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The University of California, Irvine’s commitment to sustainability spans its tripartite mission of teaching, research, and public service, as well as campus operations. From 2010 through 2015, UCI consistently ranked among the nation’s Top 10 “Coolest Schools,” Sierra magazine’s annual ranking of the greenest and most sustainable colleges and universities in the United States; UCI placed #1 in Sierra magazine’s 2014 and 2015 ranking. UCI was also named in The Princeton Review’s 2016 Green Honor Roll by receiving a score of 99 (the highest possible score). In 2013, the UCI Office of the Provost and Executive Vice Chancellor established an interschool Sustainability Initiative to make engaged sustainability scholarship integral to UCI’s excellence as a research and teaching university.

The UCI Sustainability Research Inventory was first created in 2012 in response to Sierra magazine’s “Coolest Schools” survey. It was during that year that the Sierra Club partnered with the Association for the Advancement of Sustainability in Higher Education (AASHE) and adopted that organization’s Sustainability Tracking Assessment and Rating System (STARS) as the basis for its rankings. STARS is a self-reporting framework for colleges and universities to measure their sustainability performance.

The STARS 2.0.1 Technical Manual focuses on the following criteria for sustainability research:

- Institution’s faculty and/or staff conduct sustainability research, and the institution makes an inventory of its sustainability research publicly available; and
- Institution’s academic departments (or the equivalent) include faculty and staff who conduct sustainability research.

STARS defines research as "a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge." Research activities may be basic, applied, or developmental in nature, as long as they include scholarly components. Sustainability research is defined as research that leads toward solutions that simultaneously support social wellbeing, economic prosperity, and ecological health. It includes academic research that:

- Explicitly addresses sustainability and/or furthers understanding of the interconnectedness of social, economic and environmental issues;
- Contributes directly toward solving one or more major sustainability challenge (e.g., contributes toward achieving principles outlined in the Earth Charter); and/or
- Engages community members with the aim of combining knowledge and action to achieve positive social, economic and environmental outcomes (e.g., participatory and community-based research and engaged scholarship).

The STARS Technical Manual provides that each institution may choose a specific methodology to identify sustainability research that is most appropriate given its unique circumstances. For the purpose of participating in the AASHE STARS rating program, a UCI task force adopted the following definition:

_The University of California, Irvine identifies “sustainability research” as any research or creative activity that addresses the equitable endurance of natural and human systems in the present and in the_
future. These studies can address scientific, technological, legal, economic, ethical, governance, social, and other issues that impact the conservation of finite resources for future generations and support long-term environmental and human health.

The 2016 UCI Sustainability Research Inventory is based on the definition of sustainability research outlined in STARS 2.0.1 and includes, at minimum, all research centers, laboratories, departments, and faculty members whose research focuses on or is related to sustainability. The resulting inventory includes the names of all faculty engaged in sustainability research, along with their department affiliations, and a list of every department in which at least one faculty member engages in sustainability research.

The process outlined below was followed to specifically identify UCI faculty engaged in sustainability research.

- To develop the initial inventory, an email was sent to all faculty in April 2012, asking them to self-identify; some faculty responded not only on their own behalf but also identified other faculty members who should be included on the list. A follow-up communication was sent to deans and department chairs, asking them to encourage faculty to respond.
- Various campus websites were consulted to learn the names of faculty affiliated with centers doing research in this area.
- Titles and department affiliations were validated with the Office of Academic Personnel, and URLs for faculty profiles were obtained using the campus’s online directory and departmental websites.
- In 2013, 2014, 2015 and again in 2016, copies of the previous year’s sustainability research inventory were distributed to all listed faculty for review with a request for updates, additions, and deletions.
- In 2013, 2014, 2015 and again in 2016, new faculty (i.e., hired after the previous inventory) were identified and contacted, requesting them to self-identify if engaged in sustainability research.
- In 2016, the online data gathering tool Formstack was adopted and two forms were created to gather information for the inventory. The two forms were customized for either new faculty, or faculty listed in the 2015 inventory. The existing faculty form included one extra question: if faculty would like to update their listing or not, or if they would like their listing to be removed. A URL to the online forms was distributed in the initial email to the two faculty groups. The faculty responses have been incorporated.
- Prior to finalizing the 2016 Sustainability Research Inventory, the academic deans of all UCI schools were contacted to verify the inventory of faculty engaged in sustainability research and ensure that all appropriate researchers were included.
- The deans were asked to review a list of all faculty from their school who were included in the 2015 inventory, sorted by school and department, and identify any individuals who were no longer in their schools.
- The deans were also asked to nominate any new faculty, who could be characterized as doing sustainability-related research. Faculty identified by the deans were contacted and asked to provide the required information for the sustainability research inventory by completing the new online form.

The 2016 UCI Sustainability Research Inventory is publicly available on the UCI Sustainability website.

Katie Babcock
Environmental Planning & Sustainability

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Research Centers, Institutes, and Programs

**Advanced Power and Energy Program**
The Advanced Power and Energy Program at UCI addresses the development and deployment of efficient, environmentally sensitive, sustainable power generation and energy conversion worldwide. At the heart of this endeavor is the creation of new knowledge brought about through fundamental and applied research, and the sharing of this knowledge through education and outreach. Industry is actively engaged and vital to this effort. Built on a foundation established in 1970 with the creation of the UCI Combustion Laboratory and the 1998 dedication of the National Fuel Cell Research Center, APEP is an umbrella organization that addresses the broad utilization of energy resources and the emerging nexus of electric power generation, infrastructure, transportation, water resources, and the environment.

**AirUCI Institute**
The Atmospheric Integrated Research at UCI (AirUCI) Institute addresses the urgent challenges we face in air and water quality, human health, climate change, as well as green technology through the integration of research, education, and outreach.

