Instructor Effectiveness (Agogino & Beckman)	Course Worth (Agogino & Beck-man)	Willingness to Recommend (Agogino & Beckman)	Instructor Effectiveness (Department Average)	Course Worth (Department Average)	Willingness to Recommend (Department Average)
Fall 1996	6.0 median	6.0 median	6.0 median	6.0 median of medians	6.0 median of medians	6.0 median of medians
Fall 1997	6.0 median	7.0 median	7.0 median	6.0 median of medians	5.5 median of medians	6.0 median of medians
Fall 1998	6.0 median	7.0 median	7.0 median	6.0 median of medians	5.8 median of medians	6.0 median of medians
Fall 2002	6.0 median	6.0 median	7.0 median	6.0 median of medians	6.0 median of medians	6.0 median of medians
Fall 2003	6.0 median	6.0 median	6.0 median	6.0 median of medians	6.0 median of medians	6.0 median of medians
Fall 2009	6.25	6.12		5.73	5.77	
Fall 2010	6.10	6.10		6.00	6.00	

[2] Team taught with Dr. Sara Beckman, Haas School of Business, 1996-2010; with Dr. Mark Martin, Haas School of Business, 2011. I ask students to fill out both the Mechanical Engineering and the Haas evaluations for this co-located, team-taught course.

Fall 2011	5.72	5.68		5.56	5.52	

Teacher Evaluations for ME290KA
Innovation Through Design Thinking

Semester	Instructor Effectiveness (max of 7.0)	Course Worth (max of 7.0)	Instructor Effectiveness (Department Average)	Course Worth (Department Average)
Fall 2013	6.6	6.4	6.0	5.9

Teacher Evaluations for ME290H
Green Product Development: Design for Sustainability

Semester	Instructor Effectiveness (max of 7.0)	Course Worth (max of 7.0)	Instructor Effectiveness (Department Average)	Course Worth (Department Average)
Fall 2007	5.0	5.5	5.48	5.57
Spring 2011	6.3	6.3	6.0	6.0
Spring 2013	6.2	5.8	5.9	5.9

Teacher Evaluations for ME290M
Expert Systems in Mechanical Engineering

Date	Instructor Effectiveness (maximum 7.0; Agogino)	Course Worth (maximum 7.0; Agogino)	Average of Classroom Presentation /Interaction with Students (maximum 5.0; Agogino)	Instructor Effectiveness (Department Average)	Course Worth (Department Average)	Average of Classroom Presentation /Interaction with Students (Department Average)
Spring 1995	5.8	5.5	4.3	5.8	5.8	4.3
Spring 199	6.2	5.5	4.63	6.01	5.67	4.45
Fall 2003	5.9	5.5	4.64	5.85	5.84	4.45

Teacher Evaluations for Education 290C
Cognition and Development: Educational Issues in Engineering Design and Problem Solving

Semester	Instructor Effectiveness (max of 7.0)	Course Worth (max of 7.0)	Instructor Effectiveness (Department Average)	Course Worth (Department Average)
Fall 2009	6.16	6.33	6.02/5.43[3]	5.86/5.35[3]

[3] The first departmental average is for graduate courses in ME, the second for courses in the Graduate School of Education.

This course is listed in the Graduate School of Education and fulfills the disciplinary requirement for the SESAME (Studies in Engineering, Science and Mathematics Education) Graduate Group in Science and Mathematics Education. The Fall 2009 course explored research in engineering education and cognitive issues in engineering curricular development, teaching, and assessment. It included both qualitative and quantitative research methods in engineering education, coverage of key research findings, and a course project. One recurring theme throughout the course was the duality between learning and design: design-based research, design as a pedagogy for integrative learning and the role of cognition and the learning sciences in the practice of engineering design.

SELECTED STUDENT QUOTES

ME110: Introduction to Product Design

This course provides an introduction to the engineering design process and conceptual design of products. It provides an experience in preliminary project planning of complex and realistic mechanical engineering systems. Design concepts and techniques are introduced; the student's design ability is developed in a design project or feasibility study chosen to emphasize innovation and ingenuity, and provide wide coverage of engineering topics. Design optimization and social, environmental, economic, and political implications are included as well. There is an emphasis on hands-on creative components, teamwork, and effective communication. In recent years I have developed new content and exercises on the development of sustainable products, from product definition to sustainable manufacturing and financial models. As a project-based learning class, student teams of 4-5 students work on design challenges of their own initiative or those sponsored by outside companies and nonprofits. In Spring 2013 I accepted an overload of students, but was able to find design coaches from industry for each of the design teams and sponsors for many of the teams (e.g., NASA Ames, Mercedes-Benz, Samsung Electronics, Meyer Sound, Lawrence Hall of Science, Pinoleville Pomo Nation, Human-Powered Gym).

She really cares about students, more than any other professor I've had. She stands above the rest. Spring 2010

Puts a lot of time and effort and it shows! Enthusiasm is infectious. Spring 2011

Great Speaker – had an aura of fun and enthusiasm. Engaging. Spring 2013

Great class! Spring 2013

Amazing accessibility. Spring 2013

Really good collection of slides, activities, guest lecturers to keep each week interesting. Spring 2013

Alice makes interesting points in her lectures that show her knowledge in industry. Spring 2013

Her enthusiasm, encouragement and overall support is much appreciated. Alice helped me on

a personal level as a person. She helped me feel comfortable in an environment that I felt unfamiliar with. Thank you Alice! You were very helpful & hospital. I would take your class again. Spring 2013

Extremely enthusiastic about what she teaches. Best Prof so far. Spring 2013

Best professor ever. Helpful, smart, experienced. Spring 2013

The only lectures I looked forward to this semester. You were awesome. Spring 2013

Tries to know everyone's name, encourages name cards, participation. Spring 2013

Good presentations. Interesting lectures. Very interactive class. Spring 2013

Awesome class! Spring 2013

Fun, exciting, knowledgeable. Spring 2013

She cares a lot about the access of her students and their projects. Great caring professor. Spring 2013

Professor Agogino is great! Overall a very good interesting class. She's great! Spring 2013

Most interesting lectures I have had at Berkeley. One of the friendliest professors. Spring 2013

Good presentation style! Is helpful, friendly and has a very interesting style of presentation. Spring 2013

Excellent and dedicated teacher Alice made me want to go into design. Spring 2013

Really enjoyed the class. Very engaging lectures, very enthusiastic. Good at relating to students and listening to feedback. Glad you address assignment issues. Spring 2013

ME290H Green Product Development: Design for Sustainability

The focus of the course is management of innovation processes for sustainable products, from product definition to sustainable manufacturing and financial models. Using a project in which students are be asked to design and develop a product or service focused on sustainability, I teach processes for collecting customer and user needs data, prioritizing that data, developing a product specification, sketching and building product prototypes, and interacting with the customer/community during product development. The course is intended as a very hands-on experience in the "green" product development process. It provides credit towards the Engineering and Business Sustainability Certificate for graduate students. Students can expect to depart the semester understanding "green" product development processes as well as useful tools, techniques and organizational structures that support sustainable design and environmental management practice.

Extremely organized yet flexible lectures that allow questions. Very approachable and easy to

talk to. Best class I've ever taken. Spring 2011

She is very enthusiastic and encouraging, can effectively share her knowledge. She encourages students and identifies them as individuals. Spring 2011

Very nice PowerPoint slides and examples. I liked the in-class videos. Excellent interaction with students. Provides constant feedback. Spring 2011

It is a great course with an amazing instructor but the time is too short for a design project. Spring 2011

I really like the class. It was my favorite you learn a lot in a very entertainment way. She is a great teacher very enthusiastic. Spring 2011

A+ Very dedicated. Spring 2011

I appreciated that we took a teacher evaluating during the course and actions were taken afterwards to meet the students requests. Spring 2011

My favorite course as a graduate student! I learned a lot and also had fun. Alice has excellent pedagogy as well as expert knowledge. Games and team activities in class were great. Thank you! Spring 2011

The course opened my eyes to the world of design. It has given me all the tools to partake my own design. Spring 2011

Amazing presentations! Amazing instructor! Spring 2011

Best class this semester. Spring 2011

Responded to email promptly. Spring 2011

I really like the slides! Spring 2013

Strengths! Interesting lectures, approachable, very good knowledge about subject. Spring 2013

