Donald Dabdub

Dept of Mechanical & Aerospace Engr.
University of California, Irvine
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Irvine, CA 92617
(949) 856-0847

Position: Professor VII

Birth: Masaya, Nicaragua. March 14, 1968

Citizenship: U.S.A.

Education:

Ph. D., Chemical Engineering 1995
California Institute of Technology

M. S., Chemical Engineering 1992
California Institute of Technology

B. S., Chemical Engineering 1990
Lehigh University

Professional Interests:

Atmospheric Sciences: Mathematical modeling of air pollution dynamics. Dynamics of atmospheric aerosols. Chemical reactions at gas-liquid interfaces. Impact of energy generation on air quality.

Computational Sciences: Applied mathematics. Numerical algorithms on massively parallel computers. Grid-based computations. Machine learning.

Academic Appmnts:

Professor 2005–present
Associate Dean, Undergraduate Education 2015–2021
Associate Professor 2001–2005
Assistant Professor 1995–2001
Mechanical and Aerospace Engineering
Advanced Power and Energy Program
University of California, Irvine

Awards and Honors:

Mechanical and Aerospace Engineering Professor of the Year	2019–2020
Tom Angell Faculty Mentoring Award	2018
Social Mobility Innovator Award	2018
Fellow, American Association for Aerosol Research	2016
Mechanical and Aerospace Engineering Professor of the Year	2014–2015
Senior Innovation in Teaching Award	2014
Mechanical and Aerospace Engineering Professor of the Year	2008–2009
Pi Tau Sigma Honorary Professor Award	2005
Gaspar de Portola International Fellowship	2002
UCI Project Prometheus Teaching Award	2001
National Science Foundation CAREER award	2000
W. E. Schiesser Distinguished Lecture, Lehigh University	1999
UCI Faculty Career Development Award	1997–1998

	William Corcoran Fellowship	1990–1995
	Tau Beta Pi National Engineering Honor Society	1987
	Phi Eta Sigma National Honor Society	1986
Professional Affiliations:	American Association for Aerosol Research Society of Hispanic Professional Engineers	
Advisory Role:	Board of Advisors. University of California, Riverside. Mechanical Engineering	2017–2021
	Electric Power Research Institute	2013
	Department of Energy. Environmental Molecular Sciences Laboratory (EMSL)	2013
	California Energy Commission: implications of natural gas interchangeability for California gas customers	2006–2010
	John Wayne Airport: air quality technical advisory committee	2005–2006
	Board of Advisors. University of California, Riverside. Mechanical Engineering	2004
	U. S. Department of Defense panel: military simulations on SPPs	2002
	Air Resources Board of California: the weekend ozone effect	2002
	Member of the U. S. Department of Energy panel: tropospheric aerosol program	2001
Consulting:	Government: Academic: Report to the UC Davis Vice Chancellor to review the UC Davis Air Quality Research Center. Paid.	2021
	Environmental Protection Agency. Paid.	2015
	Academic: Report to the UC Davis Vice Chancellor to review the UC Davis Air Quality Research Center. Paid.	2014
	Industry: Mitsubishi Electric & Electronics USA, Inc. Paid.	2009
	Government: California Air Resources Board. Paid.	2001
	Government: Environmental Protection Agency. Paid.	1999
Professional Offices:	Board of Directors, American Association for Aerosol Research.	2014–2017
	Awards Committee, Hispanic Engineer National Achievement Awards (HENAAC)	2016
	Awards Committee, American Association for Aerosol Research.	2013–2016
	Director Internet Committee, American Association for Aerosol Research.	2003–2005
	Member Internet Committee, American Association for Aerosol Research.	2002–2003
	Atmospheric Chemistry Committee, American Meteorological Society.	1999–2003

Professional Service:

Conference Organizer

41st Annual American Association for Aerosol Research Conference.
Portland, OR. October, 2023.

40th Annual American Association for Aerosol Research Conference.
Raleigh, NC. October, 2022.

39th Annual American Association for Aerosol Research Conference.
Virtual Meeting. October, 2021.

38th Annual American Association for Aerosol Research Conference.
Virtual Meeting. October, 2020.

37th Annual American Association for Aerosol Research Conference.
Portland, OR. October, 2019.

10th International Aerosol Conference.
St. Louis, MO. September, 2018.

36th Annual American Association for Aerosol Research Conference.
Raleigh, NC. October, 2017.

35th Annual American Association for Aerosol Research Conference.
Portland, OR. October, 2016.

34th Annual American Association for Aerosol Research Conference.
Minneapolis, MN. October, 2015.

33rd Annual American Association for Aerosol Research Conference.
Orlando, FL. October, 2014.

32nd Annual American Association for Aerosol Research Conference.
Portland, OR. October, 2013.

31st Annual American Association for Aerosol Research Conference.
Minneapolis, MN. October, 2012.

2011 International Aerosol Modeling Algorithms.
Davis, CA. December, 2011.

30th Annual American Association for Aerosol Research Conference.
Orlando, FL. October, 2011.

2011 International Colloquium on the Dynamics of Explosions and Reactive Systems.
Irvine, CA. July, 2011.

29th Annual American Association for Aerosol Research Conference.
Portland, OR. October, 2010.

American Association for Aerosol Research 2010 Specialty Conference. Air Pollution and Health: Bridging the gap from sources to health outcomes.
San Diego, CA. March, 2010.

28th Annual American Association for Aerosol Research Conference.
Minneapolis, MN. October, 2009.

27th Annual American Association for Aerosol Research Conference.
Orlando, FL. October, 2008.

International Aerosol Modeling Algorithms Conference.
Davis, CA. December, 2007.

26th Annual American Association for Aerosol Research Conference.
Reno, NV. September, 2007.

2006 International Aerosol Conference.
St. Paul, MN. September, 2006.

24th Annual American Association for Aerosol Research Conference.
Austin, TX. October, 2005.

American Association for Aerosol Research 2005 Specialty Conference. Particulate Matter Supersites Program and Related Studies.
Atlanta, GA. February, 2005.

22nd Annual Symposium on Kinetics and Photochemical Processes in the Atmosphere.
Irvine, CA. Conference Chairman. February, 2005.

23rd Annual American Association for Aerosol Research Conference.
Atlanta, GA. October, 2004.

22nd Annual American Association for Aerosol Research Conference.
Anaheim, CA. October, 2003.

Workshop on Chemistry at Interfaces.
Newport Beach, CA. June, 2004.

21st Annual American Association for Aerosol Research Conference.
Charlotte, NC. October, 2002.

19th Annual American Association for Aerosol Research Conference.
St. Louis, MO. November, 2000.

The Future of Problem Solving Environments. National Science Foundation—Division of Advanced Scientific Computing.
Irvine, CA. August, 1996.

Session Chairman

Science and Societal Impacts of Air Quality and Climate Issues: Past, Present, and Future. Irvine, CA.	2017
National Academy of Sciences US-Iran Symposium on Air Pollution in Megacities. Irvine, CA.	2013
AirUCI annual workshop. Laguna Beach, CA.	2013
AirUCI annual workshop. Laguna Beach, CA.	2012
2011 International Aerosol Modeling Algorithms. Davis, CA.	2011
30^{th} Annual American Association for Aerosol Research Conference. Orlando, FL.	2011
Brazilian Association for Aerosol Research. Rio de Janeiro, Brazil.	2011
AirUCI annual workshop. Laguna Beach, CA.	2011
AirUCI annual workshop. Laguna Beach, CA.	2010
AirUCI annual workshop. Laguna Beach, CA.	2009
AirUCI annual workshop. Newport Beach, CA.	2008
AirUCI annual workshop. Christchurch, New Zealand.	2006
AirUCI annual workshop. Laguna Beach, CA.	2006
AirUCI annual workshop. Prague, Czech Republic.	2005
Workshop Chemistry at Interfaces. Newport Beach, CA.	2004
Annual American Association for Aerosol Research Conferences.	1998–2004

Peer Evaluator

Assisted a top 50 engineering school in the evaluation of one of their faculty being promoted to full professor. 2020.

Assisted a top 25 school in Asia in the tenure evaluation of one of their faculty. 2018.

Assisted a top 50 engineering school in the evaluation of a senior professor during their recruitment process. 2018.

Assisted a top 50 engineering school in the evaluation of one of their faculty being promoted to full professor. 2017.

Assisted a top 100 engineering school in the evaluation of one of their faculty being promoted to full professor. 2017.

Assisted a top 50 engineering school in the evaluation of one of their faculty being promoted to full professor. 2015.

Assisted a top 100 engineering school in the tenure evaluation of one of their faculty. 2014.

Assisted a top 50 engineering school in the tenure evaluation of one of their faculty. 2012.

Assisted an engineering school in the tenure evaluation of one of their faculty. 2010.

Assisted a top 5 engineering school in the tenure evaluation of one of their faculty. 2009.

Assisted a top 100 department of geological sciences in the tenure evaluation of one of their faculty. 2008.

Assisted a department of mathematics in the tenure evaluation of one of their faculty. 2008.

Assisted a top 50 engineering school in the tenure evaluation of one of their faculty. 2006.

Assisted a top 100 engineering school in the tenure evaluation of one of their faculty. 2005.