**Arboretum**
The UCI Arboretum is a 12.5-acre botanic garden and research facility located approximately one mile from UCI. The Arboretum features plants and communities from the California Floristic Province and also has an extensive collection of South African species. As a part of the School of Biological Sciences, the Arboretum hosts a diversity of research projects, including undergraduate and graduate students, faculty, and post-doctoral scholars. In addition to providing shade cloth growing facilities, the Arboretum is the only site on the campus where “common garden” experiments can be conducted.

**Blum Center for Poverty Alleviation**
The Blum Center for Poverty Alleviation was launched at UCI as part of a larger consortium of Blum Centers across the University of California (UC) campuses that operate on the idea that a world-class university must be a force for tackling the world’s most daunting challenge – poverty. The Center’s mission is to enable a new generation of students and researchers to ask and address critical questions about economic development that are key prerequisites to devising effective and innovative approaches to alleviating contemporary poverty both locally, in Orange County, and abroad.

**California Institute for Hazards Research**
The California Institute for Hazards Research was founded to better coordinate natural hazards research across the UC system. Research areas for the institute include the understanding and prediction of natural hazards and the ways to reduce their impact on society. The institute will collaborate with local, state, and federal governments and organizations on natural disaster research, education, and preparedness.

**California Institute for Telecommunications and Information Technology**
The California Institute for Telecommunications and Information Technology - known as Calit2 - is a two-campus multidisciplinary research institute. One of four UC Gray Davis Institutes for Science and Innovation, Calit2 divisions at UCI and UC San Diego leverage academic expertise with industry experience to conduct cutting-edge research in diverse fields. The goal: to develop innovative information technology-based products and services to benefit society and ignite economic development in the region and state. The more than 200 UCI faculty and students affiliated with Calit2 are actively engaged in projects based on the digital transformation of energy, the environment, healthcare, and culture.

**California Plug Load Research Center**
UCI is home to the new California Plug Load Research Center, or CalPlug, a public-private partnership established in 2011 with research funding from the California Energy Commission to improve energy efficiency in the use and design of
appliances and consumer electronic devices – anything that plugs into an electrical outlet.

**Center for Biotechnology and Global Health Policy**
The Center for Biotechnology and Global Health Policy (CBGHP) serves as a reference point for research, policy development and advocacy concerning science, biotechnology, bioethics and healthcare in the United States and abroad. The CBGHP engages multiple stakeholder communities: scholars, policy makers, civil society, healthcare providers, the judiciary and the general public, highlighting the collaborative role and function of law in responding to state, federal and international healthcare concerns. With a mission to educate the public and serve as a catalyst for the advancement of society through research, educational outreach and advocacy, the Center engages three major initiatives: Public Health and Legal Policy; Reproductive Justice; and Biotechnology and National Security.

**Center for Complex Biological Systems**
The UCI Center for Complex Biological Systems promotes research and education in the area of systems biology broadly defined, which includes aspects of synthetic biology, genomics and functional genomics, computational biology, mathematical biology, biophysics, bioengineering and molecular biology. The goal is to develop a more comprehensive and accurate understanding of complex biological systems and their behaviors.

**Center for Demographic and Social Analysis**
Founded in 2007, the Campus Center for Demographic and Social Analysis formalizes a decade of highly productive collaboration between researchers in a dozen departments. With nearly 50 faculty affiliates and 30 associated graduate students, C-DASA is the focal point for a host of population-related research activities at UCI. Expertise in child and youth outcomes; demographic, spatial and social network methodologies; social inequality; and health and well-being make C-DASA a leading center for research on the well-being of local, national, and global populations. C-DASA provides small seed grants to encourage multi-disciplinary projects, collaborative studies, grant proposals, and research by junior faculty. Support for C-DASA comes from the Office of Research. The weekly Population, Society and Inequality Seminar Series fosters dialogue on current research, funding opportunities, analytic approaches, and new data sets.

**Center for Disaster Medical Sciences**
As societies become more complex and interconnected, the potential for natural disasters increases. The consequences of global climate change have exacerbated, created, or are in the process of inducing conditions that require an adaptive management response to disasters and medical and public health needs. This includes an evolutionary approach as new challenges arise from increased fire probability to higher predicted seasonal flooding events, coastal erosion and landslides, and an increase in certain, particularly vector borne and novel emerging, infectious diseases. UCI’s Center for Disaster Medical Sciences is adapting to these new challenges so that environments can be maintained in ways that correspond with a management methodology that makes resilience and continued sustainability possible. The Center is at the forefront of the emerging field of disaster medicine, offering innovative approaches to optimize disaster management through research, education, training, and public policy. Current research focuses on surge capacity and crisis care, disaster triage, earthquakes, simulation training, and disaster nomenclature.

**Center for Embedded and Cyber-Physical Systems**
The Center for Embedded and Cyber-Physical Systems (CECS) is a premier research organization focusing on research and educational aspects related to embedded systems. With applications ranging from green technology to information appliances, network and wireless communication, robotics, medical devices, smart homes for the elderly and disabled, automotive, rail and aviation technology sectors – they are changing the way we live. The Center is composed of more than 27 faculty members and 65 graduate students representing five Schools and eleven Departments across campus.

**Center for Environmental Biology**
The Center for Environmental Biology in the School of Biological Sciences was established in March 2010 to facilitate research, education, and outreach in biological science to help develop innovative new solutions to environmental problems. Biological
resources are a critical component of environmental sustainability. Land, aquatic, and marine ecosystems provide many essential functions that sustain air, water, climate, food, and social systems. It is increasingly challenging to manage these resources in response to multiple stresses and environmental disturbances such as climate change, pollution, land use change, and exotic species invasions. New advances in biological research are providing methods to better understand how organisms and ecosystems influence the environment and how they respond to environmental change. Working in partnership with ecosystem and resource managers, UCI faculty are collaborating to conduct solutions-oriented research in environmental biology, and to educate the next generation of environmental biologists and stewards of biological resources.