This was an excellent course. There are so many things I liked about it. Group projects were great and I liked the check-ins. It helped us to keep on track. Guest lectures were great. Prof. Agogino did a great job of incorporating the expertise in the rom and encouraging guest lectures. Spring 2013

Workshops were good. I would require them to encourage more students to attend. Spring 2013

Fun and exciting, loved how much activity there as and the guest lectures that were provided. Very social and willing to meet and discuss ideas. Learned a lot about different topics. Over the course of the semester which I really enjoyed how broad the material was. Altogether it was inspirational! Spring 2013

Really enjoyed this class slightly fast pared a first but a lot must be done on the first half of that can't be helped. Spring 2013

Alice is very enthusiastic and gives very useful helpful feedback. She also has many connections Wonderful. She is awesome. Spring 2013

ME290P Managing the New Product Development Process: Design Theory and Methods

This cross-disciplinary class has half MBA students (team taught by lecturers in the Haas school of Business). This class is challenging as it must meet the needs of the MBA students with 4-5 years of increasing leadership experience and graduate students in engineering and related disciplines, some of whom may have had little or none industrial experience. I started this course with Dr. Sara Beckman in the Haas School of Business and taught with her for over a decade. As Sara Beckman had increased teaching responsibilities in 2011 the course transitioned to other lecturers in Fall 2011. The Haas Business instructors are responsible for the thirty-plus MBA students in the class and I am responsible for the thirty-plus engineering, iSchool and other general campus students in the class. To accomplish a truly multidisciplinary dimension, we also collaborated with students at the California College of the Arts (CCA) in San Francisco. We have also added an international component where some of the teams included graduate engineering students from the Autonomous University of Mexico (UNAM) in Mexico City. Students from all of these programs and colleges join forces on product development teams to step through the new product development process in detail, learning about the available tools and techniques to execute each process step along the way. The course aims to develop the skills necessary for successful product development in today's competitive global marketplace – multidisciplinary teamwork, rapid prototyping, creativity, business, entrepreneurship and human-centered design.

[Interaction with students] *great! Thanks!* Fall 2009

Gives good insights. Fall 2009

She has always been very helpful outside class. And whenever our group needed she was available. Fall 2009

Great exercises and lectures Multidisciplinary teams. Good mix of theory and Practice, Fall 2010

Made the course interactive ; asked questions; lots of "hands", Fall 2010

Love the class exercises, Fall 2010

Interesting material, group projects allow for a lot of learning on team dynamics, Fall 2010

Enthusiastic, knowledgeable, attentive, Fall 2010

Amazing lectures and instruction, loved the group work. So well organized, Fall 2010

Prototyping, Fall 2010

Great instructors and great course structure. Covering everything about product development and design, Fall 2010

Great experience and stories from the real world, Fall 2010

Excellent! Fall 2010

Great presentations. Fall 2010

Dynamic nice. Incredible accessible. Very nice, caring. Questions are precisely answered, backed by research data. Fall 2010

Very good lecturer with engaging demos and exercises. Very helpful and approachable. Fall 2010

I love the passion the instructors have for the course material. Fall 2010

Well organized, clear presentation. Good use of examples. Fall 2011

Very practical. I love all the exercises. I learned a log about time dynamics. Well done! Fall 2011

Very helpful; provides constructive feedback; advises on other courses as well. Always asks question and asks us to share relevant experiences which benefits all. Fall 2011

Helped find funding for in person meeting with international team member This was indispensible. Great use of bspace and thorough syllabus. Both were very useful and efficient. Fall 2011

Very understanding, I really enjoyed having Alice as an instructor. Fall 2011

Prof. is energetic and have a broad knowledge. Fall 2011

Overall, you've done a great job! You showed that you really care about your students, particularly by forwarding all info relating to our project. I really like this class. It opens my mind about design thinking. Thanks! Fall 2011

Strengths: passionate! Energetic. Well organized. Work load is heavy but helpful. Thanks Alice! It's a great class. I learned a lot. Fall 2011

Good and great feedback. Fall 2011

Great course! Really loved the class. Learned a lot of useful information. Couldn't have asked for a better experience. Thanks! Fall 2011

RECENT EDUCATIONAL INITIATIVES

Human-Centered Design Course Threads and {.design} Decal

I am the faculty sponsor and mentor for the DeCal class {design.}, a student-initiated course on the basic human-centered design process and philosophy. This course has been offered every semester with approximately 50 students each semester. The students range from freshman to senior and span all departments on the campus.

Human-Centered Design Course Threads

I started the Human-Centered Design Course Thread with Assistant Professor Björn Hartmann, Computer Science, a certificate program in which students take multiple courses across departments that are thematically linked to human-centered design. An evaluation of these two multidisciplinary initiatives was published in our paper "Teaching Human-Centered Design Across Engineering, Humanities and Social Sciences", published in the *International Journal of Engineering Education*, Vol. 28, No. 2, pp. 484-491. See: http://coursethreads.berkeley.edu/course-threads/human-centered-design

ME39 Freshman/ Sophomore Seminar (Fall 2010)

ME39 STUDENT ENERGY WORKSHOP AT PINOLEVILLE POMO NATION

I offered a Freshman/ Sophomore seminar in Fall 2010 associated with my "CARES (Community Assessment of Renewable Energy and Sustainability)" research. The CARES project has shown that living sustainably, having access to accurate environmental data, and having implementable solutions are of major concerns to consumers. Research also indicates that people are more eager to adopt a sustainable lifestyle if they are able to collaborate, share and work together with others who share similar sustainability goals. CARES works on projects to help reduce climate change by being the first to close the loop of assessment, advisement and implementation of more sustainable lifestyles. This seminar covered approaches to community assessment of renewable energy, with a focus on conservation, geothermal, micro-hydo-electric, solar photovoltaic, solar hot water heating, and wind energy for a project with the Pinoleville Pomo Nation near Ukiah, California. At the end of the semester the students had the opportunity to develop curricular materials for a workshop that was held at the Pinoleville Pomo Nation for three age categories: elementary/middle school students, high school students and adult education. The figure (above, right) shows some of the students in their solar panel workshop for elementary school students at the Head Start center at the Pinoleville Pomo Nation.

National Collegiate Inventors and Innovators Alliance

I was the lead PI (with Dr. Sara Beckman as co-PI) in a successful grant from NCIIA (National Collegiate Inventors and Innovators Alliance) that helped fund prototyping of projects for all of my design courses.

Engineering and Business for Sustainability

I was co-founder (with PI Arpad Horvath and other faculty) of the Engineering and Business for Sustainability (EBS) Certificate Program to train UC Berkeley graduate students to understand the complexity and urgency of their role in engineering, business, and environmental management, and to work across boundaries to achieve sustainable solutions to pressing societal problems. EBS courses will allow graduate students to tap into the university's vast multidisciplinary educational resources in the College of Engineering, Haas School of Business, Energy and Resources Group, Goldman School of Public Policy, College of Natural Resources, School of Public Health, and potentially other schools. The goal of the EBS Certificate Program is to produce a cadre of influential problem solvers who can have a lasting beneficial impact on the global environment. The EBS Certificate Program is the first certificate program approved at the highest campus level under formal campus guidelines established in 2006. I co-teach the required seminar for this certificate: CEE292A: Technologies for Sustainable Communities. For more on the certificate program see: http://sustainable-engineering.berkeley.edu. The Luce Foundation video shows examples of some of the class projects: http://player.vimeo.com/video/35283830?title=0&byline=0&portrait=0&color=ab0000

Minner Faculty Fellow

The Engineering College Committee on Ethics and Social Responsibility awarded me a Minner Faculty Fellow in Summer 2012 with the opportunity to work with other Minner Fellows to add ethics and social justice to all of my design courses. I found this an extremely valuable experience and was able to develop new approaches, modules, readings and exercises for all of my subsequent design courses.

Product Design Concentration in Fung Institute for Engineering Leadership

I took the lead in developing a new area of concentration for the Masters of Engineering Program in Product Design and currently serve as its Head Graduate Advisor. The program only started in Fall 2013 and enjoyed the largest number of students for a concentration in Mechanical Engineering. Our message to prospective students was: “Product Design enables you to create, design, develop and market new products to meet the needs of consumers from all backgrounds and requirements, including sustainability. You gain skills in communicating with and assessing the needs of the user/customer, prototyping and evaluating potential designs with respect to the performance specifications and requirements and insuring safe operation, economical production, and reduced energy and resource consumption as well as environmental impact.”