Journals Served as Reviewer

Aerosol Science and Technology
Applied Numerical Mathematics
Atmospheric Chemistry and Physics
Atmospheric Environment
Environmental Engineering and Management Journal
Environmental Science & Technology
Geophysical Research Letters
International Journal of Electrical Power & Energy Systems
International Journal of Environment and Pollution
International Journal of Sustainable Transportation
Journal of Environmental Engineering and Science
Journal of Geophysical Research
Journal of the Air & Waste Management Association
Global Biogeochemical Cycles
Nature
Nature Geoscience
Numerical Methods for Partial Differential Equations
Proceedings of the National Academy of Sciences
Royal Meteorological Society
Science
Water, Air and Soil Pollution

Agencies Served as Reviewer

American Association for the Advancement of Science
American Chemical Society—Petroleum Research Fund
Canadian Foundation for Climate and Atmospheric Sciences
Danish Council for Independent Research - Natural Sciences
Environmental Protection Agency — Science to Achieve Results (STAR) Graduate Fellowship Program
French Research Agency
Israel Science Foundation
National Science Foundation—Division of Atmospheric and Geospace Sciences
National Science Foundation—Division of Atmospheric Sciences
National Science Foundation—Division of Chemistry
National Science Foundation—Division of Computational Mathematics
National Science Foundation—Division of Environmental Technology
National Science Foundation—Division of Geosciences
National Science Foundation—Division of Mathematical Sciences
National Science Foundation—Division of Polar Programs
National Science Foundation—Faculty Early Career Development (CAREER) program
National Science Foundation—Major Research Instrumentation Program
National Science Foundation—Office of International Science and Engineering
NASA: written reviewer and member of panel jury
Research Grants Council (RGC) of Hong Kong
Tahoe Science Consortium

Publishers Served as Reviewer

Cambridge University Press
CRC Press
Elsevier
Prentice Hall

Advisees: **Ph.D. Students**

Amber Fong, Member of advancement to candidacy committee. Advanced 2022.

Kai Wu, Member of preliminary exam committee. 2021.

Van Thomas Wifvat, Member of advancement to candidacy committee. Advanced 2018.

Anirudh Bharadwaj, Member of advancement to candidacy committee. Advanced 2018.

Jeremy R. Horne, Advisor. Thesis: Atmospheric modeling of gas-phase pollutants, new particle formation, and aerosol aging under future climate and emissions scenarios. Graduated 2018.

Brendan P. Shaffer, Member of advancement to candidacy committee. Advanced 2017.

Jin Dang. Thesis: Himalayan field measurements of in-use solid fuel cookstove emissions: data collection and analysis. Member of doctoral committee. Graduated 2016.

Andrés Colorado. Thesis: Pollutant emissions and lean blowoff limits of ultra-fuel flexible burners operating on gaseous renewable and fossil fuels. Member of doctoral committee. Graduated 2016.

Michael Mac Kinnon. Thesis: Assessment of emerging regional air quality (AQ) and greenhouse gas (GHG) impacts and potential mitigation strategies in U.S. Energy sectors. Member of doctoral committee. Graduated 2015.

Howard H. Lee. Thesis: NOx emissions characteristics in the wake of an air jet injected into a fuel rich vitiated crossflow. Member of doctoral committee. Graduated 2014.

Brian Tarroja. Thesis: Advising and optimizing the deployment of sustainability-oriented technologies in the integrated electricity, light-duty transportation, and water supply system. Member of doctoral committee. Graduated 2014.

Joseph J. Ensberg. Thesis: Studies of ambient organic and inorganic aerosol in Southern California. Member of doctoral committee. California Institute of Technology. Graduated 2014.

Andrés Colorado, Member of advancement to candidacy committee. Advanced 2014.

Jin Dang, Member of advancement to candidacy committee. Advanced 2014.

Albert Jordá Juanós, Member of advancement to candidacy committee. Advanced 2014.

Alireza Kalantari, Member of advancement to candidacy committee. Advanced 2014.

Jordan Schnell, Member of advancement to candidacy committee. Advanced 2013.

Ghazal Razeghi. Thesis: The development and evaluation of a highly-resolved California electricity market model to characterize the temporal and spatial grid, environmental, and economic impacts of electric vehicles. Member of doctoral committee. Graduated 2013.

Alex Cohan, Advisor. Thesis: Characterization of air pollution at high-resolution scales and health impact implications. Post-UCI: Lake Michigan Air Directors Consortium (LADCO). Graduated 2012.

Andrew Martinez. Thesis: Simulation of dynamic operation and coke-based degradation for SOFC-GT-powered medium and long haul locomotives. Member of doctoral committee. Graduated 2011.

Wayne L. Chang, Advisor. Thesis: Modeling atmospheric secondary organic aerosol dynamics through chemistry, emissions, and partitioning theory. Post-UCI: Postdoctoral scholar, University of Illinois at Urbana Champaign. Graduated 2011.

Kyung Man Kim. Thesis: The effects of carbon-in-ash on mercury capture from flue gas. Member of doctoral committee. Graduated 2010.

Paul M. Nissenson, Advisor. Thesis: The role of interfacial processes in the photochemical dynamics of aerosols. Post-UCI: Assistant Professor, Mechanical Engineering, Cal Poly Pomona. Graduated 2009.

Pedro Jiménez Guerrero. Thesis: Air quality modeling in very complex terrains: ozone dynamics in the northeastern Iberian peninsula. Member of doctoral committee. Universitat Politècnica de Catalunya. Departament de Projectes d'Enginyeria. Graduated 2009.

Satish Vutukuru, Advisor. Thesis: Modeling and analysis of secondary particulate matter formation in the atmosphere. Post-UCI: ICF International. Graduated 2008.

Marc Carreras-Sospedra, Advisor. Thesis: Air quality modeling of future electricity production. Post-UCI: Postdoctoral scholar, CES Laboratory. Graduated 2007.

Marco A. Rodriguez, Advisor. Thesis: Dynamics of multicomponent size-resolved aerosol dynamics in a global chemical transport model. Post-UCI: Cooperative Institute for Research in the Atmosphere. Graduated 2004.

Eladio M. Knipping, Advisor. Thesis: Modeling urban coastal chemistry. Post-UCI: Project Manager, Air Quality, Health & Risk Assessment. Electric Power Research Institute. Graduated 2002.

Khoi Nguyen, Advisor. Thesis: Mathematical modeling of air pollution dynamics. Post-UCI: Prof. of Science and Mathematics, Columbia College (Chicago). Graduated 2002.

Robert J. Griffin. Thesis: Experimental and computational studies of secondary organic aerosol formation. Member of doctoral committee. California Institute of Technology. Graduated 2000.

Jay R. Odum. Thesis: Secondary organic aerosol formation and gas/aerosol partitioning. Member of doctoral committee. California Institute of Technology. Graduated 1998.

M.S. Students

Nicholas A. Oune, Member of master committee. Graduated 2021.

Yeseul (Lyn) Lee, Advisor. Graduated 2020.

Shaurya Johari, Advisor. Graduated 2020.

Fabian Muresan, Advisor. Graduated 2019.

James V. Soukup, Member of master committee. Graduated 2019.

Guillem Benosa-Espinet, Advisor. Graduated 2017.

Sarah M. Wang, Member of master committee. Graduated 2017.

Alejandra Cervantes, Member of master committee. Graduated 2017.

Kate E. Forrest, Member of master committee. Graduated 2016.

Ken Chen, Advisor. Graduated 2015.

Sara Rahiminejad, Advisor. Graduated 2015.

Jeremy R. Horne. Advisor. Graduate 2015.

Alicia Tan, Member of master committee. Graduated 2013.

Jeff Ngarmboonta, Advisor. Post-UCI: Meridian Link. Graduated 2013.

Brian Tarroja, Member of master committee. Graduated 2011.

Fernan Saiz-Poyatos, Advisor. Post-UCI: Doctoral studies at UCI. Graduated 2011.

Alex Cohan, Advisor. Post-UCI: Doctoral studies at UCI. Graduated 2010.

Wayne L. Chang, Advisor. Post-UCI: Doctoral studies at UCI. Graduated 2010.

Paul M. Nissenson, Advisor. Post-UCI: Doctoral studies at UCI. Graduated 2007.

Nasser Abbasi, Advisor. Graduated 2006.

Marc Carreras-Sospedra. Graduate 2005.

Marco A. Rodriguez. Graduated 2001.

Tzvetan Emilov Sariyski. Graduated 2000.

Khoi H. Nguyen. Graduated 1999.

Eladio M. Knipping. Graduated 1999.

Amy L. Schmieder, Advisor. Graduated 1998.

Undergraduate Students

Dahm, Douglas W. 2020–2021.

Wateska, James D. 2020–2021.

Palafoutas, Jonathan L. 2019–2020.

Bonnie, Nolan R. 2018–2020.

Paradise, Andre. 2018–2020.

Hince, Samuel. 2018-2019.

Gurnard, Nicholas K. 2018.

Polcyn, Matthew J. 2018.

Balat Garcia, Pau. 2017.

Condie, James. 2017.

Muresan, Fabian 2017.

Soukup, James V. 2017.

Lee, Justin Dong-Il. 2016.

Soroka, Emiko Lynn. 2016.

Tran, Daniel. 2016.

Xing, Haosen. 2016.

Ly, Braveson. 2015–2016.

Siino, Christopher Michael. 2015–2016.

Tang, Jonathan H. 2015–2016.

Boado, Ethan Sullivan. 2013–2016.

Khechadoorian, Zepyoor. 2014–2015.

Lau, Raymond. 2013–2015.

Ly, Viet Thanh. 2015–2015.

Trejo, Roberto Javier. 2014–2015. Post-project: continue undergraduate studies at UCI, Mechanical and Aerospace Engineering.

Defuria, Dean Anthony. 2013–2014. Post-project: continue undergraduate studies at UCI, Mechanical and Aerospace Engineering.