**Center for Ethnography**
Established in 2006, the Center for Ethnography has worked to develop a series of sustained and diverse theoretical and methodological conversations across disciplines, academic and applied, both to probe the state of ethnographic practice and to influence the current changes in how ethnography is conducted, reported, received, and taught. The center supports innovative collaborative ethnographic research as well as experiments on the theoretical and methodological functioning of ethnography amid contemporary cultural, social and technological transformations.

**Center for Evolutionary Genetics**
The application of molecular and genetic tools to evolutionary questions provides answers to some of the most fundamental questions in biology. For example, phylogenetic and phylogeographic analyses illuminate the evolutionary history of life, population genetics provides insight into current processes of gene flow and natural selection, and studies that incorporate experimental evolution and functional genetics can give us a preview of future evolutionary trajectories. The utility and power of modern genetic techniques can be applied to a diverse array of academic disciplines, including studies of aging, behavior, infectious disease, cancer, genomic evolution and the domestication of plants and animals.

**Center for Global Peace and Conflict Studies**
The Center for Global Peace and Conflict Studies (CGPACS) is a multi-disciplinary program founded in 1983, housed in the School of Social Sciences, and dedicated to promoting scholarly, student and public understanding of international peace and conflict. CGPACS-affiliated faculty (more than 60 faculty from 7 schools across campus), guest speakers, and affiliated graduate students work on the military/strategic, economic/environmental and cultural/normative motives, processes, and consequences of both peace and conflict. Current CGPACS programs approach the theme *Thinking past the Unthinkable: Opportunities and Challenges for Global Peace* in three related areas: Biosecurity and the New Realities of Global Warming, Financial Crisis: Peace and Conflict in the New Normal, and Rethinking Peace and Conflict after the Arab Spring. Biosecurity and the New Realities of Global Warming, the first CGPACS sub-theme, is particularly relevant to sustainability. Global warming poses a challenge to received wisdom about peace and conflict in the world. Bringing together the considerable expertise on the UCI campus, in partnership with local, regional and international experts, CGPACS looks at the numerous challenges to peace and potential for conflict posed by peak water and peak oil.

**Center for Globalization, Law, and Society**
The Center for Globalization, Law and Society (GLAS) is the umbrella center for the study of international, transnational and comparative law at UCI School of Law. The Center organizes presentations, conferences and other events, and is a focal point for cutting-edge research on the development and operation of law in a globalized world. As a premier research center, it builds understanding of law’s roles and constraints in addressing issues that transcend national borders, including the economy, human rights, health, and the environment. The Center brings together scholars of international, transnational and comparative law with social science researchers to build understanding and spur exchange on how to address transnational problems in a more effective and just way. UCI is one of the world’s leading centers for the interdisciplinary study of law and society. The Center builds on these existing strengths by expanding connections between the law school, campus, and local, state, national, and
global communities of scholars and affected constituencies.

**Center for Hydrometeorology and Remote Sensing**
The Center for Hydrometeorology and Remote Sensing (CHRS) brings together faculty and researchers to advance the knowledge of the water and energy cycle at scales ranging from the local watersheds to continental scales. Researchers focus on land-surface hydrologic processes, their spatial and temporal variability, and the use of remote sensing information and computer models to improve both the understanding of these processes and the ability to model them in order to predict the impacts of natural and anthropogenic variables on water resources. A primary goal of CHRS has been to develop the means to extend the benefits of federal space and weather agencies’ vast technological resources into applications that can assist hydrologists and water resource managers worldwide.

**Center for Land, Environment, and Natural Resources**
The Center for Land, Environment, and Natural Resources (CLEANR) strives to make UCI School of Law a nationally recognized site for scholarship, education, community outreach, and public engagement on environmental, natural resources, and land use law. CLEANR adopts a broad understanding of law to include judicial decision-making, legislation, regulation (including administrative guidance and policy), and alternative forms of dispute resolution. The center also adopts a broad understanding of environmental problems to include issues pertaining to environmental health, pollution control, land use, natural resources, public lands, and energy. CLEANR has hosted or co-hosted eight interdisciplinary conferences on a range of environmental topics, including offshore drilling, environmental health and law, water conservation in Mexico, the Arctic, California coastal conservation, climate justice, ice melt, and pesticides. Center programming includes an annual environmental law lecture series, an environmental literature and film series, and an international interdisciplinary summer institute for future sustainability leaders. Future programming also will include convening of focused environmental dispute resolution processes, interdisciplinary research funding, and policy papers.

**Center for Learning in the Arts and Sciences**
Founded in 2001, the campus Center for Learning in the Arts and Sciences focuses on developing effective interdisciplinary methods for helping all students to understand key concepts in the arts and sciences, with a special interest in civic competence and scientific knowledge. The Center has a strong focus on investigating methods by which communities and the natural environment may be sustained and thrive.

**Center for Occupational and Environmental Health**
The UC Centers for Occupational Health and Environmental Health were established in 1979 under a mandate from the California legislature with the goal of improving research and training on injuries and occupational disease prevention in California. The University established centers in Northern and Southern California, and later the Southern center was divided into one center at UCI and the other at UCLA. The centers were established to train occupational health scientists and professionals, conduct research on occupational and environmental health issues, and provide services to the public, employer, and workers in Southern California. UCI’s center houses programs in Environmental Health Sciences, Occupational and Environmental Medicine, Environmental Epidemiology, and Toxicology. Affiliated faculty and staff reside within the School of Medicine, the School of Social Ecology, and the Program in Public Health.

