RESEARCH AND EDUCATION GRANTS (1994-2016)

PI Status/ Year	Agency	Grant Title	Award
PI 1984/1990	NSF	Presidential Young Investigator Award	\$500,000.
PI 1994/97	NSF	Concept Database: A Design Information System for Concurrent Engineering with Application to Mechatronics Design	\$238,311.
PI 1994/95	NSF	Synthesis: Engineering Education Coalition grant (with 8 universities)	\$3,069,509.
PI 1995/96	NSF	Synthesis: Engineering Education Coalition grant (with 9 universities)	\$1,490,000.
PI 1995/96	CAL- TRANS (PATH)	PATH MOU-231: Intelligent Diagnosis Based on Validated Fused Sensor Data for Reliability and Safety Enhancement of Intelligent Vehicle Systems	\$136,903.
PI 1995/96	NEC	Various Donors Gift	\$10,000.
PI 1996/97	NSF	Synthesis: Engineering Education Coalition grant (with 9 universities)	\$1,400,000.
PI	John Wiley & Sons	Synthesis Gift	\$40,717.
PI 1997/98	NSF	Synthesis: Engineering Education Coalition grant (with 8 universities); NEEDS Supplement.	\$100,000.
PI 1997/2000	GE Fund	Integrating Calculus, Chemistry, Physics and Engineering Education through Technology Enhanced Visualization, Simulation and Design Cases and Outcomes Assessment. (\$450,000 over three years – 1997/98, 1998/99, 1999/2000; \$150,000 per year.) Co-PIs, Paul Gray and Buford Price.	\$450,000.
PI 1997/98	CALTRANS - PATH	PATH MOU-322: Intelligent Diagnosis Based on Validated Fused Sensor Data for Reliability and Safety Enhancement of Intelligent Vehicle Systems	\$177,903.

PI 1997/98	CA MICRO	"Development of Decision Strategies for Scheduling Outages of Power Plants"	\$14,426.
PI 1997/98	General Electric	Industry match to MICRO: "Development of Decision Strategies for Scheduling Outages of Power Plants"	\$35,000.
PI 1998/2001	NSF	"NSF Action Agenda: Expanding the National Engineering Education Delivery System as the Foundation for an On-Line Engineering Education Community". (\$800,000 over 3 years, 1998-2001).	\$800,000.
PI 1998/99	CALTRANS - PATH	PATH MOU-322: Intelligent Diagnosis Based on Validated Fused Sensor Data for Reliability and Safety Enhancement of Intelligent Vehicle Systems	\$34,000.
PI 1998/2000	NSF	"Using the National Engineering Education Delivery System as the Foundation for Building a Test-Bed Digital Library for Science, Mathematics, Engineering and Technology Education".	\$200,000.
PI 1998/2000	Engineering Information Foundation (EIF)	"Interactive Theater Program at UC Berkeley". (\$73,020 over 2 years; \$40,000 in 1998/99, \$33,020 in 1999/00).	\$73,020.
PI 1999-2001	NSF	"Developing a Prototype National Digital Library for Science, Mathematics, Engineering and Technology Education". (\$400,000 over 2 years, 1999-2001).	\$400,000.
Primary Auth Co-PI with James Casey) 1999/2005		SUPERB (Summer Undergraduate Program of Engineering Research at Berkeley): A Proposal for an NSF REU in Bioengineering. (\$295,000 total — \$59,000 per year for 5 years).	\$295,000.
PI 2000/2003	NSF	"Developing a Core Integration System for a National Science, Mathematics, Engineering and Technology Education Digital Library at www.smete.org".	\$846,616.
PI 2001/2003	NSF/Merlot	"Developing a Vision Support Planning Tool". (Two year subcontract to the Merlot project at the California State University system-wide).	\$76,499.
PI 2001/2003	NSF	"Collaborative Research: Developing a Learner- Centered Metathesaurus for Science, Mathematics, Engineering and Technology Education". (Two year collaborative project, \$108,766).	\$108,766.

PI 2001/2003	NSF	"Enhancing Interoperability of NSDL Collections and Services". (Two year collaborative project, \$1,000,000).	\$1,000,000.
PI 2001/2004	NSF/Merlot	"Online Tutorials for Peer Reviewers: Scaling the Peer Review Process for National STEM Education Digital Library Collections". (Two year subcontract to the Merlot project at the California State University System-wide, 2001/02, \$60,000).	\$60,000.
PI 2001/2004	NSF/Merlot	"The NSDL Collaboration Finder: Connecting Projects for Effective and Efficient NSDL Development". (Two year subcontract to the Merlot project at the California State University system-wide, 2001/02, \$130,000).	\$130,000.
PI 2002/2003	Discovery Grant, UC Office of the President	"Learning in the Palm of Your Hand: Workshop Opportunity Grant".	\$10,000.
PI 2002/2003	MICRO/GE	"MEMS "Smart Dust Motes" for Designing, Monitoring and Enabling Efficient Lighting". (\$27,000 UC Office of the President, Project MICRO; \$30,000 from General Electric, Corporate R&D 2002/03).	\$57,000.
PI 2002/2010	NCIIA & Lemelson Foundation	"Invention and Innovation in New Product Development: Freshman/Sophomore/Junior/Senior/ Graduate Course Sequence". (\$43,250 grant, 2002/2005).	\$43,250.
PI 2003/2007	NSF	"MEMS/NEMS Design Automation". (\$330,00 grant for three years).	\$330,000.
PI 2003/2005	NSF/ Exploratorium	"Exploratorium Online: Exhibit-based Science Learning and Teaching Digital Library". (Subcontract to the Exploratorium's NSF grant of the same title, \$126,597 2003/04 and \$31,929 2004/05).	\$158,526.
Sr. Personnel 2003/2005	NSF	"Targeted Research: Chemistry Digital Library". Two year grant with PI, Mark G. Kubinec and Co-PI, Alexander Pines, Chemistry. (My portion of the grant is \$66,224 (\$36,347 2003/04 and \$29,877 2004/05).	\$66,224.
PI 2004/2005	NCIIA & Lemelson Foundation	"The Shuttle-Tracking Service: Implementing Cost- Effective Location-Based Services"	\$19,989.
PI 2004-2009	NSF	Distinguished Teaching Scholar "Designing Technology for Diversity", 4 year award.	\$305,000.