ME290KA: Innovation Through Design Thinking

In order to add the course offerings for the new Product Design MEng degree program, I developed the "Innovation Through Design Thinking" course. Designed for professionally-oriented graduate students, this course introduces students to Design Thinking; a human-centered approach to innovation and problem solving that integrates the needs of people, the possibilities of technology, and the requirements for economic viability. Emphasis is on problem solving as a process within contextual limitations, employing methods from user centered design, qualitative research, rapid prototyping, and the use of collaborative and participatory systems. Students will explore design-based approaches to problem solving that focus on translating observations into insights, and insights into products, services, and experiences to design innovations that improve people's lives. The first offering of this course was in 2013 and held in the Cal Design Lab (494 Wurster Hall). The final was a tournament sponsored by Larson-Juhl. The course went well and the teacher evaluations were above 6 on a 7 point scale.

Designated Emphasis in Development Engineering

Working with the Development Engineering Executive Committee and U.S. AID funding from the DIL (Development Impact Lab) proposal, I have been working on a proposal for a Ph.D. designated emphasis (minor) in Development Engineering. More at: http://cega.berkeley.edu/programs/DIL/

Jacobs Institute of Design Innovation

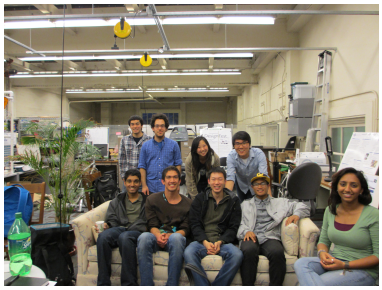
I served as a member of the Design Task Force in the College of Engineering to define the educational programming and building features for the new Jacobs' Institute of Design (Spring, Summer 2013). More at: http://engineeringdesign.berkeley.edu

Mentoring Undergraduate Research Students

I have hosted over 100 undergraduate researchers in my lab during the last four years. Several of these students were part of programs to increase the diversity of students engineering and encourage them to apply to graduate schools. Four of these students I supervised directly for honors research. The others were co-advised with my senior graduate students. I follow an integrated approach to mentoring, teaching and research – integrating both engineering and learning science research. I mentor graduate students who, in turn, are trained to effectively mentor undergraduate researchers and improve their mentoring and teaching skills. All of these students have graduated to form a cadre of faculty and industry leaders equipped with superior mentoring skills. I meet with all undergraduate and graduate students once a week in a group meeting, then hold weekly meetings with subgroups and individuals. I am proud to have won the 2012 Lifetime Mentor Award from the American Association for the Advancement of Science (AAAS). Photos of some of the larger teams are shown below.

SMART LIGHTING MAX TECH & BEYOND

CARES TEAM BUILDING STRAW BALE HOME WITH PINOLEVILLE POMO NATION



HUMAN-POWERED GYM TEAM

EDUCATIONAL SCHOLARSHIP

I am a firm believer that education needs the same degree of rigorous analysis as disciplinary research in order to evaluate and show impact. A summary of my peer-reviewed publications in the *scholarship of learning* is provided below.

Peer-Reviewed Journal Publications

1. "The Impact and Instructional Benefit of Using Multimedia Case Studies to Teach Engineering Design," (with Sherry Hsi), *Journal of Educational Hypermedia and Multimedia*, Association for the Advancement of Computing in Education (ISSN 1055-8896), Vol. 3, No. 3/4, 1994, pp. 351-376.

2. "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.

3. "The National Engineering Delivery System (NEEDS): A Multimedia Digital Library of Courseware," (with B. Muramatsu), *International Journal on Engineering Education*, Vol. 13 No. 5, 199, 1997, pp. 333-340.

4. "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.

5. "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.

6. "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. (Won 'best paper' award at FIE '97.)

7. "A 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.

8. "Perceptions of the Design Process: An Examination of Gendered Aspects of New Product Development", (with Newman, C., M. Bauer, and J. Mankoff), *International Journal of Engineering Education,* Vol. 20, No.2, pp. 452-460, 2004.

9. "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.

10. "Engineering Design Thinking, Teaching, and Learning," (with C. Dym, O. Eris, D.D. Frey,and L.J. Leifer), *Journal on Engineering Education*, ASEE, Jan. 2005, v. 94, no. 1, pp. 103-120.

11. "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.

12. "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.

13. "Self-Reflection: Lessons Learned in a New Product Development Class", (with J.H. Hey, A.P Van Pelt and S. Beckman), *Journal of Mechanical Design*, ASME, Vol. 129, No. 7, July 2007, pp. 668-676.

14. "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.

15. "Sustainable Product Design: 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.

16. "Diversity in Design Teams: An Investigation of Learning Styles and their Impact on Team Performance and Innovation," (with K. Lau and S. Beckman), *International Journal of Engineering Education*, Vol. 28, No. 2, 2012, pp. 293-301.

17. "Teaching Human-Centered Design 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, pp. 484-491.

18. "Mobile and Augmented Reality Cyberlearning with the Engineering Pathway Digital Library," (with K. Ryokai and L. Oehlberg), *International Journal of Engineering Education*, Vol. 28, No. 2, 2012, pp. 1119-1126.

19. "Off the Paved Paths: Exploring Nature with a Mobile Augmented Reality Learning Tool", (with K. Ryokai), *Journal of Mobile HCI (IJMHCI),* Vol 5 (2), April 2013, pp. 21-49. doi:10.4018/jmhci.2013040102.

20. "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, in press.

Peer-Reviewed Books or Book Chapters

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.

2. The Engineer of 2020: Visions of Engineering in the New Century, National Academy Press, 2004, committee report.

3. "Implementation of Quality Evaluation for Web-based Courses and Digital Learning Resources," (with X. Teng, B. Muramatsu, J.W. Zhang, J.G. Tront, and F. McMartin), *Lecture Notes in Computer Science,* Eds., Wenyin Liu, Yuanchun Shi, Qing Li, Springer-Verlag GmbH, ISBN: 3-540-22542-0, vol. 3143, p. 379, 2004.

4. Educating the Engineer of 2020: Adapting Engineering Education to the New Century, National Academy Press, 2005, committee report.

Peer-Reviewed Conference Proceedings

1. "Making Connections to Engineering in the First Two Years," (with S. Sheppard and A. Oladipupo ; ed., Lawrence P. Grayson), Frontiers in Education toward 2000, IEEE, pp. 563-569, 1992.

2. "Use of Multimedia Technology in Teaching Engineering Design," (with S. Hsi), Proceedings of HCI International `93 (5th International Conference on Human-Computer Interaction, Orlando, Florida; Aug. 8-13, 1993), pp. 778-783.

3. "Navigational Issues in Multimedia Case Studies of Engineering Design," (with S. Hsi), Proceedings of HCI International `93 (5th International Conference on Human-Computer Interaction, Orlando, Florida; Aug. 8-13, 1993), pp. 764-769.

4. “Scaffolding Knowledge Integration through Designing Multimedia Case Studies of Engineering Design," Engineering Education for the 21st Century: Proceedings of Frontiers in Education, FIE'95, (with S. Hsi), ASEE/IEEE (ISBN 0-7803-3022-6), pp. 4d1.1-4d1.4.

5. " People, Product and Process: Interactive Multimedia Case Study in Integrated Design and Manufacturing Strategies," (with D. Johnston and R. Stanard), Engineering Education for the 21st Century: Proceedings of Frontiers in Education, FIE'95, ASEE/IEEE, pp. 3a2.22-3a2.26.

6. " Learning Style Based Innovations to Improve Retention of Female Engineering Students in the Synthesis Coalition," Engineering Education for the 21st Century:

Proceedings of Frontiers in Education, FIE'95 (with S. Hsi), ASEE/IEEE, pp. 4a2.1-4a2.4.

7. "Engineering for Middle School: A Web-based Module for Learning and Designing with Simple Machines," (with A. McKenna), CD ROM ISBN 0-7803-4089-2, IEEE/ASEE FIE'97, Proceedings of the Frontiers in Engineering Education) Conference. (Won Best Paper Award; thirteen papers out of 400 submitted were selected for this award.)