Zack, Darren. 2012–2014. Post-UCI: industry.

Donikian, Vatche. 2012–2013. Post-project: continue doctoral studies at UCI, Mechanical and Aerospace Engineering.

Jani, Aditya. 2012–2013. Post-UCI: doctoral studies at Rice University, Civil and Environmental Engineering.

Horne, Jeremy R.. Graduated 2012. Post-UCI: doctoral studies at UCI, Mechanical and Aerospace Engineering.

Sale, Kevin. 2011–2012. Post-project: continue undergraduate studies at UCI, Mechanical and Aerospace Engineering.

Chen, Lee-Huang. 2010–2011. Post-UCI: doctoral studies at UC Berkeley, Mechanical Engineering.

Ensberg, Joseph. Graduated 2009. Post-UCI: doctoral studies at Caltech, Chemical Engineering.

Wilschke, Jeff. Graduated 2009. Post-UCI: graduate studies at UCLA, Aerospace Engineering.

Chang, Wayne. Graduated 2006. Post-UCI: doctoral studies at UCI, Mechanical and Aerospace Engineering.

Allen, William. 2004–2005. Post-UCI: undergraduate studies at the University of Nottingham (England).

Carmody, Kevin . Graduated 2005. Post-UCI: industry.

Regele, Jonathan. Graduated 2001. Post-UCI: doctoral studies at the University of Colorado, Theoretical Physics.

Worsley, Scott. Graduated 2001. Post-UCI: undergraduate studies at Harvard University, Mathematics.

Leverkuehn, Chris P. Graduated 2000. Post-UCI: graduate studies at King's College (England), Applied Mathematics.

Other Academic Advising

Matthew L. Dawson. Research Scientist.	2019–present
Shupeng Zhu. Post-doctoral researcher.	2016–present
María E. Huertas-Bolaños. Post-doctoral researcher.	2019
Sangjin Kim. Research Scientist.	2018–2019
Jeremy R. Horne. Post-doctoral researcher.	2018
Marc Carreras-Sospedra. Research Scientist.	2012–2018
Eduardo Martins. Research Scientist.	2016–2017
Matthew L. Dawson. Post-doctoral researcher.	2014–2016
Andrew Martinez. Post-doctoral researcher.	2011–2014
Jialu Xu. Visiting doctoral student.	2013
Oriol Jorba-Casellas. Post-doctoral researcher.	2011 and 2013
Marc Carreras-Sospedra. Post-doctoral researcher.	2007–2012
Paul Nissenson. Post-doctoral researcher.	2009–2011
Eva Melgar-Paniagua. Visiting doctoral student.	2011
María Gonçalves Ageitos. Visiting post-doctoral researcher.	2010
María Teresa Pay. Visiting doctoral student.	2009
Prasad Pokkunuri. Post-doctoral researcher.	2008
Daniel Packwood. Visiting doctoral student.	2008
Khoi Nguyen. Post-doctoral researcher.	2004–2005
Angel Jimenez. Post-doctoral researcher.	2003–2004
Marco Rodríguez. Post-doctoral researcher.	2004
Eladio Knipping. Post-doctoral researcher.	2003
Pedro Jimenez. Visiting doctoral student.	2002

Extramural Funding:

- Atmospheric modeling algorithms for massively parallel architectures. Environmental Protection Agency subcontract PC180084. 1995–1996. Monetary Level: $25,000. Role: Co-PI.
- Environmental Protection Agency. 288 hours of computer time on the Cray C90 Supercomputer. 1995–1996. Role: PI.
- Environmental Protection Agency. Unlimited computer time on the Cray T3D Supercomputer. 1995–1996. Role: PI.
- Integration of Problem Solving Environments on air quality models. National Science Foundation. 1996–1997. Monetary Level: $135,000. Role: Co-PI.
- Dynamics of ozone in the San Joaquin Valley of California. Exxon Educational Foundation. 1997. Monetary Level: $15,000 overhead free. Role: PI.
- Impact of air quality on global climate change. EPRI. 1997–1998. Monetary Level: $12,600. Role: PI.
- Mathematical modeling of air toxic dynamics. Toxic Substance Research Program. 1997–1998. Monetary Level: $12,600. Role: PI.
- Dynamics of ozone in the San Joaquin Valley of California. Exxon Educational Foundation. 1998. Monetary Level: $10,000 overhead free. Role: PI.
- Center for Advanced Computing Research. 100,000 node-hours of computer time per quarter on the Intel Touchstone Delta Supercomputer. 1995–1998. Role: PI.
- Center for Advanced Computing Research. 5120 node-hours of computer time per quarter on the Intel Paragon Supercomputer. 1995–1998. Role: PI.
- Integration of Problem Solving Environments on air quality models. National Science Foundation. 1997–1999. Monetary Level: $35,000. Role: Co-PI.
- Laboratory and modeling studies of atmospheric chlorine: formation of due to sea-salt particles and environmental impact. University of California Council on Research, Computing and Library Resources. 1999–2000. Monetary Level: $20,000. Role: PI.

- Ozone and fine particle formation in California and in the Northeastern United States. Environmental Protection Agency. 1998–2001. Monetary Level: $139,500. Role: Co-PI.
- Laboratory studies of the role of halogen chemistry in the formation and fate of ozone in the remote and polluted troposphere. U. S. Department of Energy. 1998–2001. Monetary Level: $650,750. (Most of the funds are to be used for equipment in the school of Chemistry. $30,611 are under my discretionary control.) Role: Co-PI.
- The formation and fate of gaseous nitrous acid (HONO): A key component in determining tropospheric ozone and fine particles. California Air Resources Board. 1998–2001. Monetary Level: $298,271. Role: Co-PI.
- Computational implementation of a size and chemically resolved aerosol chemical transport model for the global troposphere. National Partnership for Advanced Computational Infrastructure (NPACI), National Science Foundation. 10,000 node-hours of computer time on the IBM SP, and 500 node-hours on the Cray SV1. 2000–2001. Role: PI.
- UCI Desktop Computing Award. March 2001. Monetary Level: $2,125. Role: PI.
- The reaction of NaCl particles with NO3/N2O5: a potential source of nighttime chlorine compounds. Division of Atmospheric Sciences, Atmospheric Chemistry, National Science Foundation. 2000–2002. Monetary Level under my discretionary control: $98,000. Role: Co-PI.
- Chlorine emissions from activated sea-salt aerosols and their potential on ozone. California Air Resources Board. 2001–2002. Monetary Level: $15,000. Role: PI.
- Development of a new generation atmospheric model: assessment of energy generation impacts and alternative strategies. Link Foundation. 2001–2002. Monetary Level: $20,000. Role: PI.
- Modeling the dynamics and chemistry of atmospheric aerosols. National Science Foundation. 1998–2002. Monetary Level: $160,000. Role: PI.
- Ozone weekend effect. California Air Resources Board. 2001–2002. Monetary Level: $7,500. Role: PI.
- The National Partnership for Advanced Computational Infrastructure. National Science Foundation. 1997–2002. Monetary Level: $50,000. Role: Co-PI.
- Impact of altering NO/NO2 splits in NO_x emissions from trap-equipped diesel sources using 2010 emission inventory estimates. California Air Resources Board. 2002–2003. Monetary Level: $35,000. Role: PI.
- Modeling inorganic and organic atmospheric aerosols. Sub-contract University of Houston. 2002–2003. Monetary Level: $80,000. Role: PI.
- Mathematical modeling of particulate matter in Houston. Sub-contract University of Houston. 2002–2003. Monetary Level: $160,693. Role: PI.
- Mathematical modeling of secondary organic aerosol. Electric Power Research Institute. 2003. Monetary Level: $15,000. Role: PI.
- CAREER: Modeling multicomponent size-resolved aerosol dynamics in a global chemical transport model. National Science Foundation. 2000–2005. Monetary Level: $338,784.00. Role: PI.
- Computational simulation of the atmospheric chemistry of alkanes. Sub-contract University of New Hampshire. 2005. Monetary Level: $10,000. Role: consultant.
- Modeling Analyses in Southern California in Support of SECA. California Air Resources Board. 2005–2006. Monetary Level: $50,000. Reduced overhead. Role: PI.
- Air quality impact of distributed power generation. California Energy Commission. 2002–2006. Monetary Level under my discretionary control: $698,689. Role: Co-PI.
- UCI Desktop Computing Award. 2007. Monetary Level: $1,700. Role: PI.
- Air quality impacts of distributed generation in the Eastern United States. Electric Power Research Institute. 2007. Monetary Level: $10,000. Role: PI.