**Center for Research in International Studies**
The Center for Research on International Studies is designed to promote research connections among all faculty and students at UCI with international and global interests. Promoting synergies enhances the prospects for both addressing the global issues of today and educating the next generation of global citizens.

**Center for Research on International Immigration**
The Center for Research on International Immigration focuses on policy-related research concerned with immigration and immigrant settlement, including the role that immigration plays in affecting population dynamics and the economy. Broadly speaking, the Center’s research involves projects on what kinds of immigrants come, what happens to them when they are here, and what effects they have on America.
In his keynote address at a 2012 NSF-funded National Academies symposium, John Holdren, head of the US Office of Science and Technology Policy and chief science advisor to the nation, spoke at length about climate change, and described a need for both mitigation – the reduction of the magnitude of change – and adaptation – the mobilization of responses to change. Holdren advocated for the development of technology that focuses on "meeting human needs [and] wants at lower cost with reduced use of material resources [and] reduced environmental impact." The Center for Research in Sustainability, Collapse-Preparedness & Information Technology (RiSCIT) seeks to engage with this challenge, in part due to the potential for "greening through IT" – that is, making civilizations more environmentally sustainable via IT interventions and in part as means of preparing for civilizational collapse. The goal of the RiSCIT center is to provide a central focus for research on the role of informatics and computing in supporting the transition to sustainability and addressing the potential to prepare for civilization-scale collapse.

**Center for Solar Energy**
The Center for Solar Energy was established in 2007 to pioneer research in solar energy conversion. Presently, solar energy provides an insignificant fraction of the United States’ overall energy needs, and fundamental scientific breakthroughs will be required to change this state of affairs. The mission of the Center for Solar Energy (CfSE) is to study the fundamental scientific principles of solar energy conversion and to educate scientists, students, and the general public about harnessing our most abundant energy resource.

**Center for the Study of Democracy**
The Center for the Study of Democracy sponsors research and education aimed at improving the democratic process in the United States and expanding democracy around the world. The Center’s research activities focus on developing a better understanding of the conditions fostering democratic development and democratic processes in the United States and internationally.

**Center for Trauma and Injury Prevention Research**
Since its inception in 2004, UCI School of Medicine’s Center for Trauma and Injury Prevention Research has demonstrated its commitment to the reduction of the associated personal and societal burden of traumatic injury by conducting multidisciplinary research, translating research into policy and practice, serving as a regional and national resource, and working in close partnership with communities. This is part of the University’s institutional and cultural commitment to sustainability as trauma injuries increase through climate change challenges and the prevention of injury becomes a focused societal need.

**Center for Unconventional Security Affairs**
Global environmental change, technological innovation, economic globalization, and the spread of democracy have dramatically transformed the security landscape. While the incidence of war has declined, other, unconventional threats have moved onto the agenda, such as climate change, cybercrime and complex disasters. These threats to human security and national security have become as important as the traditional threat of war. Security today depends as much on investments into promoting sustainability, alleviating poverty and facilitating cooperation as into intelligence and defense. The Center for Unconventional Security Affairs (CUSA) was established in 2003. Its Unconventional Security Research Group studies and develops solutions to unconventional security challenges through interdisciplinary field research. CUSA’s Transformational Media Lab explores the use of media in communicating these challenges and moving people from concern to action. The eARTh Studio provides a platform for artists who create art informed by these issues. CUSA also focuses on supporting leaders in the business, government and non-profit communities who are trying to address these challenges, and on educating the next generation of leaders by integrating students into all aspects of the Center’s activities. In 2010, the Center launched a Sustainability Seminar Series that continues today.
**Center in Law, Society and Culture**
The Center in Law, Society and Culture brings together UCI faculty and graduate students who share interests in law, society, and culture, broadly defined. Issues of interest to center affiliates include race, law and justice; law and literature; critical legal theory; legal consciousness; law and space; legal philosophy, culture and policing; the interaction of local and international legal cultures; globalization; migration; knowledge production; law, science, and society; and law and history.

**Community Knowledge Project**
The Community Knowledge Project is a practice that explicitly addresses the systems and structures of inequality in which all humans and non-humans live. The Community Knowledge Project is inspired by the Environmental Justice Movements around the globe where expertise itself is challenged and redefined. Coburn (2006) nicely details the promise of local knowledge for a new generation of scholars that seek a connection rather than domination or mastery over their subjects/objects of interest. His is an introduction and a doorway into a situated knowledge making practice that includes, on equal footing, expert and local knowledge makers. Neither takes an upper hand for Coburn. Rather, expert and local knowledge practices share many qualities that make the dichotomy only useful as a mnemonic, not as epistemological or ontological truism. Because community health issues are inherently multidimensional, students from all departments and backgrounds are encouraged to become involved.

**Community Outreach Partnership Center**
Initiated in 2001, the Community Outreach Partnership Center (COPC) builds bridges between UCI and local communities. The Center harnesses university resources – faculty, student, and institutional – to help address key regional challenges. COPC projects are guided by a commitment to "community engagement." The Center uses applied research, training and instruction, and outreach to help build and sustain healthy communities.

**Greenhouse**
The UCI Greenhouse is a 9,000-square-foot growth facility that supports teaching and research needs for the School of Biological Sciences. The Greenhouse is divided into 15 growth areas that are individually programmable for temperature. Greenhouse Staff provides watering, pest management, and basic maintenance for plants used in research and teaching. Additional facilities include common-use lab space, a lath house adjacent to the Greenhouse for plants requiring ambient conditions, an autoclave for soil sterilization, and storage space for greenhouse supplies, which are provided by investigators. Limited environmental growth chamber space is also available.