8. "Integrating Design, Analysis and Problem Solving in an Introduction to Engineering Curriculum for High School Students," (with A. McKenna), Engineering Education: Contributing to U.S. Competitiveness; Proceedings of ASEE '98, ASEE, June 28-July 1, 1988, CD ROM, Session 1280, pp. 1-14. (Won 'overall best paper' award.)

9. "Capturing Students' Teamwork and Open-Ended Performance in an Undergraduate Multimedia Engineering Design Class", (Ann McKenna and Lydia Mongia), Proceedings of the Frontiers in Engineering Education Conference '98, (CD ROM version: IEEE Catalog # 0-7803-4762-5/98), Nov. 4-7, Tempe, AZ, pp. 264-269.

10. "Virtual Disk Drive Design Game with Links to Math, Physics and Dissection Activities," (with Rebecca Richkus, David Yu, and David Tang), Proceedings of FIE'99,(Frontiers in Education Conference; San Juan, Puerto Rico; 10-14 November 1999), ASEE/IEEE, CD ROM ISBN #0-7803- 5646-2, pp. 12c3-18 to 12c3-22.

11. "Building a Digital Learning Community for Faculty on the Internet," (with Jason Puzniak and Flora McMartin), Proceedings of ASEE 2000, Paper #3630, ASEE, 2000.

12. "Theater Class Helps Transform the Climate for Diversity in Engineering," (with Edith Ng and Carla Trujillo), Proceedings of ASEE 2001, CD ROM (Session 2592).

13. "Speech Acts and Collaborative Learning in Classroom Case-Study Discussions," (with Shankaran Sitarama and Andy Dong), Proceedings of ICEE '01 (Oslo, Norway, August 6-10, 2001, http://fie.engrng.pitt.edu/icee/), pp. 7B3-18/23.

14. "Designing an Untethered Educational Digital Library" (with A. Dong), Proceedings of the IEEE International Workshop on Wireless and Mobile Technologies in Education (WMTE 2003).

15. "Best Practices in the Design, Development and Use of Courseware in Engineering Education," (with Teng, X., J.G. Tront, and B. Muramatsu), Proceedings of FIE2005, Session F2E.

16. "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.

17. "ABET Alignment of Learning Resources in the Engineering Pathway Digital Library", (with J-L Wu), Proceedings of the ASME Congress, 2007 (ISBN 0-7918-3812-9).

18. "Mobile Learning and Digital Libraries: Designing for Diversity", (with E. Datta), Proceedings of the ASME Congress, 2007 (ISBN 0-7918-3812-9).

19. "Design Team Framing: Paths And Principles", (with J. Hey and J. Yu), Proceedings of the Design Engineering Technology Conference, ASME, 2008.

20. "Teaching Multinational, Multidisciplinary Sustainable Product Development", (with V. Borja, S. Beckman, N. Shedroff, M. Lopz, A. Ramirez), Proceedings of the Design Engineering Technology Conference, ASME, 2008.

21. "Sketching in Design Journals: Visual Representations in the Product Design Process," (with K. Lau and L. Oehlberg), Proceedings of the ASEE Engineering Design Graphics Division Midyear Conference, 2009.

22. "Sustainable Product Design: Designing for Diversity in Engineering Education," (with L. Oehlberg and R. Shelby), Proceedings of the Mudd Design Conference, May 2009.

23. "Undergraduate Conceptions of the Engineering Design Process: Assessing the Impact of a Human-Centered Design Course", (with L. Oehlberg), Proceedings of ASEE 2011.

24. "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.

25. "The Design Exchange: Supporting the Design Community of Practice", (with C. Roschuni and S. Beckman), Proceedings of ICED 2011 Proceedings of the 18th International Conference on Engineering Design (ICED11), Vol. 8, 2011, pp. 255-264.

26. "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.

27. "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.

28. “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.

29. “Cross-Community Design and Implementation of Engineering Tinkering Activities at a Science Center”, (with J. Wang), *FabLearn*, (Stanford University, Oct. 27-28, 2013).

30. "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.

MASTERS THESES AND PROJECTS CHAIRED BY ALICE M. AGOGINO

1.	1984/85	Timothy M. Hayes	MS Plan II	"Human Factors Display Design for a Multi-Channel Radiation Monitor"
2.	1984/85	Stephen H. Grau	MS Plan II	"The Conceptual Design of a Distributed Digital Control Network for Nuclear Power Plant Control"
3.	1985/86	Eric A. Moore	MS Plan II	"INFORM: A Knowledge Acquisition and Modeling Interface for IDES, the Influence Diagram based Expert System"
4.	1985/86	Steven L. Ethier	MS Plan II	"A Human Factors Study of the Primary Operating Displays for the NUSC Automatic Top Control Unit"
5.	1985/86	Johnston Choy	MS Plan II	"Automating SYmbolic MONotonicity Analysis"
6.	1985/86	Ron Heglie	MS Plan II	"DASCON: The Data, Acquisition Configuration System"
7.	1986/87	Kenneth M. Schneider	MS Plan II	"Real Time Control with Influence Diagram based Expert System"
8.	1986/87	Mark K. Lambert	MS Plan I	"A Graphical Interface to an Influence Diagram based Expert System"
9.	1986/87	Ann S. Almgren	MS Plan II	"Symbolic Computation for Constrained Optimization in Computer-Aided Design"
10.	1986/87	Nestor F. Michelena,	Master of Engrg	"Multiobjective Hydraulic Cylinder Design"
11.	1986/87	Kristofer A. Swanson	MS Plan II	"CVAID Expert System Development"
12.	1987/88	Lt. Leonard S. Kim	MS Plan II	"Influence Diagram and Ada based Expert System"
13.	1987/88	Jean-Michel Nataf	MS Plan II	"Automatic Modeling of Thermal Systems"
14.	1987/88	Ramanathan Guha	MS Plan II	"Induction and Analogy for Engineering Expert Systems"
15.	1987/88	Ashutosh Rege	MS Plan I	"On the Theory and Automation of Influence Diagrams: Consistency, Modeling and Implementation"
16.	1987/88	Sampath Srinivas	MS Plan II	"Inducing Influence Diagrams from Examples"
17.	1987/88	Sherry Hsi	MS Plan II	"ADIS: Assistive Device Interface Selector for the Disabled"
18.	1987/88	Michael J. Molezzi	MS Plan II	"Computer Workstation Design for Disabled Users: A Study of the Design Process"
19.	1988/89	Ramachandran Gurumoorthy	MS Plan II	"Annotated Prolog in a Distributed Environment"
20.	1988/89	Audumbar Padgaonkar	MS Plan II	"Monitoring System for the Time-of-Flight Wall at LBL"
21.	1989/90	Rhonda S. Stieber	MS Plan II	"An Expert System Advisor for Configuring Information Display Systems"

22.	1989/90	Sandra L. Turner	MS Plan II	"Preliminary Analysis of the Application of Expert Systems to Fire Detection in Structures"
23.	1990/91	Christopher Johnson	MS Plan II	"Version Control & Temporal Enhancements to DesignSCRIBE: An Information System for Concurrent Design"
24.	1991/92	Kathy Naassan	MS Plan II	"Sensor Validation for the Space Shuttle Main Engine Controller"
25.	1991/92	Keith Allan Gallion	MS Plan I	"RMS - Repair Management System: A System to Aid in the Diagnosis of Ship Structural Failures and the Evaluation of Repair Alternatives"
26.	1991/92	Regina S. Narkiewicz	MS Plan II	"Tem Pump Performance Model"
27.	1992/93	Jay Evans	MS Plan II	"Multimedia Case Studies for Teaching Best Design Practices"
28.	1992/93	Punit Jain	MS Plan II	"Intelligent Sensor Validation for Diagnostic Expert System: Integrating Algorithmic and Heuristic Processing"
29.	1992/93	James Osborn	MS Plan II	"Development of Display Object: An Interactive Educational Spatial Reasoning Tool"
30.	1992/93	Ian Zook	MS Plan II	"Using Multimedia Case Studies in Engineering: Knowledge Acquisition During Case Study Development"
31.	1992/93	Antonio Hernandez	MS Plan II	"The Identification of Successful Strategies for Spatial Reasoning"
32.	1993/94	Charles M. Carlstrom	MS Plan II	"Development, Testing, and Assessment of the Cyclone Grinder Multimedia Case Study"
33.	1993/94	Andy Dong	MS Plan II	"Design Wizard: Tools for Computer-Assisted Prototype Selection"
34.	1993/94	Todd Forsyth	MS Plan II	"A Report on the Structure and Operation of the Controlled Ecological Life Support Visual Database Project"
35.	1993/94	Nagaraj Srinivasan	MS Plan II	"Multimedia Case Studies in Engineering: Development and Assessment of the Disk Drive Case Study"
36.	1993/94	Kai Goebel	MS Plan II	"Using a Neural-Fuzzy Scheme to Diagnose Manufacturing Processes"
37.	1993/94	Pranjali Dattada	MS Plan II	"User Study for a Networked Multimedia Database of Courseware"
38.	1993/94	Stacey Au	MS Plan II	"A Multimedia Archival System for Explosively Actuated Valves: A Study in Design Archival"
39.	1994/95	Sunny Gill	MS Plan II	"The Best Practices Document: Recommendations for Using Instructional Technology for Delivery of Courseware"
40.	1994/95	Nanette Nalzaro	MS Plan II	"GE Multimedia Acquisition System (GEMMAcs): A Presentation Database; A Study in Document Information Archival"
41.	1994/95	Stephen Bayne	MS Plan II	"Capturing Design Experience with a Low Cost Database for Design Component Standardization"
42.	1995/96	Zhijie Huang	MS Plan II	"An Electronic Product Catalog"