- How new chemistry findings affect our understanding of the weekend effect—A modeling study. California Air Resources Board. 2005–2007. Monetary Level: $150,000. Role: PI.
- Determining relative air quality impacts of three personal vehicle options in 2010. Toyota Motor Sales. 2006–2007. Monetary Level: $53,107. Role: Co-PI.
- Air quality impact of distributed power generation in the San Joaquin Valley of California. California Air Resources Board. California Energy Commission. 2006–2008. Monetary Level: $480,000. Role: Co-PI.
- An integrated approach to understanding the air-water interface in atmospherically relevant systems. National Science Foundation. 2002–2008. Monetary Level: $3,519,248. Role: Co-PI.
- N_2O_5 issues on air quality modeling. California Air Resources Board. 2007–2008. Monetary Level: $15,000. Role: PI.
- Air oxidants increase bioavailability of lead house paint leading to increased childhood lead poisoning in Los Angeles County, California. Housing and Urban Development. 2007–2009. Monetary Level: $745,471. Role: Co-PI.
- Impacts of excited NO2 on ozone production. Undergraduate Research Opportunities Program. University of California, Irvine. 2008–2009. Monetary Level: $200. Role: Faculty Advisor.
- The Henry Samueli School of Engineering Council on Research and Computing and Libraries (CORCL) Research and Travel. 2009. Monetary Level: $614. Role: PI.
- Modeling population exposure to key air pollutants in communities adjacent to the ports of Los Angeles and Long Beach. Environment Institute. 2009. Monetary Level: $31,000. Role: PI.
- Plug-in hybrid vehicles. California Air Resources Board. 2007–2010. Monetary Level: $1,200,000. Role: Co-PI.
- Evaluation of the impact of LNG fuel variability on ambient air quality. California Energy Commission. 2008–2010. Monetary Level: $100,000. Role: PI.
- California-Catalonia Visiting Scholar Program. 2011. Monetary Level: $2,992. Role: PI.
- Local distributed generation impacts on regional air quality. California Energy Commission. 2009–2011. Monetary Level: $125,000. Role: PI.
- Effects of climate change and greenhouse gas mitigation strategies on air quality in the U.S. Environmental Protection Agency. 2009–2012. Monetary Level: $600,000. Role: Co-PI.
- Air quality and greenhouse gas impacts of renewable power in California. California Energy Commission. 2010–2013. Monetary Level: $500,000. Role: Co-PI.
- Development of a model to predict pollutant emissions and air quality based on variations in the quality of pipeline natural gas. California Air Resources Board. 2012–2013. Monetary Level: $ 149,907. Role: PI.
- Air quality and GHG impacts of more renewable electric future. California Energy Commission. 2010–2014. Monetary Level: $499,980. Role: Co-PI.
- Energy, air quality, water and climate change co-benefits of renewable generation and fuels roadmap. California Energy Commission. 2011–2014. Monetary Level: $157,966. Role: Co-PI.
- Economically viable strategies for conversion of biogas and biomass to power that facilitate California air quality goals. California Energy Commission. 2011–2014. Monetary Level: $397,236. Role: Co-PI.
- Assessment of the emissions and energy impacts of biomass and biogas use in California. California Air Resources Board. 2012–2014. Monetary Level: $142,497. Role: PI.
- A comprehensive approach to understanding chemistry at interfaces and atmospheric implications. National Science Foundation. 2009–2015. Monetary Level: $9,984,244. Role: Co-PI.

- Enhancement of the TEMPLES model to accommodate fugitive emissions from natural gas production, processing, transmission and distribution in California. California Air Resources Board. 2014–2016. Monetary Level: $60,000. Role: PI.
- Implementing particle-resolved aqueous phase chemistry into PartMC-MOSAIC for a detailed treatment of aerosol-cloud interactions. National Science Foundation. 2015–2016. Monetary Level: $41,085. Role: PI.
- Development of the next generation air quality model - new approaches to parallelization and portability. Council on Research Computing and Libraries. 2015–2016. Monetary Level: $10,000. Role: PI.
- Partnership with Rice University. External Partners Program. 2015–2016. Monetary Level: $4,913. Role: PI.
- Photodegradation of oxygenated polycyclic aromatic hydrocarbons on environmental interfaces. National Science Foundation. Chemistry Division. 2012–2016. Monetary Level: $80,000. Role: PI.
- Sensitivity analyses for distributed generation scenarios. Electric Power Research Institute. 2016. Monetary Level: $30,000. Role: PI.
- Current trends and future air quality impacts of small-scale distributed generation. Electric Power Research Institute. 2013–2016. Monetary Level: $170,000. Role: PI.
- Collaborative Research: The role of singlet molecular oxygen in urban atmospheres rich in polycyclic aromatic hydrocarbons. National Science Foundation. 2016–2019. Monetary Level: $80,000. Role: PI.
- Air quality impacts of fuel cell electric hydrogen vehicles. Undergraduate Research Opportunities Program. 2019. Monetary Level: $1,500. Role: Faculty Advisor.
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A71 Development of an air quality model for particle formation from sulfur compounds and amines. 32nd Annual Conference of the American Association for Aerosol Research. Portland, OR. October, 2013.

A72 New particle formation from methanesulfonic acid, ammonia and amines: developing a mechanistic basis for global models. U.S. Department of Energy's Atmospheric System Research 2014 Science Team Meeting. Potomac, MD. March, 2014.

A73 Particle formation from methanesulfonic acid and ammonia/amines via laboratory experiments, ab initio calculations, and modeling studies. 33rd Annual Conference of the American Association for Aerosol Research. Orlando, FL. October, 2014.

A74 Effects of global warming mitigation strategies in major energy sectors on primary and secondary aerosol. 33rd Annual Conference of the American Association for Aerosol Research. Orlando, FL. October, 2014.

A75 Contribution of biomass use for renewable energy to particulate matter formation. 33rd Annual Conference of the American Association for Aerosol Research. Orlando, FL. October, 2014.

A76 Impacts on air quality by photosensitized production of singlet molecular oxygen by PAHs and oxy-PAHs in the lower atmosphere: an experimental and computational modeling approach. American Geophysical Union Fall Meeting. San Francisco, CA. December, 2014.

A77 Air quality assessment of alternative fuels for low carbon fuel standards. CRC Mobile Source Air Toxics Workshop. Sacramento, CA. February, 2015.

A78 Impact of organosulfur compounds at the marine/urban interface in a decreasing SO2 world. 249th American Chemical Society National Meeting & Exposition. Denver, CO. March, 2015.

A79 Air emissions from biopower production. 2015 International Emissions Inventory Conference. Air Quality Challenges: Tackling the Changing Face of Emissions. San Diego, CA. April, 2015.

A80 Changes in emissions due to GHG mitigation strategies. 2015 International Emissions Inventory Conference. Air Quality Challenges: Tackling the Changing Face of Emissions. San Diego, CA. April, 2015.

A81 Addressing air quality issues of biopower in California. 2015 Environmental Vision—An International Electricity Sector Conference. Crystal City, VA. May, 2015.

A82 Regional and near field air quality implications with wide spread deployment of DG/CHP in California. ASME Power and Energy 2015. San Diego, CA. June, 2015.

A83 Impact of global climate change on ozone, particulate, and secondary organic aerosol concentrations in California: a model perturbation analysis. 34th Annual Conference of the American Association for Aerosol Research. Minneapolis, MN. October, 2015.

A84 Dynamics of aromatic-derived SOA in the South Coast Air Basin of California. 34th Annual Conference of the American Association for Aerosol Research. Minneapolis, MN. October, 2015.

A85 Aerosol mixing state impacts on aqueous phase chemistry. American Meteorological Society's 18th Conference on Atmospheric Chemistry. New Orleans, LA. January, 2016.

A86 Effects of ammonia on SOA formation and composition. International Global Atmospheric Chemistry (IGAC) Project 2016 Science Conference. Breckenridge, CO. September, 2016.

A87 Particle-resolved modeling of in-cloud chemistry. 35th Annual Conference of the American Association for Aerosol Research. Portland, OR. October, 2016.

A88 Impact of ammonia on dynamics of anthropogenic SOA formation and composition. 35th Annual Conference of the American Association for Aerosol Research. Portland, OR. October, 2016.

A89 Reactive uptake of ammonia by biogenic and anthropogenic organic aerosols. 254th American Chemical Society Fall National Meeting & Exposition. Washington, DC. August, 2017.

A90 Effect of aerosol water on chemical composition and aging of organic aerosols. 36th Annual Conference of the American Association for Aerosol Research. Raleigh, NC. October, 2017.

A91 Reactive uptake of ammonia by secondary organic aerosols: implications for air quality. 36th Annual Conference of the American Association for Aerosol Research. Raleigh, NC. October, 2017.

A92 Modeling of reactive ammonia uptake by secondary organic aerosol in CMAQ: application to continental US. 16th Annual Community Modeling and Analysis System Conference. Chapel Hill, NC. October, 2017.

A93 Air quality impacts of projections of natural gas-fired distributed generation. 16th Annual Community Modeling and Analysis System Conference. Chapel Hill, NC. October, 2017.

A94 A laboratory and modeling investigation on the effects of ammonia uptake on SOA composition and its potential impacts on air quality. 10th International Aerosol Conference. St. Louis, MO. September, 2018.

A95 Secondary organic aerosol (SOA) phase state-relevant properties: evaluation of impacts in the southern great plains using CMAQ. 10th International Aerosol Conference. St. Louis, MO. September, 2018.

A96 Comprehensively assessing the drivers of future air quality in California. 10th International Aerosol Conference. St. Louis, MO. September, 2018.

A97 Reactive uptake of amines and ammonia by secondary organic aerosols. American Chemical Society Fall 2019 National Meeting & Exposition. San Diego, CA. August, 2019.

A98 A laboratory and modeling investigation on the effects of amine uptake on SOA composition and its potential impacts on air quality. 37th Annual Conference of the American Association for Aerosol Research. Portland, OR. October, 2019.

A99 A scalable, portable, gas-aerosol chemistry treatment for atmospheric models. 37th Annual Conference of the American Association for Aerosol Research. Portland, OR. October, 2019.

A100 Effect of humidity on the reactive uptake of ammonia and amines by nitrogen-containing secondary organic aerosol. American Chemical Society Fall 2021 National Meeting & Exposition. Atlanta, GA and virtual. August, 2021.

A101 The CAMP approach: Separating aerosol representation from multiphase chemistry in aerosol models. American Geophysical Union Fall 2022 Meeting. Chicago, IL and virtual. December, 2022.