**Health Policy Research Institute**
UCI’s Health Policy Research Institute is a multidisciplinary research unit that conducts health services research, comparative effectiveness and quality-of-care research. The Institute focuses on the assessment and improvement of the quality of health care, especially care for chronic diseases, with an emphasis on understanding and reducing disparities in health and healthcare for racial/ethnic minorities and vulnerable populations.

**Institute of Transportation Studies**
The Institute of Transportation Studies (ITS) – a UC organized research unit with branches at Irvine, Davis, and Berkeley – was established to foster research, education, and training in the field of transportation. Research at ITS covers a broad spectrum of transportation issues spanning the fields of engineering, planning, economics, computer science and public health. ITS-Irvine serves as headquarters for a major six-campus Multicampus Research Program and Initiative funded by the UC Office of the President on Sustainable Transport: Technology, Mobility and Infrastructure. Current funded research projects at Irvine focus upon: intelligent transportation systems, particularly advanced transportation management systems; analysis and simulation of urban traffic networks; transportation system operations and control; travel demand forecasting for both person and freight transportation; analysis of complex travel behavior; transportation/land use interactions, particularly those which encourage alternative modes of travel; planning and evaluation of advanced public transit systems; transportation pricing and regulation; energy and environmental issues, particularly demand for alternative fuels and assessing the greenhouse gas and air quality impacts of traffic and truck operations and associated pollution mitigation.
strategies; effect of land-use on transportation demand; and the growth of automobile use in the U.S. and Western Europe.

**National Fuel Cell Research Center**
The NFCRC was dedicated in 1998 by the U.S. Department of Energy and the California Energy Commission and is affiliated with the Advanced Power and Energy Program at UCI. The goal of the NFCRC is to facilitate and accelerate the development and deployment of fuel cell technology and fuel cell systems; promote strategic alliances to address the market challenges associated with the installation and integration of fuel cell systems; and to educate and develop resources for the various stakeholders in the fuel cell community. The NFCRC addresses the role of stationary fuel cell systems for both distributed and central plant generation of electricity, back-up power, powering laptops and cell phones, co-generating heat and cooling, and tri-generating hydrogen as a transportation and an industrial feedstock. The NFCRC addresses the role of mobile fuel cell systems for powering automobiles, trucks, buses, locomotives, ships, and long-distance trucks, and deploys fuel cell vehicles to address hydrogen generation, fueling, and public preparation for a future hydrogen economy.

**Coastal and Marine Science**
The oceans are of vast importance, and marine species and ecosystems are at risk. Human impacts on marine habitats are greatest in areas of high population density, including the Los Angeles metropolitan area, which is adjacent to a productive and diverse stretch of coastline. Researchers at UCI are tackling many of the pressing environmental concerns that impact oceans at both local and global scales, including the effects of pollution, climate change, marine debris, invasive species, nutrient loading, and biodiversity loss. Locally, UCI faculty are at the forefront of coastal ocean monitoring and are leading restoration and conservation efforts in Orange County.

**Newkirk Center for Science and Society**
The Newkirk Center for Science and Society promotes research in the natural and social sciences to enhance the quality of life. It finds ways to develop and share research knowledge with the public and policy makers so they can make informed decisions on vital policy issues on law, education, environment, health care, crime, and public infrastructure. Among these are the Center's "Toward a Sustainable 21st Century" seminar series, begun in 2007, and the Summer Seminar Series: "Empowering Sustainability on Earth," launched in July 2011. Emphasizing health, the environment, community development, education, and law, the Center embraces the following principles in its operations: enabling scientists to connect more easily with policy makers, practitioners, and citizens; assisting the community to connect to the development of science intended to serve its needs; harnessing the multidisciplinary capacities of UCI and the UC system-wide.

**Social Ecology Research Center**
Affiliated with the School of Social Ecology, the Social Ecology Research Center promotes research that links natural and socio-cultural domains, transcending individual disciplines and bridging critique and action. Current research projects include Social Ecology of Resilience and Sustainability, Ecology and the Neighborhood, and Climate Narratives.

**UCI Combustion Laboratory**
The UCI Combustion Laboratory, (UCICL) is one of the components of the Advanced Power & Energy Program (APEP) at UCI. The UCICL is addressing the challenges associated with the combustion of alternative and fossil fuels by developing and applying (1) advanced experimental capabilities including specialized test rigs, laser and conventional diagnostics; (2) numerical tools; and (3) statistically designed testing to problems of practical relevance. These tools are necessary to unravel the complex, multidisciplinary nature of combustion that heretofore has eluded understanding. A fundamental understanding of the interaction between turbulent mixing and chemical reaction is required if practical combustion systems are to be improved beyond the current state of the art.

**UCI OCEANS**
Oceans are important for the Earth System but are vulnerable to human impacts such as climate change, overfishing, and pollution. Across campus, researchers at UCI are tackling pressing marine and on-shore environmental concerns and investigating questions at both global and local scales. This
Initiative will offer a fresh take on ocean research and education by embracing a vision and approach that spans the natural sciences, engineering, social science, arts, education, law, and governance and is thus distinct from other marine research institutions. With the unique collection of interdisciplinary research approaches and strong community support, UCI OCEANS is poised to become the flagship organization for urban ocean studies, while simultaneously contributing to high impact global-scale ocean research. Twenty-nine faculty from eight schools are part of this Initiative.

**UCI Salton Sea Initiative**
The Salton Sea Initiative is an interdisciplinary collaboration based at UCI and working to promote understanding about the sustainability challenges facing the Salton Sea region. This work takes many forms: facilitation and collaboration on various research efforts in the natural and social sciences; teaching, curriculum development, and empowering our students to teach; and working with regional partners to create avenues for public discourse about the future of the Salton Sea. The Salton Sea Initiative is one of the initiatives sponsored by UCI’s Office of the Provost and Executive Vice Chancellor through the Office of Academic Initiatives.