43.	1995/96	Mitchell Suarez	MS Plan II	"Neural Network Terminal Area Aircraft Trajectory Conflict "
44.	1995/96	Shad H. Shokralla	MS Plan II	"21st Century Jet: The Boeing 777 Multimedia Case Study"
45.	1995/96	David W. Bellm	MS Plan II	"Characterization of the Sonar and Radar Distance Sensing Devices under Suboptimal Operating Conditions for the California Partners for Advanced Transit and Highways"
46.	1995/96	Robert Stanard	MS Plan II	"People, Products and Process: Interactive Multimedia Case Study in Integrated Design, Manufacturing Strategy and New Product Development"
47.	1996/97	Jorge Enrique Barreto	MS Plan II	"Augmenting Information Retrieval Using EVPI Computation"
48.	1996/97	David Yu	MS Plan II	"The Virtual Disk Drive Design Studio"
49.	1996/97	Bradly Cammon	MS Plan II	"Integration of Sensor Validation and Fusion Techniques with SmartPath: A Process and Performance Evaluation"
50.	1997/98	Ya Wen	MS Plan II	"People, Products and Strategies: The Design and Development of a Web-based Multimedia Case Study"
51.	1997/98	Jiangxin Wang	MS Plan II	"Sensor Validation and Fusion of GPS Aided Longitudinal Positioning System for IVHS"
52.	1998/99	Youhao Jing	MS Plan II	"MESANet: Facilitating MESA Design with Internet and a WWW-based Learning Environment"
53.	1998/99	Rebecca F. Richkus	MS Plan II	"Web Implementation and Enhancement of the Virtual Disk Drive Design Studio," Netscape Version and Internet Explorer Version
54.	1998/99	Aparoopa (Tina) Dutta	MS Plan II	"Geographically-Independent Learning: Built & Designed for ME290P"
55.	1999/2000	Jason Puzniak	MS Plan II	"The Role of On-Line Communication and Community in a Digital Library for Science, Mathematics, Engineering, and Technology Education"
56.	2001/2002	Andrew Hill	MS Plan II	"Creating Online Faculty Collaboration to Develop Engineering Education Computer Learning Materials"
57.	2001/2002	Jessica Granderson	MS Plan II	"Development of an On-Line Design Guide for Cal MESA's (Mathematics, Engineering and Science Achievement) BEST (Boosting Engineering Through Science and Technology Robotics Competitions"
58.	2002/2003	Rebekah Yozdell-Epstein	MS Plan II	"Economic, Energy and User Needs Analysis of an Intelligent Lighting System"
59.	2003/2004	Matthew Dubberly	MS Plan II	"Life Cycle Assessment of an Intelligent Lighting System using a Distributed Mote Network"
60.	2003/2004	Hengsi Lin	MS Plan II	"A Protocol for Evaluating Designers' Sketching Activities"
61.	2003/2004	Mohammad Rasheq Zarif	MS Plan II	"Categorization of Current MEMS Suspension Design Variants"
62.	2004/2005	Yao-Jung Wen	MS Plan II	"Smart Dust Sensor Mote Characterization, Validation, Fusion and Actuation

63.	2004/2005	Julien Sauvageon	MS Plan II	"Integrated Systems Health Monitoring Using Smart Dust Mote Sensor Networks: Hot Spot and Peak Strain Detection in Space Vehicles"
64.	2004/2005	Vinukumar Ranganathan	MS Plan II	"Locking-free Curved Beam Finite Element formulation And its application in MEMS Resonators "
65.	2004/2005	Marisela Avalos	MS Plan II	"Technology Assessment of Implantable Cardioverter Defibrillator Batteries"
66.	2005/2006	Lionel Mohri	MS Plan II	"The Design Process through the Eyes of a Berkeley Student"
67.	2005/2006	Fabian Beltran	MS Plan II	"Human Preference Testing for Smart Lighting"
68.	2006/2007	Esha Datta	MS Plan II	"Mobile Learning and Digital Libraries: Designing for Pre-Engineering Education at the Elementary School Level "
69.	2007/2008	Stephanie Lynn Robinson	MS Plan II	"A Usability Assessment of the Engineering Pathway Educational Digital Library"
70.	2007/2008	Jennifer Mangold	MS Plan II	"A User Needs Study of K-12 Teachers for the Engineering Pathway Educational Digital Library"
71.	2007/2008	Andrew Favor	MS Plan II	"Exploring a Publisher Funded Business Model by Using Engineering Pathway as a Content Platform"
72.	2007/2008	Ryan Shelby	MS Plan II	"Thermal Endurance and Cryogenic Capable Pressure Vessel Design for a (L)H2 Fueled Toyota Prius"
73.	2007/2008	Lora Oehlberg	MS Plan II	"Tangible and Digital Media in Design Journals: Mediumâ€™s Influence on Sketching Behavior"
74.	2007/2008	Kimberly Lau	MS Plan II	"Sketching Behavior and Design Journals"
75.	2007/2008	Rupam Singla	MS Plan II	"Designing a Suit to Protect Migrant Farm Workers in California from Pesticide Exposure"
76.	2007/2008	James T. Bonnell	MS Plan II	"Green Lighting: Wireless Lighting Systems Integration for Significant Energy Savings"
77.	2008/2009	Timothy Robert Jacobi	MS Plan II	"A Product Development Case Study in the Amusement Industry"
78.	2008/2009	Johanna Louise Mathieu	MS Plan II	"Design of a Rural Water Provision System to Decrease Arsenic Exposure in Bangladesh" (with Ashok Gadgil)
79.	2008/2009	Nick Adrian Galano	MS Plan II	"Smart Lighting: LED Implementation and Ambient Communication Applications"
80.	2008/2009	Celeste Roschuni	MS Plan II	"Relationship Conflict And Feeling Communication In Design Teams"
81.	2009/2010	Kayvan Nowrouzi	MS Plan II	"Node Weight Modeling for Optimal Routing: The Mobile Millennium Project" (with Alexandre Bayen)
82.	2011/2012	Jennifer Wang	MS Plan I Thesis	"Engineering Learning at a Science Center" (with Lisa Pruitt and Marcia Linn)
83.	2011/2012	Ryan Paulson	MS Plan II	"Personalized Illuminance Model Using Inverse Modeling and Piecewise Linear Regression"
84.	2012/2013	Daniel Wilson	MS Plan II	"Life Cycle Assessment Shows Carbon Savings from a Fuel-Efficient Biomass Cookstove Dwarf Embodied Carbon Emissions"