Distinguished Lectures:

S1 Current state-of-the-art aerosol models. Plenary lecture. Atmospheric Environment Service. Toronto, Canada. March 3, 1997.

S2 Mathematical modeling of the physics and chemistry of atmospheric aerosols. W. E. Schiesser Endowed Lecture. Lehigh University. Bethlehem, PA. February 17, 1999.

S3 Chemical effects of diesel trap-related emissions and other current topics in atmospheric chemical modeling. Plenary lecture. 19^{th} Annual Symposium on Kinetics and Photochemical Processes in the Atmosphere. University of California, Los Angeles. Los Angeles, CA. February 28, 2002.

S4 Chemical effects of diesel trap related emissions and other current topics in atmospheric modeling. Keynote lecture. Center for Environmental Analysis—Centers of Research Excellence in Science & Technology (CEA-CREST): Third Annual Environmental Science Conference. Pasadena, CA. May, 2002.

S5 Modeling studies of polluted and remote atmospheres with heterogeneous and interface chemistry. Keynote lecture. Gordon Research Conference on Atmospheric Chemistry. Big Sky, MT. September, 2003.

S6 Applications of chemical kinetics to current issues—a study in air quality and transportation. Plenary lecture. 28^{th} Symposium on Kinetics and Photochemical Processes in the Atmosphere. Irvine, CA. March, 2011.

S7 Chemical and physical modeling of atmospheric aerosols. Plenary lecture. 2^{nd} Conference of the Brazilian Association for Aerosol Research. Rio de Janeiro, Brazil. August, 2011.

S8 Latest developments in predicting aromatic-derived SOA in a regional air quality model. Keynote Lecture. Pacifichem 2015. The International Chemical Congress of Pacific Basin Societies. Honolulu, HI. December, 2015

Invited Seminars:

P1 Integration of Problem Solving Environments on air quality models. National Science Foundation—Division of Advanced Scientific Computing. Santa Fe, New Mexico. March 2, 1996.

P2 Computational analysis of urban and regional air quality models. California Institute of Technology. Department of Chemical Engineering. Pasadena, California. April 9, 1996.

P3 A PSE for airshed models using the $3D+T+M^k$ archetype. Center for Research in Parallel Computation. Argonne National Laboratory (ANL), Argonne, Illinois. May 16, 1996.

P4 The reusability of PSEs in CFDs. National Science Foundation—Division of Advanced Scientific Computing. University of California, Irvine. August 20, 1996.

P5 Information technology for environmental solutions. IBM Almaden Research Center. San Jose, CA. Oct 30, 1996.

P6 Problem Solving Environments for parallel computing: A case study on air quality modeling. SUPERCOMPUTING '96. Pittsburgh, PA. Nov 19, 1996.

P7 Modeling, visualization and high performance computing. Computing in Environmental Resource Management Conference. Sponsored by the Air and Waste Management Association and the U.S. Environmental Protection Agency. Research Triangle Park, NC. Dec 3, 1996.

P8 PM simulation methods & impact of climate change on air quality. Electric Power Research Institute. Palo Alto, CA. January 23, 1997.

P9 Managing specificity and generality: tailoring general archetypal PSEs to specific users. 1997 Center for Research on Parallel Computation Annual Meeting. Rice University, Texas. May 21, 1997.

P10 The implementation of symbolic computations on large-scale atmospheric numerical simulations. 1997 IMACS Conference on Applications of Computer Algebra. International Association for Mathematics and Computers in Simulation. Conference on Applications of Computer Algebra. Maui, Hawaii. July 25, 1997.

P11 Problem Solving Environments for Parallel Computing in the classroom. SUPERCOMPUTING '97. San Jose, CA. November, 1997.

P12 Mathematical modeling of the size and composition distribution of $PM_{2.5}$ aerosols. Air and Waste Management Association and the U.S. Environmental Protection Agency. Long Beach, CA. January 27, 1998.

P13 Improving codes capable of more detailed treatment of air quality. Pacific Northwest National Laboratory. First workshop on atmospheric aerosols. Richland, WA. August, 1998.

P14 Incorporating aerosol dynamics into global chemistry transport models. Atmospheric Chemistry Division. National Center Atmospheric Research. Boulder, CO. October 23, 1998.

P15 Modeling of laboratory studies of Cl_2 formation by reaction of O_3 with deliquesced NaCl particles. 16^{th} Annual Symposium on Kinetics and Photochemical Processes in the Atmosphere. California State University–Los Angeles. Los Angeles, California. February 1999.

P16 Applied mathematics, fast computers and clean air. Department of Mathematics. Harvey Mudd College. Claremont, CA. May 5, 1999.

P17 The chemical mechanism for Cl_2 production from NaCl aerosol and ozone. 17^{th} Annual Symposium on Kinetics and Photochemical Processes in the Atmosphere. University of California, Irvine. Irvine, California, February 2000.

P18 Parallel computation and applied mathematics aspects of atmospheric modeling. Institute for Mathematics and its Applications. Minneapolis, MN. March 18, 2000.

P19 Mechanical Engineering in the Information Age. Department of Mechanical and Aerospace Engineering. University of California, Irvine. Irvine, CA. June 2, 2000.

P20 Dynamics of particle pollutants in Los Angeles. Department of Community and Environmental Medicine. University of California, Irvine. Irvine, CA. June 2, 2000.

P21 Parallel computations in atmospheric chemical modeling. Ohio Supercomputer Center. Columbus, OH. October, 2000.

P22 Parallel computations in atmospheric chemical modeling. Computational Science Research Center. San Diego State University. San Diego, CA. November, 2000.

P23 Mathematical modeling of size and chemically resolved urban atmospheric aerosols. Atmospheric Chemistry Colloquium Series. Pacific Northwest National Laboratory. Richland, WA. January 8, 2001.

P24 Mathematical modeling of halogen activation in sea-salt aerosols. Environmental Engineering Science/Global Environmental Science. California Institute of Technology. Pasadena, CA. January 24, 2001.

P25 New discoveries in the chemistry of Cl in the lower atmosphere and its impact on air quality. Department of Chemistry. University of Houston. Houston, TX. February 8, 2001.

P26 Mathematical modeling of size and chemically resolved urban atmospheric aerosols. Department of Chemical Engineering. University of Houston. Houston, TX. February 9, 2001.

P27 The chemistry and control of VOCs and NOx emissions in the South Coast Air Basin of California. 18^{th} Annual Symposium on Kinetics and Photochemical Processes in the Atmosphere. California Institute of Technology. Pasadena, CA. February, 2001.

P28 Dynamics of pollutants in the South Coast Air Basin of California. CEA-CREST Winter Seminar. California State University, Los Angeles. Los Angeles, CA. March 9, 2001.

P29 Mathematical modeling of urban and regional air pollution. University of Houston. Houston, TX. May 14, 2001.

P30 A combined hydrophobic-hydrophilic module for predicting secondary organic aerosol formation. European Aerosol Conference Special Session on Secondary Organic Aerosol. Leipzig, Germany. September, 2001.

P31 The Earth's atmosphere viewed from a chemical engineering perspective. Department of Chemical Engineering. Rice University. Houston, TX. November 29, 2001.

P32 Modeling California air quality dynamics by parallel computation — Impact of various control strategies on particulate matter. Atmospheric Sciences seminar series. Department of Land, Air & Water Resources. University of California, Davis. Davis, CA. December 4, 2001.

P33 Chlorine emissions from activated sea-salt aerosols and their potential impact on ozone. Chairman's Air Pollution Seminar. California Air Resources Board. Sacramento, CA. March 31, 2002.

P34 Chemical effects of diesel trap related emissions and other current topics in atmospheric modeling. Center for Environmental Analysis—Centers of Research Excellence in Science & Technology (CEA-CREST): Third Annual Environmental Science Conference. Pasadena, CA. May, 2002.

P35 Aerosol dynamics of NOx and VOC control. EPA Science Forum 2002. Washington, DC. May, 2002.

P36 Mathematical modeling of air pollution. Departament d'Enginyeria Química. Escola Tècnica Superior d'Enginyeria Química. Tarragona, Spain. June 28, 2002.

P37 Mathematical modeling of atmospheric aerosols. Departament de Proyectos de Ingeniería. Universitat Politècnica de Catalunya. Barcelona, Spain. July 4, 2002.

P38 The role of fluid dynamics in mathematical air quality models. Fluid Mechanics Series. Department of Mechanical & Aerospace Engineering. University of California, San Diego. San Diego, CA. October 21, 2002.

P39 Air Quality Monitoring. Academy for Lifelong Learning. University of California, Irvine. Irvine, CA. February 20, 2003.

P40 Reactions at the interface of deliquesced NaBr particles. Workshop on chemistry at interfaces. Beckman Center. National Academy of Sciences & Engineering. Irvine, CA. July, 1, 2003.

P41 Why interfaces matter in the atmosphere: a modeling perspective. Workshop on chemistry at interfaces. Beckman Center. National Academy of Sciences & Engineering. Irvine, CA. July, 1, 2003.

P42 Release of Molecular Bromine from the Reaction of O3 and OH with NaBr Aerosol. Gordon Research Conference on Atmospheric Chemistry. Big Sky, MT. September, 2003.

P43 Modeling ozone formation metrics in the South Coast Air Basin of California. Gordon Research Conference on Atmospheric Chemistry. Big Sky, MT. September, 2003.

P44 An integrated approach to understanding the air-water interface in atmospherically relevant systems. Collaborative Research in Chemistry Conference 2003. Washington, DC. November 3, 2003.