**UCI Sustainability Initiative**
The Sustainability Initiative provides a platform for interdisciplinary scholarship on the critical climate, environment, and resource issues confronting society. The Initiative aims to infuse sustainability across UCI empowering students and faculty with the rich institutional history of impactful research and promotes collaborations with diverse communities on and off campus in developing solutions to challenges affecting California and the globe. Community-engaged scholarship and practice are integral to UCI’s excellence as a research university and underlie how the university creates knowledge to serve society. Specific goals of the Sustainability Initiative include: transform sustainability education at UCI; embrace climate neutrality as an institution; enable skills sharing and capacity building for transformation; communicate the legacy of UCI’s sustainability scholarship and practice; facilitate connection and resource sharing on and off campus; incubate new projects by faculty, staff, and student leaders; and reinforce campus efforts to inspire, enable, and evaluate public impact through interschool research, education, and engagement. The Sustainability Initiative is one of the initiatives sponsored by UCI’s Office of the Provost and Executive Vice Chancellor through the Office of Academic Initiatives.

**UCI Water Energy Nexus Center**
The UCI Water Energy Nexus Center (UCI WEX Center) promotes comprehensive and transdisciplinary approaches to water efficiency, energy efficiency, and greenhouse gas reduction in an urban environment with a diverse, rapidly growing population. The UCI WEX Center’s mission is to advance the understanding of the water environment and the energy-water nexus for urban areas and their surroundings in order to assist people and institutions in their efforts to promote health, enhance the efficient use of water and energy resources, and protect environmental values. UCI WEX Center aims to promote excellence in urban water research and education at UCI by facilitating the integration of research in basic and applied science, engineering, and social sciences. It also aims to bridge with entities outside academia to advance societal and industrial applications of fundamental and applies research to inform and aid policy makers and to educate the public on urban water sustainability in Orange County, California, the United States and beyond.

**UC Network for Experimental Research on Evolution**
NERE, the Network for Experimental Research on Evolution, is a UC Multicampus Research Program funded and administered through the UC Office of the President and its constituent UC campuses. NERE (pronounced “near”) supports collaboration, communication, and graduate education concerned with research on biological evolution. A number of UCI researchers are affiliated with NERE.

**UC Research and Education in Green Materials Program**
The goal of the Research and Education in Green Materials program is to transform the research education of a new cadre of graduate students to approach materials science, toxicology, environmental engineering and technologies, and the social sciences through selective engagement collaboratively to transform what some call “our current toxic material society” into a “green
material society.” California, as the world’s sixth largest economy, is both a source and sink for consumer products manufactured with material components that remain poorly characterized with respect to potential impacts on human health and environmental quality. The program is designed not only to pinpoint toxic risks but also to develop effective strategies for managing the risks while paying attention to consumer preferences, the bottom line for manufacturers, and the role of government policies in protecting the public.

**Water UCI**
The interschool Water UCI Initiative fosters collaboration in the fields of fundamental and applied water science, technology, engineering, management and policy. Water UCI team tackles “grand challenges” – high-consequence, high-uncertainty problems that entail unprecedented mitigation costs, have the potential to generate social conflict, and may be approaching irreversibility. California is used as both a point of departure to address global water issues and a benchmark for applying innovations in areas such as water resource monitoring, groundwater management, wastewater recycling and demand-side management. Water UCI activities focus on interdisciplinary research, curriculum development, and community outreach events. Water UCI is one of the initiatives sponsored by UCI’s Office of the Provost and Executive Vice Chancellor through the Office of Academic Initiatives.

**W. M. Keck Carbon Cycle Accelerator Mass Spectrometry Laboratory**
The Keck Carbon Cycle accelerator mass spectrometry (KCCAMS) facility was set up to use carbon isotopic techniques, primarily AMS, to advance understanding of the carbon cycle and its linkages with climate.
UC Natural Reserve System
The UC Natural Reserve System contributes to the understanding and wise stewardship of the Earth and its natural systems by supporting university-level teaching, research, and public service at protected natural areas throughout California. Sites administered by UCI include:

Burns Piñon Ridge Reserve
The Burns Piñon Ridge Reserve lies at the westernmost edge of the Mojave Desert, where Joshua trees give way to the piñons and junipers of higher elevations. To the west, the peaks of the San Bernardino Mountains cast a rain-shadow over this boulder-strewn land. Animal communities from the desert and the mountains cross paths at the Burns Reserve. A three-hour drive from UCI and two hours from UC Riverside, the 121-hectares (303 acres) contained within this site are located in the Morongo Basin, just north of the town of Yucca Valley.

San Joaquin Marsh Reserve
The San Joaquin Marsh Reserve represents one of the last remnants of wetlands that once covered much of Orange County's flood plain. Located in an ancient river-cut channel at the head of Newport Bay, the reserve supports a variety of wetland habitats, including marshlands, shallow ponds, and channels confined by earthen dikes. Dry upland habitats with a remnant coastal sage scrub community rise on the margins of the reserve. The marsh is a critical stopping place for 100 migratory bird species using the Pacific Flyway. Altogether, more than 200 bird species (20 nesting) have been sighted in the reserve, including two resident endangered bird species: the light-footed clapper rail and the California least tern. The marsh is located within a ten-minute walk from UCI, making it convenient for day use by faculty and numerous students.