85.	2012/2013	Vivek Mohan Rao	MS Plan II	"Building Facades for Solar Water Treatment: Design and Characterization of a Vertically-Integrated Multistep (VIMS) Solar Photocatalytic Water Treatment Reactor"
86.	2012/2013	Qi Hongo	MS Plan II	"Sustainability Guidelines for Early Product Development: Focus on Hot Water Kettles and Florescent Lights"
87.	2012/2013	Hanxin Shen	MS Plan II	"Sustainability Guidelines for Early Product Development: Focus on Office Seating and Childhood Furniture"
88.	2012/2013	Rui Guo	MS Plan II	"Sustainability Guidelines for Early Product Development: Focus on Cell Phones"
89.	2012/2013	Guang Zhu	MS Plan II	"Sustainability Guidelines for Packaging"
90.	2012/2013	Min Zhu	MS Plan II	"Sustainability Guidelines for Early Product Development: Focus on Jeans and Footwear"
91.	2012/2013	Chaten Boscha	MS Plan II (Co-Chair)	"Samsung Capstone Project: Assessing Risks and Opportunities of Introducing a Controversial/Unconventional Technology within an Existing Framework"
92.	2013/2014	Dizhou Lu	MS Plan II	"Structural Design for Tensegrity Mechatronics"
93.	2013/2014	Justino J. Calangi	MS Plan II	"Model-Based Control System for Packing a 6-Bar Tensegrity Structure"
94.	2013/2014	Eric Cheng-yu Hong	MS Plan II	"Viability of Tensegrity Robots in Space Exploration"
95.	2013/2014	Yuejia (Margaret) Liu	MS Plan II	"Tensegrity Soft Robot for NASA Mission"
96.	2013/2014	Yangxin Chen	MS Plan II	"Structure and Actuation Design of a 6-Rod Tensegrity Robot"
97.	2013/2014	Greg Quan	MS Plan II	"New Mobility Solutions for a Changing Automotive Landscape: Development of a Shared Transportation Web Platform"
98.	2013/2014	Saddiq Nuru	MS Plan II	"Identifying Opportunity Spaces in the Car/Ride Sharing Environment: Creating a Framework for a Suburban Commmunity Circulator"
99.	2013/2014	Weishi Wu	MS Plan II	"Residential Mobility Solution and Life-Cycle Assessment of Community Carsharing"
100.	2013/2014	Rahul Mehendiratta	MS Plan II	"Residential Mobility Solution and Life-Cycle Assessment of Community Carsharing"
101.	2013/2014	Aadityeshwar Saran Singh Deo	MS Plan II	"Mercedes-Benz Residential Mobility Service: Framework to Evaluate the Change in Greenhouse Gas Emissions"
102.	2013/2014	Andrew Kam	MS Plan II	"Collaborative Workspace Design: Digital Device Design of Digital-Tangible Platforms"
103.	2013/2014	Joshua Harling	MS Plan II	"Collaborative Workspace Design: User-Experience Analysis of Digital-Tangible Platforms"
104.	2013/2014	Xueying (Cheryl) Hou	MS Plan II	"Collaborative Workspace Design: Sustainability Analysis of Digital-Tangible Platforms"
105.	2013/2014	Ellen Dong	MS Plan II	"Collaborative Workspace Design: Hardware Design Analysis of Digital-Tangible Platforms"

106.	2013/2014	Pierce Gordon	MS Plan II (Co-Chair with Dan Kammen)	"Design Thinking for the Poor: A Comparative Content Analysis of Development Challenges in OpenIDEO"
107.	Summer 2014	Rong Lily Hu	MS Plan II	"A Statistical Learning Approach for Detection of a Chiller Energy Efficiency Fault"
108.	Fall 2014	Hugo Wagoner	MS Plan II	"Open Innovation Business Models for the Development of a Tensegrity Toy Kit"
109.	Fall 2014	Jeffrey Lee	MS Plan II	"Pinoleville Pomo Nation Sustainable Home: A case study of energy modeling on sustainable design"
110.	Fall 2014	Andrew P. Sabelhaus	MS Plan II	"Mechanism and Sensor Design for SUPERball, a Cable-Driven Tensegrity Robot"
111.	Spring 2015	Jessica Lee	MS Plan II	"Anisotropic Collapsible Leg Spines for Increased Millirobot Traction"
112.	Spring 2015	Kathryn G. Van Lieshout	MS Plan II	"Environmental Impact and Indoor Quality Assessment of Pinoleville Pomo Nation Demonstration Home: An implementation of life cycle assessment and culturally inspired design"
113.	Spring 2015	Julien J. Caubel	MS Plan II	"A Low-Cost, Compact Low Carbon Sensor to Monitor Biomass Cookstove Emissions"
114.	Spring 2015	Colin Ho	MS Plan II	"A Haptic Display Using Interleaved Belts to Simulate Lateral and Rotational Slip"
115.	May 2015	Jonathan Chinen	MEng Plan II	"IoT and the Restorative Smart Office"
116.	May 2015	William J. Frese	MEng Plan II	"Design of a Bioreactive System for Emotionally Intelligent Internet of Things Environments"
117.	May 2015	Lee Benjamin Hamstra	MEng Plan II	"Environmental Responses to Stress in the Office of the Future"
118.	May 2015	Daylun (Daniel) Lim	MEng Plan II	"Rapid Prototyping in UX Design Research for the Internet of Things"
119.	May 2015	Oscar Segovia	MEng Plan II	"Audio, IoT and the Advent of the Smart Office"
120.	May 2015	Dayana Hijaz	MEng Plan II	"Green Design Guide for Design Professionals"
121.	May 2015	Baris Ozgen	MEng Plan II	"Green Design Strategies for Consumer Electronics: Results and Case Studies from the Internet of Things"
122.	May 2015	Joey Le Zhang	MEng Plan II	"Green Design Guide for Design Professionals: Product Environmental Performance Study"
123.	May 2015	Yujiang Sun	MEng Plan II	"Green Design Guide for Design Professionals: UX design for green sustainability guide"
124.	May 2015	Patrick Bailey Hylton	MEng Plan II	"Mechantronics and Design of the Passive Compliance system of the ULTRA Spine, A Tensegrity Robot"
125.	May 2015	Yakshu Madaan	MEng Plan II	"Design and Prototypes of Structure and Guide Pulleys for ULTRA Spine - a tensegrity robot"
126.	May 2015	ChanWoo Yang	MEng Plan II	"Simulations and Dynamics Modeling for Tensegrity Soft Spine Robotics: ULTRA Spine"
127.	May 2015	Lim Yusheng Alexander	MEng Plan II	"Design of a New Spherical Tensegrity Robot Kit"

128.	May 2015	Azhar Khaderi	MEng Plan II	"Mechatronics and Control of a Spherical Tensegrity Robot Kit"
129.	May 2015	Peadar Keegan	MEng Plan II	"Electronics & Software Design of a Spherical Tensegrity Robot for NASA Missions"
130.	May 2015	Xiang Lee	MEng Plan II	"A Study in Artificial Intelligence Methods for Spherical Tensegrity for NASA Missions"

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PH.D. THESES
CHAIRED BY ALICE M. AGOGINO

1.	1988/89	Pramod Jain	"A Vector Quantization Multistart Method for Global Optimization"
2.	1989/90	Fariborz Nadi	"Modeling of Complex Manufacturing Processes via Integration of Influence Diagrams and Neural Networks"
3.	1989/90	Robert K. Paasch	"Management of Uncertainty in Sensor Based Diagnostic Expert Systems"
4.	1989/90	Jonathan Cagan	"Innovative Design of Mechanical Structures from First Principles"
5.	1990/91	Ming-Lei Tseng	"Integrating Neural Networks with Influence Diagrams for Multiple Sensor Diagnostic Systems"
6.	1990/91	Nestor Michelena	"Monotonic Influence Diagrams; Application to Optimal and Robust Design"
7.	1991/92	Jean-Michel Nataf	"Equation-based Automatic Modeling Applied to Thermal Systems"
8.	1991/92	Young-Jin Kim	"Uncertainty Propagation in Intelligent Sensor Validation"
9.	1991/92	Eric Schendel, M.D.	"Cascading Synthetic Node Inference: Cascading Bayesian Inference Employing Synthetic Intermediate Nodes" (Bioengineering)
10.	1993/94	Stephen R. Bradley	"Design Optimization under Resource Constraints"
11.	1993/94	Cassandra T. Rogers	"Expert Systems Approach to Regional Evaluation of Debris Flow Hazard" (Co-chaired with Nicholas Sitar), Engineering Science - Civil Engineering
12.	1995/96	William H. Wood III	"Supplying Concurrent Engineering Information to the Designer: The Conceptual Design Information Server"
13.	1995/96	Satnam S. Alag	"A Bayesian Decision- Theoretical Framework for Real-Time Monitoring and Diagnosis of Complex Systems: Theory and Application" Abstract
14.	1995/96	Kai Goebel	"Management of Uncertainty in Monitoring and Diagnosis of Mechanical Systems Using Fuzzy Techniques" Abstract