P45 Comparison of ozone formation among various US cities. EPA Air Quality Projects Workshop. University of Houston. Houston, TX. December 16, 2003.

P46 Modeling and experimental studies of heterogeneous and interface chemistry In the troposphere. Department of Earth Sciences. University of New Hampshire. April, 2004.

P47 Urban air quality impacts of distributed generation in the South Coast Air Basin of California. Energy Systems Integration Public Lectures. California Energy Commission. Sacramento, CA. October 13, 2004.

P48 Distributed energy resources and air quality in California. Department of Earth System Sciences, UCI. Irvine, CA. January 19, 2005.

P49 Update on the development and application of CACM and MPMPO. Electric Power Research Institute. Palo Alto, CA. February 4, 2005.

P50 Recent advances in the modeling of secondary organic aerosol dynamics. Universitat Politècnica de Catalunya. Barcelona, Spain. March 7, 2005.

P51 The UCI-CIT Airshed Model. West Coast SECA Meeting. Santa Cruz, CA. April 22, 2005.

P52 Gas-phase molecular halogen formation from sea-salt aerosols: When are interface reactions important? Ions and molecules at aqueous interfaces workshop. Prague, Czech Republic. June 27, 2005.

P53 Why is the whole greater than the sum of its parts? First Joint Meeting of the NSF-DOE Environmental Molecular Science Institutes Program. Arlington, VA. August 26, 2005.

P54 Heterogeneous interfacial reactions: a new paradigm in atmospheric chemistry. The Chicago Section of the American Chemical Society. Des Plaines, IL. September 23, 2005.

P55 Applied mathematics issues related to parallel computations in atmospheric chemical modeling. Department of Mathematics, University of Houston. Houston, TX. October 25, 2006.

P56 Distributed generation & advanced energy conversion technologies and their associated air quality impacts in the South Coast Air Basin of California. Department of Mechanical Engineering, University of California, Riverside. Riverside, CA. January 19, 2007.

P57 Estudio de incertidumbres en un modelo urbano de la calidad del aire. Physics Department. Universidad Autónoma Metropolitana. Mexico. April 20, 2007.

P58 Impact of sea-salt aerosol on the weekend effect. Department of Atmospheric & Oceanic Sciences, University of California, Los Angeles. Los Angeles, CA. May 9, 2007.

P59 Coupling distributed generation and transportation futures to the quality of the urban environment. California: Prosperity through technology. Energy and the Environment. 6^{th} Annual Industry Research Symposium. Irvine, CA. May 15, 2007.

P60 Impact of sea-salt aerosol on the weekend effect. Department of Aerospace and Mechanical Engineering, University of Southern California. Los Angeles, CA. Feb 20, 2008.

P61 Climate change and impact: a global perspective. 2008 Tenth Annual Beckman Scholars Symposium. Irvine, CA. July 26, 2008.

P62 Understanding regional DG impacts and placement options in Central and Southern California. California Energy and Air Quality Conference. The California Energy Commission's Public Interest Energy Research Conference. Diamond Bar, CA. October 29, 2008.

P63 The links among energy, transportation and air quality. UC San Diego Scripps Institution of Oceanography. San Diego, CA. March 17, 2009.

P64 Computational issues related to atmospheric chemical modeling. Barcelona Supercomputing Center. Barcelona, Spain. June 9, 2009.

P65 Distributed energy resources, transportation futures, and air quality in the urban environment. Civil and Environmental Engineering Department. Rice University. Houston, TX. November 13, 2009.

P66 Adaptation for future air quality analysis and decision support tools in light of global change impacts and mitigation. U.S. Environmental Protection Agency. Research Triangle Park, NC. October 5, 2010.

P67 Air quality implications of increasing alternative fuel use. Third California Energy and Air Quality Conference. The California Energy Commission's Public Interest Energy Research Conference. Irvine, CA. November 2, 2010.

P68 Secondary Organic Aerosol. EPRI–A&WMA Workshop on Future Air Quality Model Development Needs. Washington, DC. September, 2011. (Moderator)

P69 New particle formation from methanesulfonic acid and amines in air. AirUCI annual workshop. Laguna Beach, CA. February, 2013. (Author)

P70 Atmospheric chemistry, parallel computing, and applied mathematics. Department of Mathematics. University of California, Irvine. Irvine, CA. May, 2013.

P71 Impacts of distributed generation on air quality in different regions of the U.S. EPRI Workshop: Air Quality Impacts of Natural Gas Combustion for Electricity Generation. Palo Alto, CA. August, 2013.

P72 State-of-the-science of computational models for urban air pollution dynamics. American Association for the Advancement of Science. U.S.–Iran symposium on air pollution in megacities. National Academy of Sciences. Irvine, CA. September, 2013.

P73 Atmospheric impact of energy distribution: from laboratory chamber experiments to policy makers' awareness, via parallel computation simulations. Chemical Engineering Department. Columbia University. New York, NY. September, 2013.

P74 The road map to improve air quality in Texas. EPRI 2013 Fall Environment and Renewables Program Advisory Meeting. Kansas City, MO. September, 2013.

P75 The South Coast Air Basin of California: air quality and energy dynamics. Society of Hispanic Professional Engineers Annual Conference 2013—Environmental Sustainability and Earth Systems Engineering Research Symposium. Indianapolis, IN. November, 2013.

P76 Air quality impacts of GHG mitigation strategies in the power generation and transportation sectors. AirUCI annual workshop. Laguna Beach, CA. January, 2014. (Author)

P77 Particles and their precursors: from Angstrom to regional scales. AirUCI annual workshop. Laguna Beach, CA. January, 2014. (Author)

P78 Computational issues related to mathematical modeling of atmospheric systems. Computational Science Research Center. San Diego State University, San Diego, CA. April, 2014.

P79 The impact of biomass energy usage to air quality in southern California. Society of Hispanic Professional Engineers Annual Conference 2014—Environmental Sustainability and Earth Systems Engineering Research Symposium. Detroit, MI. November, 2014.

P80 Assessment of the emissions and energy impacts of biomass and biogas use in California. California Air Resources Board, Sacramento, CA. March, 2015.

P81 Mathematical modeling of the atmosphere—Overview and examples of two current issues. Centre d'Enseignement et de Environnement Atmosphérique. École des Ponts ParisTech. France. June, 2015.

P82 The ammonia puzzle: interactions with particles and impacts on air quality. Symposium: Science and Societal Impacts of Air Quality and Climate Issues: Past, Present, and Future. Irvine, CA. April, 2017.

P83 Mathematical modeling of reactive uptake of ammonia and its impact of atmospheric aerosol. Department of Chemical Engineering, Lehigh University. Bethlehem, PA. April, 2017.

P84 Cows, cars and urban air quality. Department of Mechanical Engineering. University of California, Riverside. Riverside, CA. May, 2017.

P85 Affordable and clean energy. Reunión de la Red Temática de Contaminación Atmosférica y Mitigación del Cambio Climático. Universidad Nacional Autónoma de México. Mexico City, Mexico. October, 2017.

P86 What matters to me and why. Lunchtime series organized by the Office of the Chancellor. University of California, Irvine. Irvine, CA. January, 2019.

P87 Environmental Sustainability. International Workshop on Metropolitan Perspectives. CentroMet. Queretaro, Mexico. February, 2019.

Pedagogical Activities:

- Developed a new course *Introduction to Machine Learning.* The course was developed while teaching MAE-199 and will be offered for the first time as MAE-195. 2019.
- Guest lecturer. MAE-260 / CHEM-241. Current Issues Related to Tropospheric and Stratospheric Processes. University of California, Irvine. Spring, 2019.
- Guest lecturer. CHEM-245. Multiphase Chemistry. University of California, Irvine. Winter, 2018.
- Guest lecturer. Technology: Environment's friend or foe? Fireside Chat Series. Campuswide Honors Program. University of California, Irvine. Winter, 2017.
- Guest lecturer: University Studies 1. (F15, W16, F17, W17, W18)
- Freshman Seminar: The link between energy and the environment. Updated the seminar that I developed in 2008 and volunteered to teach. Fall, 2015.
- Implemented high-bandwidth video conferencing to broadcast live MAE-261 lectures to students at Rice University. This effort was supported by professional audio and video specialists at UCI's Teaching, Learning and Technology Center. Winter, 2013.

- Completed the development of a new version of MAE-10 to focus on Matlab instead of FORTRAN programming. Spring, 2012.
- Developed the online version of the course *Introduction to Engineering Computations.* The online course consists of 35 videos, each of approximately 10-15 minutes in length. Since its development, it has been offered by UCI Extension program via the Open Courseware Consortium. Fall, 2011.
- Advisor to the 2011 Sustainability Science Team. The team includes 5 Ph.D. candidates from the School of Physical Sciences, School of Social Sciences, School of Social Ecology, and the Henry Samueli School of Engineering. Project: to develop an integrated approach to studying the Salton Sea's water quality, hydrological cycle, and purification technologies available to restore and sustain the salinity and eutrophic levels. Fall, 2011.
- Advisor to the 2010 Sustainability Science Team. The team includes 5 Ph.D. candidates in the School of Humanities, the Merage School of Business, the Henry Samueli School of Engineering, the School of Social Ecology, and the School of Physical Sciences. Project: to develop sustainability indicators that can be used to guide and manage sustainable development in communities that experience rapid upswings and downturns in growth, associated with dramatic changes in the economic environment. Fall, 2010.
- Freshman Seminar: The link between Energy and the Environment. Developed and taught a new specialized seminar designed for the freshman class. Spring, 2008.