Steele Burnand Anza-Borrego Research Center
At 615,000 acres, Anza-Borrego Desert State Park is the largest state park in California and one of the largest desert protected areas in the west. Located in the eastern half of San Diego County, the park extends roughly 25 miles east to west and 50 miles north to south. The Steele Burnand Anza-Borrego Desert Research Center, housed in a former country club, is located adjacent to the park in the town of Borrego Springs. An agreement with Anza-Borrego Desert State Park and the Anza-Borrego Foundation makes the park available to reserve users. Anza-Borrego Desert State Park encompasses a wide variety of habitats. High elevation species such as white fir grow on several mountaintops. Sonoran Desert stalwarts such as ocotillo, palo verde, fishhook cacti, and creosote are found in hotter, lower elevation areas. A perennial stream, Coyote Creek, offers rare riparian habitat within this arid region. Thirty fan palm oases, piñon pine and juniper forests, and live oak woodlands. The eroded formations of the Borrego and Carrizo Badlands are found in the eastern portion of the park.

As of July 2012 the Reserve now also includes the White Mountain Research Center, hosted by the Institute of the Environment and Sustainability at UC Los Angeles. WMRC includes a number of field stations: the Owens Valley base station near the town of Bishop, a montane station at Crooked Creek, an alpine state at Barcroft, and the summit lab. The combination of facilities, geologic exposure, steep topography, and high elevation make the station uniquely valuable for scientific study and education. Researchers from UCI's Advanced Power and Energy Program were instrumental in upgrading the site's energy infrastructure in recent years.
Field Research Partnerships

Crystal Cove State Park and Marine Research Facility
UCI has partnered with Crystal Cove State Park and the Crystal Cove Alliance to provide the opportunity for UCI faculty and students to undertake small-scale and low-impact scientific research in the Park by utilizing the Park and Marine Research Facility for approved projects. The facility has been restored and renovated for modern scientific research, while simultaneously preserving the structure, design and look of an historic cottage. The Park and Marine Research Facility supports low-impact scientific study that furthers understanding of Crystal Cove's natural, cultural, and historical resources.

UCI Ecological Preserve
The UCI Ecological Preserve is a 60-acre site on the southern edge of the campus, located adjacent to University Hills, the Irvine Research Park, and the San Joaquin Transportation Corridor. It is part of the main campus and is managed by UCI's Office of Natural Reserves for the School of Biological Sciences. The Preserve is enrolled in the Nature Reserve of Orange County. The Preserve is used for research and is a cherished and scenic campus asset. Its panoramic view encompasses much of the campus, with the Pacific Ocean and Catalina Island as a westerly backdrop. The Ecological Preserve has seen extensive research efforts over the years, including many publications, theses, and surveys of plants and animals ranging from bobcats, California gnatcatchers, and cactus wrens to research focused upon restoration ecology and plant-animal interactions.

UCI Field Laboratory for Energy Research
UCI is combining novel strategies for energy efficiency, energy management, and self-generation with research that positions the campus as one of the nation's most advanced field laboratories for community energy generation and utilization, and microgrid technology. The partnership is led by the UCI Advanced Power and Energy Program in a novel collaboration with UCI Facilities Management, and campus Environmental Planning and Sustainability. Partners include Siemens, MelRoK, Toyota, ETAP, and UCI's Transportation and Distribution Services. As a result of previous and ongoing investments in multiple photovoltaic installations and energy research initiatives, the UCI Field Laboratory provides a unique combination of key renewable, distributed energy, and smart demand response resources for the study of photovoltaic deployment and integration into the electric grid. The Field Laboratory also enables the investigation of controlled metrics in the context of the emerging smart grid paradigm. Included are natural gas-powered distributed generators, energy storage devices, photovoltaic power systems, a large thermal storage tank, electric vehicles, and smart demand response and dispatchable power capabilities. Overlaying the hardware is a sophisticated array of circuit, energy, and transportation steady-state and dynamic simulation and computer models.

Fuel Cell Vehicle Deployment and Hydrogen Infrastructure
The National Fuel Cell Research Center (NFCRC) hosts the world's largest university program in the deployment of fuel cell vehicles and hydrogen fueling stations through partnerships with automakers and hydrogen providers. The NFCRC fuel cell vehicle (FCV) deployment program has been ongoing since 2002 and currently includes 17 Toyota FCVs. Through the program, fuel cell vehicles are deployed to local political and business leaders, including members of the Irvine City Council, so that they can gain experience and understanding of the operation and refueling of this next-generation vehicle. The NFCRC also manages two hydrogen fueling stations in partnership with Air Products. The UCI hydrogen station was the first 24-hour publicly accessible hydrogen station in the United States, and the Orange County Sanitation District hydrogen station is the first in the world to produce bio-hydrogen on site. Orange County, and in particular Irvine, has become a hub for the early deployment of fuel cell vehicles, which several automakers plan to retail in 2015. Through a strategic alliance with automakers including General Motors, Toyota, Honda, Nissan, Hyundai, and Mercedes and energy companies Air Products...
and Linde, the NFCRC is engaged in systematic planning for the deployment of hydrogen fueling infrastructure.

**Irvine Smart Grid Demonstration Project**
UCI is host to one of the country’s largest smart grid demonstration programs, the Irvine Smart Grid Demonstration (ISGD), sponsored by the U.S. Department of Energy ISGD under the leadership of Southern California Edison. ISGD is demonstrating and evaluating future smart grid technologies through a public-private partnership. The Advanced Power and Energy Program is a research partner in many aspects of the project, manager of the electric vehicle deployment to 30 homes engaged in the project, and coordinator with UCI Facilities Management, Environmental Planning and Sustainability, and Transportation and Distribution Services with various dimensions of the project. ISGD spans from the western grid, to the substation and distribution circuit level, and to individual homes that have been outfitted with smart appliances, solar panels, electric vehicles, smart chargers, battery storage, and various energy efficiency measures to explore the zero net energy home of the future.