15.	1996/97	Sherry Hsi	"Facilitating Knowledge Integration in Science through Electronic Discussion: the Multimedia Forum Kiosk"
16.	1996/97	Balaguruna (Bala) Chidambaram	"Catalog-Based Customization" Abstract
17.	1996/97	Andy Dong	"The Management of Design Information: A Decision-Analytic Approach" Abstract
18.	1997/98	Anil Varma	"Intelligent Distributed Design Systems: A Machine-Learning Approach"
19.	2000/2001	Xio-Ping (Susan) Su	"Compliant-Leverage Mechanism Design for MEMS Applications"
20.	2001/2002	Ann McKenna	"Designing Instruction to Support Mechanical Reasoning: Three Alternatives in the Simple Machines Learning Environment" Abstract
21.	2001/2002	Jiangxin Wang	"Equipment and Process Modeling and Diagnostics in Semiconductor Manufacturing" Dissertation (1.9 mb)
22.	2001/2002	Ning-Ning Zhou	"Simulation and Synthesis of MicroElectroMechanical Systems (MEMS)" Abstract
23.	2004/2005	Shuang Song	"Shared Understanding and Information Seeking, Sharing and Sketching in the New Product Design Process"
24.	2004/2005	Raffi Kamalian	"Evolutionary Synthesis of MEMS Devices"
25.	2004/2005	Jia-Long Wu	"Unified Language System for Engineering Design (ULSED): A Framework and Automation Tools for Better Design Information Retrieval"
26.	2005/2006	Ying Zhang	"MEMS Design Synthesis Based on Hybrid Evolutionary Computation"
27.	2006/2007	Jessica Granderson	"Human-centered Sensor-based Bayesian Control: Increased energy efficiency and user satisfaction in commercial lighting"
28.	2007/2008	Jonothan Henry Grenville Hey	"Effective Framing in Design"; Thesis Seminar slides.
29.	2007/2008	Corie Lynn Cobb	"Case-based Reasoning for MEMS Design Synthesis"
30.	2008/2009	Yao-Jung Wen	"Wireless Sensor and Actuator Networks for Lighting Energy Efficiency and User Satisfaction"

31.	2008/2009	Jaspal Sandhu	"Serial Hanging Out in Mongolia: Information, Design and Global Health"
32.	2009/2010	Catherine Newman	"Information Scaffolding: Applications to Technical Animation"
33.	2012/2013	Celeste Roschuni	"Communication in the Design Process: Applying Human-Centered Design Tactics"
34.	2012/2013	Lora Oehlberg	"Information Sharing Tools for Collaborative Human-Centered Design Teams"
35.	2012/2013	Yael Valerie Perez	"Global Architects Meet the Place - Bridging the Gap through Information and Communication Technology", Co-advised with Prof. Yehuda Kalay (Architecture), Spring 2013
36.	2012/2013	Ryan Shelby	"Co-Designing Sustainable Communities: The Identification and Incorporation of Social Performance Metrics in Native American Sustainable Housing and Renewable Energy System Design", Spring 2013
37.	2012/2013	Sohyeong Kim	"Open Innovation Ecosystem: Chez Panisse Case Study," Summer 2013
38.	2012/2013	Anna Pereira	"Computer Input Devices: Design for Well-Being and Productivity," Co-advised with Prof. David M. Rempel (UCB School of Public Health; UC San Francisco Medical School), Summer 2013
39.	2013/2014	Jennifer Wang	"Engineering Learning: Cross-Community Design, Development, and Implementation of Engineering Design Challenges at a Science Center", Spring 2014
40.	2013/2014	Sara Samiphak	"Liver Fluke Infection and Fish Consumption in Khon Kaen, Thailand: A Case Study on Negotiating the Middle Ground between Eastern & Western Medicine", Spring 2014
41.	2013/2014	Mark Fuge	"Collaborative Design Informatics: Leveraging Big Data to Create Better Designs", Summer 2014
42.	2014/2015	Kimberly Lau	"Diversity in Design Teams: An Investigation of Learning Styles and their Impact on Team Performance and Innovation", Target: Summer 2015

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OTHER PH.D. THESES
ALICE M. AGOGINO SERVED AS READER (2nd or 3rd)

1987/88	Gaetano Borriello	"Reasoning about Circuit Interfaces and the Automatic Synthesis of Interface Transducers"
1987/88	Perry Lee McCarty, Jr.	"The Management of Uncertainties in Expert Systems"
1987/88	Eric Bier	"Snap Dragging: Interactive Geometric Design in Two and Three Dimension"
1988/89	Dave W. Halligan	"Managing and Documenting Unforeseen Site Conditions using Influence Diagrams"
1988/89	Dartikeya Mayaraman	"CODECS: A Mixed-Level Circuit and Device Simulator"
1989/90	Lung Albert Chen	"Knowledge-Based Retrieval of Information as a Process of Evidential Reasoning"
1989/90	Woo-Tsong Linn	"An Object-Oriented System for Knowledge-Based Production Scheduling"
1990/91	Gary S. May	"Automated Malfunction Diagnosis of Integrated Circuit Manufacturing Equipment"
1991/92	Marie Ellen desJardins	"A Model for Autonomous Learning in Probabilistic Domains"
1992/93	Shlomo Zilberstein	"Operational Rationality through Compilation of Anytime Algorithms"
1992/93	Luis Miguel Bozzo Rotondo	"Qualitative Reasoning about Structural Behavior for Conceptual Design"
1992/93	Adeel Najmi	"Management of Cycle Time in Semiconductor Wafer Fabrication"
1993/94	Cassandra T. Rogers	"Expert Systems Approach to Regional Evaluation of Debris Flow Hazards"
1994/95	Sovarong Leang	"A Control and Diagnostic System for the Photolithography Process Sequence"
1994/95	Asoke Kumar De	"Modeling and Optimization of Fine Grinding of Minerals in High-Pressure Roll Mill - Ball Mill Hybrid Communication Circuits"
1994/95	Brian C. Smith	"Implementation Techniques for Continuous Media Systems and Applications"

1995/96	Nestor V. Queipo	"On the Optimal Placement of Heat Sources in an Enclosure Based on Adaptive Search and Machine Learning"
1995/96	Vikram Vij	"Exploiting Parallelism in a Shared Disk Database System"
1996/97	Gitanjali Swamy	"Incremental Methods for Formal Verification and Logic Synthesis"
1996/97	Stephen Anthony Edwards	"The Specification and Execution of Heterogeneous Synchronous Reactive Systems"
1997/98	Peter Neuhaus	"Industrial Strength Human-Assisted Walking Robots"
1998/99	Brian M. Dennis	"CrossJam: A Language for Hypermedia Authoring"
1999/2000	Dawn Rickey	" The Role of Metacognition in Learning Chemistry, "
1999/2000	Jeanna Neefe Matthews	"Improving File System Performance with Adaptive Methods"
1999/2000	Adrian J. Isles	" Formal Verification Using Datapath Abstraction"
1999/2000	Blas Guerrero	"An Analysis of Academic Demographic and Non-Cognitive Factors that Influence Academic Performance During the Freshman Year in College"
2000/01	Douglas Clark Burton	"Scaffolding Knowledge Integration Through Curricular Depth"
2002/03	Hesham Mohamed Kamel	"The Integrated Communication 2 Draw"
2002/03	Zu-Hsu Lee	"Design and Analysis of Algorithms for Due Date Quotation"
2003/04	Michael Wetter	"Simulation-Based Building Energy Optimization" (pdf)
2004/05	Rodney Martin	"Optimal Prediction, Alarm, and Control in Buildings Using Thermal Sensation Complaints"
2004/05	Lixia Zhou	"Optical MEMS for Free-Space Communication"
2005/06	Pam Sirivedhin Ridgely	"A Method for Dynamic Modeling and Simulation of FlexibleBeams"
2006/07	Colin Thomas Milberg	"Application of Tolerance Management to Civil Systems"
2006/07	Jaewook Lee	"Design Collaboration as a Framework for Building Intelligent Environments"
2006/07	Youngung Shon	"Development and Evaluation of a Haptic Rendering System for Virtual Design Environments"