Courses Taught:

CEE-296 Master of Science Thesis Research (Graduate)
SF19

ENGR-H199 Individual Study Honors (Undergraduate)
WSF19

Freshman Seminar – Energy & Environment (Undergraduate)
S08, F15

MAE-10 Introduction to Engineering Computations (Undergraduate)
F98, F99, F00, F01, F02, F03, F04, WF05, WF06, WF07, WF08, WF09, SF11, S12, SF13, SF14, F15, F16, F17, F18, F19

MAE-164 Air Pollution and Control (Undergraduate)
S96, S97, S02, W10, W11, W12, W14, W15, W16, W22

MAE-182 Introduction to Machine Learning (Undergraduate)
W20, S22

MAE-185 Numerical Analysis in Mechanical Engineering (Undergraduate)
S98, S01, S04, S06, S07, F10

MAE-189A Senior Project (Undergraduate)
F99, F00

MAE-189B Senior Project (Undergraduate)
W00, W01, W06, W07

MAE-189C Senior Project (Undergraduate)
S99, S01, S07

MAE-199 Individual Study (Undergraduate)
W97, WSF04, WF05, F06, WS07, W09, F10, WSF11, WSF12, WSF13, WSF14, WSF15, 10-wkSumr15, WSF16, SF17, WSF18, WS19

MAE-200A Engineering Analysis I (Graduate)
F95, F96, F97

MAE-200B Engineering Analysis II (Graduate)
W02

MAE-261 Air Quality Modeling (Graduate)
W96 as MAE-295, W97, W98, W99, W01, W03, S08, S10, W13

MAE-264 Combustion Particles and Aerosols (Graduate)
W00, W04

MAE-294 MS Project (Graduate)
F02, W03, S06, WSF07, WSF08, WSF09, S15, W17, S17, F18, WS19

MAE-295 Seminars in Engineering (Graduate)
F96, WSF97, WS98, WSF07, WSF08, WSF09

MAE-296 Master of Science Thesis Research (Graduate)
F96, WSF97, WSF98, WSF99, WSF00, WS02, WS03, W04, WF05, WSF06, WSF07, WSF08, WSF09, WS10, F12, WSF13, WSF14, WS15, F17

MAE-297 Doctor of Philosophy Dissertation Research (Graduate)
F98, WSF99, WSF00, WSF01, WS02, F03, WF04, WSF05, WSF06, WSF07, WSF08, WSF09, WSF10, WSF11, WS12, F15, WSF16, WSF17, W18

MAE-298 Seminars in Mechanical Engr (Graduate)
F96, WS97

MAE-299 Individual Research (Graduate)
S98, WSF99, F00, WSF01, WSF02, WSF03, WSF04, WSF05, S06, WSF07, WSF08, WSF09, W13, W14, 2ndSumrSess15, F17

UNI STU-170 Adv Internship DUE (Undergraduate)
WS17, WS19

UNI STU-196 Directed Study DUE (Undergraduate)
S17

University & Community Service:

Systemwide Service

- Member. Creating a UC culture of study abroad—Systemwide meeting. Oakland, CA. January, 2017.
- Participant. Creating Equitable Education for California's Undergraduates: Promising Practices for Improving Student Learning and Outcomes. UC Systemwide conference on undergraduate education. Davis, CA. January 6–7, 2017.
- UCI Campus representative for the Coalition for National Science Funding (CNSF) to target key Congressional appropriations offices to advocate for support for the National Science Foundation. Capitol Hill, Washington DC. 2011.

Campus Administration and Services

- Member. Admission by Exception Committee. Office of Undergraduate Admissions. 2020–2021.
- Member. Steering Committee on Reaffirmation of Western Association of Schools and Colleges (WASC) Senior College and University Commission (WSCUC). Office of Academic Planning and Institutional Research. 2020–2021.
- Supervisor. Undergraduate Research Opportunities Program (UROP). 2019–2021.

- Supervisor. Scholarship Opportunities Program (SOP). 2019–2021.
- Member. Selection committee for the UCI nominees for the Lindau Nobel Laureate Meetings Fellows. Graduate Division. 2019–2021.
- Member. Division of Career Pathways (DCP) Advisory Board. Role: to advise the Vice Provost and Associate Vice Provost on the services and programs; to provide input on short- and long-term plans developed by DCP staff; to offer insights and suggestions for new programs or services and to suggest priorities for the DCP; to advocate, when logical, for the enhancement and expansion of career services for students and alumni; to aid in the DCP outreach to governments, businesses, and other organizations for opportunities for students and alumni. 2018–2021.
- Associate Dean of Undergraduate Education. Main responsibilities include: Academic Testing Center, Academic Honesty, Blackstone LaunchPad, Undergraduate/Undeclared Advising Program, Capital Internship Program, and Study Abroad Center. 2015–2021.
- Member. Selection committee of the UCI Campuswide Honors Program to identify each year's prospective freshmen invitees to join the honors program. 2015–2021.
- Presenter and host. Undergraduate/ Undeclared Deans Honor List Reception to recognize academic excellence of students. 2015–2021.
- Presenter. Parent and Family Welcome. Student Parent Orientation Program (SPOP). 2015–2021.
- Member. Search committee for the Deputy Chief Global Affairs Officer. Office of Global Engagement. 2021.
- Member. Selection committee for the Tom Angell Fellowship Award for mentoring. Office of Inclusive Excellence. February 18, 2021.
- Chair. Goldwater Scholarship Nominating Committee. UCI Scholarship Opportunities Program. December 15, 2020.
- Presenter. STEM Transfer Faculty Connections workshop for UCI's STEM Transfer Scholars. Organized by the Transfer Student Center. October 22, 2020.
- Chair. Fulbright U.S. Student Program Scholarship Nominating Committee. UCI Scholarship Opportunities Program. 2020.
- Reviewer. Advancing Equity in the Age of COVID-19. Office of Inclusive Excellence, UCI. 2020.
- Reviewer. Minority Science Program (MSP). School of Biological Sciences, UCI. 2020.
- Member. Enrollment Work Group. Discuss and propose alternative models for undergraduate admission and enrollments that address changes in the goals of the academic units, changes in student demographics, and shifts of student interest by major. 2019–2020.
- Chair. Search committee for the Assistant Director of the Undergraduate Research Opportunities Program. 2019–2020.
- Chair. Truman Scholarship Nominating Committee. UCI Scholarship Opportunities Program. January, 2020.
- Speaker. Annual First Year Excellence Program dinner that is offered to Undergraduate/Undeclared students. 2015–2019.
- Founder. Killam Fulbright Fellowship Program. 2018–2019.
- Chair. Search committee for the Executive Director of Advising for the Division of Undergraduate Education. 2018–2019.
- Chair. Goldwater Scholarship Nominating Committee. UCI Scholarship Opportunities Program. December 12, 2018.
- Presenter. STEM Transfer Faculty Connections workshop for UCI's STEM Transfer Scholars. Organized by the Transfer Student Center. October 10, 2018.
- Member. Search committee for the Director of New Ventures position for Applied Innovation. August, 2018.

- Member. Winston Churchill Foundation Scholarship and the Fulbright U.S. Student Program Scholarship Nominating Committee. UCI Scholarship Opportunities Program. Summer, 2017–2018.
- Participant. Facilitating Social Mobility in Higher Education Symposium. Office of the Vice Provost for Teaching and Learning. Irvine, CA. Winter, 2018.
- Representative and Participant. Associated Students – University of California, Irvine (ASUCI) / Associated Graduate Students (AGS) Student Government Luncheon. Winter, 2018.
- Member. Search committee for the Director of Development for the Office of the Vice Provost for Teaching and Learning. Winter, 2018.
- Speaker. Success tips for international students. Global Scholars Speaker Series. International Student Excellence Programs. January 24, 2018.
- Member. Goldwater Scholarship Nominating Committee. UCI Scholarship Opportunities Program. December 11, 2017.
- Member. Ad hoc group to review the issuance of co-curricular certificates across campus and provide recommendations to Provost Lavernia on how to establish best practices. Fall, 2017.
- Member. Search committee for the Senior Director of the Office of Global Affairs. Appointed by Associate Vice Chancellor Victoria Jones. Spring, 2017.
- Speaker. UCI Admissions Counselor Fly In. UCI Office of Admissions & Relations with Schools. February, 2017.
- Member. UCI Research Cyberinfrastructure Center (RCIC) Advisory Committee to provide direction for research computing and research networking campus-wide, as well as to guide the UCI Office of Information Technology on their research computing services, strategies and policies. 2014–2016.
- Member. Goldwater Scholarship Nominating Committee. UCI Scholarship Opportunities Program. December 8, 2016.
- Presenter. How to connect with STEM faculty and engage in research. Organized by the Transfer Student Center. November 15, 2016.
- Chairman. Hearing on Academic Honesty for undergraduate student. UCI Office of Academic Integrity and Student Conduct. October 10, 2016.
- Member. Search committee for the Executive Director of the Office of Inclusive Excellence. Appointed by Vice Provost Doug Haynes. 2016.
- Member. ADVANCE Program Advising Committee (APAC) chaired by Prof. Doug Haynes to monitor and assess UCI policies and progress in developing and maintaining an equitable environment for all UCI faculty. 2013–2015.
- Member. Faculty Assessment of the State of Research Computing Committee appointed by Vice Chancellor of research John Hemminger to assess the state of research computing on campus. 2012–2013.
- Member. UCI Environment Institute Steering Committee. Appointed by Dean Rafael L. Bras. Chair: Prof. Michael Prather. 2008–2012.
- Member. Search committee for the Dean of the School of Physical Sciences. Appointed by Executive Vice Chancellor and Provost Michael R. Gottfredson. 2011.
- Member. Faculty recruiting committee for the Department of Mechanical and Aerospace Engineering via the UC Environment Institute. Person hired: Prof. Jacob Brouwer. 2011.
- Member. Faculty recruiting committee for the Department of Chemical Engineering and Materials Science and Chemistry via the UC Environment Institute. Person hired: Prof. Allon I. Hochbaum. 2011.
- Reviewer. Campus wide Global Change, Energy, and Sustainable Resources proposals. 2009.