PI 2004/2005	NASA AMES	"Integrated Systems Health Monitoring Using Smart Dust Mote Sensor Networks"	\$90,000.
PI 2004/2005	UC Energy Institute (UCEI)	"Intelligent Commercial Lighting: Demand-Responsive Conditioning and Increased User Satisfaction"	\$35,000.
PI 2004/2005	California Energy Commission Energy Innovations Small Grant (EISG) Program	"Efficient Lighting By Sensing And Actuating With MEMS 'Smart Dust Motes': A Feasibility Study"	\$74,010.
PI 2004/06	UCOP Discovery Grant	"Ubiquitous Digital Library Infrastructure to Support Mobile Learning"	\$89,215.
PI 2004/06	HP Match to the UCOP Discovery Grant	"Ubiquitous Digital Library Infrastructure to Support Mobile Learning"	\$135,000.
PI 2004/06	Ricoh Match to the UCOP Discovery Grant	"Ubiquitous Digital Library Infrastructure to Support Mobile Learning"	\$20,000.
PI 2004/2005	NCIIA & Lemelson Foundation	"Wireless Crop Protection"	\$15,900.
PI (with Co- PI Leslie Speer from CCA) 2004/2005	Proctor and Gamble/IDSA gift	"Interdisciplinary Student Design Collaborative Underserved Markets: Migrant Communities/Workers (California Central Valley)"	\$40,000.
PI 2005	NASA AMES	"Agent-Based Modeling of Human Collaboration with Intelligent Sensor Networks"	\$8,830.
PI 2005/2009	NSF, NCWIT	"Digital Library for the National Center for Women in Information Technology"	\$72,322.
PI 2005/2006	CISCO Systems/ NCWIT Gift	"Digital Library for the National Center for Women in Information Technology"	\$8,000.

PI 2005/2009	NSF	"A Comprehensive Pathway for K-Gray Engineering Education"	\$2,850,000.
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	t CITRIS "White Paper Competition"	"Mitigation of Water Scarcity in California Agriculture through Use of an Information Technology Platform for Environmental Data"	\$7 , 500.
PI, 2006/2007	Chancellor's Green Campus Fund Award	"Fifty Percent Energy Savings with Innovative Energy- Efficient Office Lighting"	\$4,700.
Co-PI (with Horvath, et al.)	Luce Foundation	"Sustainable Engineering through Green Design, Manufacturing and Social Infrastructures"	\$550,000.
PI, UCB 2007/2010	NSF	"BPC-DP: Practices, Aggregation, Infrastructure, and Retrieval Service (PAIRS) for Broadening Participation in Computing"	\$213,394.
PI 2008	Kauffman Foundation	"Evaluation of New Product Development and Sustainable Design"	\$28,645.
PI 2008/2010	NCIIA & Lemelson Foundation	"CARES: Community Assessment of Renewable Energy and Sustainability Project Proposal"	\$16,000.
PI	KAUST	"Research to Support the Development of a Sustainability Engineering Infrastructure in the Kingdom of Saudi Arabia"	\$120,000.
Co-PI 2008/2010	NSF	"Expanding the Accessibility of NSDL for Mobile Learning", PI, Kimiko Ryokai	\$150,000.
PI 2009/2011	NSF	"Expanding the Accessibility of NSDL for Mobile Learning"	\$470,997.
PI 2009/13	NSF	"Pilot: meta4acle - A Software Tool for Generating Metaphors, Stimulating Creativity and Framing Solutions"	\$237,159.

PI 2009/12	NSF	"Sustaining the Pathway for K-Gray Engineering Education"	\$470,997.
PI 2010-12	CITRIS	Center and Green IT for Native CARES Native American Community Assessment for Renewable Energy and Sustainability	\$73,216.
PI 2010/11	NCIIA	Lochlorine Chlorine Producer and Doser: Saving Lives through Safe Water.	\$20,000.
PI 2011/12	NASA Ames	Expanding NASA's Capacity in Wireless Sensor Networks: Smart Buildings and Space Exploration	\$109,814.
PI 2011/12	NCIIA	Student Ambassador Grant	\$2,500.
PI 2012/13	NSF	CNIC: U.SDanish 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	NSF	TheDesignExchange, an Interactive Portal for the	\$487,091.

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

	Cybersecurity		
PI 2016/17	Tech for Social Good, CITRIS	Helping Hands - Playground Edition	\$2,000
Co-PI (with PI Grace O'Connell and Co-PI Sanjay Joshi)	CITRIS Seed Funding	Million Hands: Prosthetic Hands for Children through an Open Source Platform, 3D Printers and Sensors	\$60,000

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 (1996/2001)	\$180,000.
1997/98	California State Legislature	Graduate Fellowships; California Legislative Grant (CLG)	\$245,000.
1997/98	Grad Division	Diversity Grants	\$2,500.
1997/98	State-wide MESA	Minority Engineering Program (MEP)	\$32,955.
1997/98	Sega Foundation	Youth Education & Health Foundation	\$10,000.
1997/98	State-wide MESA	Secondary Program Grant	\$205,000.

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