2006/07	Nathan Ken Ota	"The Application of Wireless Sensor Networks to Residential Energy Efficiency and Demand Response"
2007/08	Debbie Gahaton Jones	"Line-of-Sight Sealed Silicon Carbide Diaphrams for Harsh Environment Sensors"
2007/08	Priya Sreedharan	"Bayesian based design of real-time sensor systems for high-risk indoor contaminants"
2008/09	Xue Chen	"Demand Response-enabled Autonomous Control for Interior Space Conditioning in Residential Buildings"
2008/09	Tye Lawrence Rattenbury	"An Activity Based Approach to Context-Aware Computing"
2008/09	Stan Tuholski	"Transformation, Flow, and Value Constellations in AEC Projects"
2009/10	Florent Heidet	"Maximum Fuel Utilization in Advanced Fast Reactors without Actinides Separation"
2009/10	Corinne Reich-Weiser	"Decision-Making to Reduce Manufacturing Greenhouse Gas Emissions"
2010/11	Jessica Louis Baker Rivest	"Nanocrystal Photovoltaics: The Case of Cu2S-CdS"
2011/12	Johanna L. Mathieu	"Modeling, Analysis, and Control of Demand Response Resources"
2011/12	Isaac Liu	"Precision Timed Machines"
2012/13	Nancy Diaz-Elsayed	"The Development of Energy Models for Production Systems and Processes to Inform Environmentally Benign Decision-Making", Spring 2013
2012/13	Fatima Allyne	"Precipitation Effects in Ion Implanted Aluminum Nitride," Summer 2013
2013/14	Stefanie Lynn Robinson	"An Environmental and Economic Trade-off Analysis of Manufacturing Process Chains to Inform Decision Making for Sustainability," Fall 2013
2013/14	Sushrut S. Pavanaskar	"Improving Energy Efficiency in CNC Machining," Spring 2014
2013/14	Paz Arroyo	"Exploring Decision-Making Methods For Sustainable Design In Commercial Buildings," Spring 2014

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VISITING SCHOLARS AND POSTDOCTORAL RESEARCHERS
ALICE M. AGOGINO

1.	1987/89	Xio Wan Wang	Professor at Beijing Institute of Aeronautics and Astronautics, Beijing Peoples Republic of China. Fuzzy logic and supervisory control.
2.	Spring 1989	John S. Gero, Russell Severance Springer Professor	Professor of Architectural Science and Director of Research, University of Sydney, Sydney, Australia and Adjunct Professor of Architecture, Carnegie Mellon University. AI in Design.
3.	Spring 1989	Maria Angeles Gil	Professor from Department de Matematicas at the Universidad de Oviedo, Spain. Fuzzy logic and Bayes' networks.
4.	Spring 1989	Javier Sanchez-Reyes	Professor from ETSEIB, Polytechnical University of Catalonia, Barcelona, Spain. Bayes' networks and neural-fuzzy networks for diagnostics, sensor validation and supervisory control.
5.	1991-92	Xueli Yu	Professor of Computer Science from Taiyuan University of Technology, Shanxi, China. Diagnostics and artificial intelligence.
6.	Spring 1993	Michael Gerald Madden	Professor from University College, Ireland. Bayes' networks and probabilistic methods for diagnostics and monitoring.
7.	1994-95	Masao Arakawa	Professor from Waseda University, Japan. Fuzzy optimization using influence diagrams and design databases.
8.	1994-95	Luciano Sanchez-Ramos	Professor from Department de Matematicas at the Universidad de Oviedo, Spain
9.	Spring 1996	Thomas Larson	Researcher from Technical University of Denmark. Mult-sensor data fusion.
10.	Spring 1996	Akiko Ide	Researcher from NEC, Japan. User Interface Design for educational software environments.
11.	1997-99	Ronald M. Dolin	Researcher from Los Alamos National Laboratory, New Mexico. Bayes' Nets, influence diagrams and probabilistic methods for diagnostic and monitoring.

12.	1997-99	Susan Chao	Postdoctoral researcher from Engineering-Economic Systems, Stanford University. Decision analysis, equipment diagnostics, monitoring and warranty decision making.
13.	1998-2000	Janio Akamatsu	Professor from UNESP Universidade Estadual Paulista, Campus de Guarantingueta, Sao Paulo, Brazil. Engineering education, educational technology and educational assessment.
14.	1999-2000	Anita Flynn	Acting Assistant Professor. Research in Micromechanical Electronic Systems (MEMS) and teaching mechatronics design courses.
15.	2000-02	Shijun Qui	Professor from Xiamen University in China, Berkeley Scholars Program. Research on artificial intelligence, sensor fusion and supervisory control for mechanical systems diagnostics.
16.	2000-02	Chee Peng Lim	Fulbright Scholar and Professor of Electrical and Electronic Engineering, University of Science Malaysia, Engineering Campus. Research on neural-fuzzy intelligent systems for medical decision support.
17.	2000-02	Shu-Xun Chen	Professor in the School of Space Technology, Beijing University of Aeronautics and Astronautics and former Director of the Key Laboratory for Modern Design and Advance Manufactory at Guangxi University. Research on mechanical design and multiobjective optimization.
18.	2004-05	Juha Kela	VTT Finland, industrial visitor, mobile and embedded computing technologies in consumer products.
19.	2004-06	Xia Teng	Dr. Teng received her PhD in materials science and engineering from the Johns Hopkins University in 1993. Since graduating she has worked on medical information systems and several e-Learning initiatives.
20.	2005-06	Chiung-Hui Chiu	Dr. Chiu is a Professor in the Graduate Institute of Computer Science and Information Education at the National University of Tainan in Taiwan. Her main research interests focus on investigating the designs of computer-based systems, particularly for design and learning.

21.	2005-06	Jia-long Wu	Post-doctoral Researcher, computational linguistics, digital libraries.
22.	2006-07	Igor Verner	Dr. Verner is a Senior Lecturer in the Department of Education in Technology and Science at the Technion University in Israel. His research is in educational technology and learning environments for engineering.
23.	2007-08	Vincente Borja	Professor of Mechanical and Mechatronics Engineering, UNAM, Mexico City. Studied sustainable product design and manufacturing.
24.	2007-08	Erik Kolb	Visiting student, Aachen University, Germany. Design theory and methods.
25.	2007-09	Joceslise Jacques	Visiting student, Federal University of Rio Grande do Sul (UFRGS) - Brazil. Sustainable product design.
26.	2007-08	Aydin Taghizadeh	Visiting student, Chalmers University of Technology in Goteborg, Sweden. Green CAD.
27.	2009-10	Stefaan Simons	Professor of Chemical Engineering, University College London; grant from the Royal National Academy to study sustinable engineering and CO2 technologies.
28.	2010-11	Kyoung Jun Lee	Visiting professor from Kyung Hee University, South Korea, working on "Integration of Product, Service, and Business Model Development Methodology through Design and Service Science Approach".
29.	2010-11	Wang Hao	Visiting student from the University of Tokyo working on "Value Cognition System for Innovation Product Development and Chance Discovery for Decision-making".
30.	2010-11	Hal Aronson	Dr. Aronson is a visiting scholar from WE CARE Solar.
31.	2011-12	Stefano Moret	Visiting student from Padua University working on "Energy Harvesting & Data Analysis of Smart Lighting in Sutardja Dai Hall", 2011.
32.	2011-12	Yunlu Zhang	Visiting student from Wuhan University working on data mining and digital libraries.
33.	2012-13	Chunyan Liang	Lecturer in the School of Economics and Management in the North China Electric Power

			University, P.R.China working on digital libraries and sustainable product design and manufacturing.
34.	2013-14	Ying Tian	Lecturer in Mechanical Engineering at the Tianjin University working on methods for modeling a productâ€™s energy footprint, particularly in the early stages of the design process.
35.	2013-14	Yinan Lai	Program Director of the Mechanical Engineering Division at the National Science Foundation of China (NSFC). Prior to this appointment, she served as a Professor in Mechanical Engineering and Deputy Dean at the Harbin Institute of Technology in China. Her research involves design methods for digital design and virtual prototyping.
36.	2015	Syed Imran Ali	Doctoral Fellow, Clean Water in Refugee Camps, Blum Center for Developing Economies, UC Berkeley
37.	2015	Kweku Opoku-Agyemang	Doctoral Fellow, ITC and Democracy in Ghana, Blum Center for Developing Economies, UC Berkeley

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