- Member. Recruiting committee to hire an environmentally oriented faculty member. Appointed by Dean Rafael L. Bras. Person hired: Prof. Jasper Vrugt. 2009.
- Participant and organizer. AirUCI, a new Organized Research Unit on campus to bring together faculty from the School of Physical Sciences, HSSoE, and the College of Health Sciences. The new ORU was approved. The ORU triples the number of scientists involved in AirUCI and vastly expands its scope. 2008.
- Member. Broadcom computer server donation coordination group. 2008.
- Member. Campus committee to generate recommendations on how UCI should proceed to develop the area of Energy and the Environment. Appointed by Dean Nicolaos G. Alexopoulos and Dean John C. Hemminger. 2006–2007.
- Member. *Computational Science* group at UCI. Coordinate recruitment efforts in computational math, science and engineering on campus and provide a forum for learning more about what UCI's strengths are in this area around campus. 1997–2003.
- Member. Conflict of Interest Oversight Committee. 2001, 2002.
- Director. Aeneas Parallel Supercomputer users group. Help coordinate the distribution of resources, system administration, user policy, and software installation of the Aeneas supercomputer. 1998–2002.
- Member. Campus wide *Parallel Computing Capability* group. Plan the strategy and hardware acquisitions at UCI to perform research on concurrent computations. 1997–2002.
- Faculty adviser. Undecided/Undeclared freshman students. Working with Prof. Robert Newsom, Associate Dean, Division of Undergraduate Education. Fall 1998, Spring 1999, Winter 2000, and Winter 2001.

School Services

- Member. Search committee for the Director of the HORIBA Institute for Mobility and Connectivity. Person hired: Prof. Thomas Bradley. 2019.
- Member of the Preliminary Exam for the Department of Civil and Environmental Engineering. 2017.
- Junior Faculty Mentor. Volunteered to assist and mentor junior faculty in the school with their NSF CAREER proposals. Effort in collaboration with Prof. Donovan and Prof. Regan. 2017.
- Equity Advisor for the UCI ADVANCE Program for Faculty Equity and Diversity. Faculty recruiting strategies and raising awareness of Best Practices. Organize faculty development programs. Address individual issues raised by women and underrepresented minority faculty. 2013–2015.
- Successful strategies for tenure for assistant professors in engineering and ICS—Panelist. 2011.
- Member of the HSSoE Environmental Engineering Review Committee. 2007–2009.
- Member of the HSSoE Sustainable Energy Committee. 2009.
- Member of the HSSoE Energy and Environment Academic Planning Committee. 2008.
- Participant in the FTE Proposal initiative "Energy, Air and Water Resources." 2007
- Member of the School committee to develop graduate student recruiting and funding from Mexico. 2002.
- MAE representative to the School of Engineering Committee on Computing. 1998–2001.
- MAE representative to the School of Engineering Faculty Research and Travel Committee. 1998, 2001.
- Chairman of the School of Engineering Faculty Research and Travel Committee. 1999–2000.

- MAE representative for the graduate program in Environmental Engineering. Responsibilities include: admission of all new applicants to the program, evaluation of all existing students, curriculum design, and financial aid distribution. 1995–2000.
- Chairman of the committee to evaluate introductory computing course consolidation for all engineering freshmen. 1999.
- Member of the search committee for new Environmental Engineering faculty member in the department of Civil and Environmental Engineering. Jan 1997.

Department Services

- MAE junior faculty mentoring program for Natascha Buswell. Role: Primary Mentor. 2018–present.
- MAE junior faculty mentoring program for Haithem Taha. Role: Mentor. 2018–present.
- Faculty Mentoring Program — Mentor and support junior faculty in the department. Strategies for success. How to navigate challenges. 2016–present.
- Diversity efforts. 2015–present.
- Honors, Awards, and Prizes Committee. 2012–present.
- Member of the Mathematics Preliminary Exam. 2017–2018.
- Graduate admissions advisor and student communications. 2015–2018.
- Graduate Admissions Committee. 2015–2017.
- Computational Resources Committee. 2012–2016.
- Graduate student advisor — Preliminary Exam Coordinator. Organize faculty and students to implement the three components of the preliminary exam. The exam is scheduled twice a year. 2011–2015.
- Graduate Studies Committee. 2009–2015.
- Faculty Recruiting Committee. Persons hired: Prof. Yoonjin Won and Prof. Jaeho Lee. 2013–2014.
- Chairman of the MAE committee to plan future strategy in the area of energy and environment. Develop an outline for strategic areas of growth (with Prof. Jack Brouwer and Prof. Yun Wang). 2013.
- Chairman of the Mathematics Preliminary Exam. 2009–2010.
- Graduate Student Advisor. 2005–2009.
- Chairman of the MAE Graduate Studies Committee. 2005–2009.
- Member of the program planning committee of Energy and Atmospheric Quality. 2007.
- Head coordinator for ABET evaluation. 2004–2005.
- Graduate student advisor. 2002.
- Promote graduate student recruitment in Spain. 2002.
- Installation of the wireless network in the department. 2001.
- Member of the department committee in charge of graduate student recruiting and admission. 2001.
- Member of the Mechanical & Aerospace Engineering Department Computer Committee. 1996–2000.
- Participant of the High Tech Committee chaired by Professor Ken Mease. 2000.
- Webmaster of Mechanical & Aerospace Engineering Department. `http://www.eng.uci.edu/~maeadmin`. 1995–1999.
- Hardware and network upgrade planning for all the staff in the department. 1999.

- American Society of Mechanical Engineers Student Adviser. 1997–1998.
- Member of the committee to design a program for Mechanical Engineering / Environmental Engineering double majors. Fall 1998.
- Faculty Secretary. 1995–1997.
- Coordinator for the Fluid and Thermal Science Seminar series offered by the Mechanical Engineering Department. 1996–1997.

Community Services

- Hosted student for the St. Margaret's Episcopal School Summer Internship Program. Project: Chaos dynamics and the computational generation of Sierpinski triangle. Student hosted: Kendall Robison. Summer, 2015.
- Participant in yearly "Summer Teacher Training Program in Environmental Chemistry." The program is a two-week summer Environmental Chemistry program for science teachers in grades 8-12. 2005–2013.
- Guest speaker in the Osher Lifelong Learning Institute (OLLI). What is the state of the science of air pollution issues in Southern California? Irvine, CA. November, 2007.
- Participant in "Community Day." A symposium to present the results of new research to the public and to provide tours of the UCI computational and experimental laboratories. 2005–2007.
- Reviewer for the Southern California Junior Science and Humanities Symposium, K 9-12 students. September, 2004.
- Participant in the ASUCI High School Outreach program. 2002.

Diversity

- Invited Participant. Undoing Racism Workshop. People's Institute for Survival and Beyond. University of California, Irvine. January 12–14, 2018.
- Mentor for Valerie Elvira Martinez during a 10-week summer program conducting research in my laboratory. CAMP Summer Science Scholars. University of California Louis Stokes Alliance for Minority Participation (LSAMP). 2016
- Mentor for Marlayna Victoria Montenegro during a 10-week summer program conducting research in my laboratory. CAMP Summer Science Scholars. University of California Louis Stokes Alliance for Minority Participation (LSAMP). 2016
- Reviewer of UCI's *High Impact Hiring Plan* proposals. The goal is to identify diverse faculty leaders whose scholarly, scientific, and creative accomplishments and career trajectories promise to accelerate our ascendancy among the ranks of globally preeminent research universities. 2014–2016.
- Judge for SHPE 2015 technical paper/poster competition. Society of Hispanic Professional Engineers. Baltimore, MD. September, 2015.
- Member of the UCI recruitment table during the Grad School Fair of the Society of Hispanic Professional Engineers Conference 2014. Detroit, MI. October, 2014.
- Judge for SHPE 2014 technical paper/poster competition. Society of Hispanic Professional Engineers. Detroit, MI. September, 2014.
- Quantum efficiency of $O_2(^1D)$ formation by pyrene: an experimental, theoretical and modeling approach. Presentation at the Cal State LA MORE (Minority Opportunities in Research) Program.

- Member of the UCI recruitment table during the Grad School Fair of the Society of Hispanic Professional Engineers Conference 2013. Indianapolis, IN. October, 2013.
- Guest speaker to UCI's Student Chapter of the Society of Hispanic Professional Engineers. Irvine, CA. October, 2013.
- Judge for SHPE 2013 technical paper/poster competition. Society of Hispanic Professional Engineers. Indianapolis, IN. September, 2013.
- Guest speaker to UCI's Student Chapter of the Society of Hispanic Professional Engineers. Irvine, CA. March, 2012.
- Guest speaker to UCI's Student Chapter of the Society of Hispanic Professional Engineers. Irvine, CA. March, 2010.
- Guest speaker to UCI's Pi Beta Phi Sorority. Scholar dinner program. Irvine, CA. 2010.