**Tri-Generation from Biogas**
The National Fuel Cell Research Center (NFCRC) is demonstrating the world’s first high-temperature fuel cell tri-generation system at the Orange County Sanitation District through a public/private partnership. The system, which is fueled on biogas derived from wastewater treatment, simultaneously produces electricity, heat, and hydrogen fuel. The installation is also coupled with a hydrogen fueling dispenser, which is today used to refuel fuel cell vehicles with bio-hydrogen. Tri-generation technology was first conceived at the NFCRC in 2002 and then developed further through research and collaboration with Air Products and Chemicals, Inc. and FuelCell Energy, Inc., eventually leading to the current demonstration at the Orange County Sanitation District. The partners involved in the program include Air Products and Chemicals, FuelCell Energy, the U.S. Department of Energy, the California Air Resources Board, South Coast Air Quality Management District, and the Southern California Gas Company.

**Nature Reserve of Orange County**
UCI is a founding member and serves a leadership role in the Nature Reserve of Orange County is a 503(c)(3) nonprofit corporation that manages the Natural Community Conservation Plan/Habitat Conservation Plan for the central and coastal subregion of Orange County, California. The Nature Reserve coordinates the land-management activities of public and private landowners within the 37,000-acre reserve system, conducts wildlife and habitat research and monitoring, and restores disturbed habitats.

**Organization for Tropical Studies**
UCI is a founding member of the Organization for Tropical Studies (OTS), headquartered at Duke University, through which more than 300 scientists from 25 countries work at field sites in Costa Rica and Africa each year. OTS is a non-profit consortium that has grown to include 63 universities and research institutions from the United States, Latin America and Australia. OTS was founded to provide leadership in education, research and the responsible use of natural resources in the tropics. To address this mission, OTS conducts graduate and undergraduate education, facilitates research, participates in tropical forest conservation, maintains three biological stations in Costa Rica and conducts environmental education programs.

**ZEV•NET at the Irvine Transportation Center**
The Advanced Power and Energy Program operates a novel shared car program of electric vehicles called ZEV•NET for “Zero Emission Vehicle Network Enabled Transport,” in partnership with Toyota and the City of Irvine. ZEV•NET provides battery electric transportation for the critical “last mile” of commutes, from the Irvine train station to offices and local meetings. Since its inception in 2001, seven businesses in the City of Irvine have participated in the ZEV•NET car sharing program, providing employees access to convenient, zero emission transportation. The innovative transportation model provides multiple benefits to the community such as reducing road congestion by enabling more train commuting and replacing short trips made by gasoline vehicles during the work day – trips that produce the most harmful “start-up” emissions – with zero emission BEV trips.
Schools, Departments, and Programs in which Sustainability Research Takes Place

Claire Trevor School of the Arts
• Studio Art

Francisco J. Ayala School of Biological Sciences
• Developmental and Cell Biology
• Ecology and Evolutionary Biology

The Paul Merage School of Business

School of Education

The Henry Samueli School of Engineering
• Biomedical Engineering
• Chemical Engineering and Materials Science
• Civil and Environmental Engineering
• Electrical Engineering and Computer Science
• Mechanical and Aerospace Engineering

College of Health Sciences
• Program in Public Health

School of Humanities
• Comparative Literature
• History
• Art History

Donald Bren School of Information and Computer Sciences
• Computer Science
• Informatics
• Statistics

School of Law

School of Medicine
• Biological Chemistry
• Community & Environmental Medicine
• Emergency Medicine

• Epidemiology
• Internal Medicine
• Occupational and Environmental Medicine
• Psychiatry and Human Behavior

School of Physical Sciences
• Chemistry
• Earth System Science
• Mathematics
• Physics and Astronomy

School of Social Ecology
• Criminology, Law and Society
• Planning, Policy and Design

School of Social Sciences
• Anthropology
• Cognitive Sciences
• Economics
• Political Science
• Sociology
Faculty Engaged in Sustainability Research
(Listed by Primary School/Department/College Affiliation)

Claire Trevor School of the Arts
- Studio Art
  - Jesse Colin Jackson

Francisco J. Ayala School of Biological Sciences
- Developmental and Cell Biology
  - Bruce Blumberg
  - R. Michael Mulligan
- Ecology and Evolutionary Biology
  - Adriana D. Briscoe
  - Albert F. Bennett
  - Ann K. Sakai
  - Anthony D. Long
  - Arthur E. Weis
  - Brad Hughes
  - Bradford A. Hawkins
  - Brandon S. Gaut
  - Cascade Sorte
  - Catherine “Kate” Loudon
  - Diane Campbell
  - Dominik Wodarz
  - Donovan German
  - Eman “Manny” Azizi
  - F. Lynn Carpenter
  - Francisco J. Ayala
  - James W. Hicks
  - Jennifer Martiny
  - John C. Avise
  - Jose Ranz
  - Kailen A. Mooney
  - Kathleen K. Treseder
  - Laurence D. Mueller
  - Matt McHenry
  - Matthew Bracken
  - Michael R. Rose
  - Michael T. Clegg
  - Nancy Tyler Burley
  - Peter A. Bowler
  - Richard Symanski
  - Sergio Rasmann
  - Stephen G. Weller
  - Steven A. Frank
  - Steven D. Allison
  - Timothy J. Bradley
  - Travis Huxman

The Paul Merage School of Business
- Alladi Venkatesh
- Christopher W. Bauman
- Devin Shanthikumar
- L. Robin Keller
- Kerry Vandell
- Luyi Gui
- Shivendu Shivendu

School of Education
- Liane Brouillette

The Henry Samueli School of Engineering
- Biomedical Engineering
  - Abraham P. Lee
- Chemical Engineering and Materials Science
  - Albert F. Yee
  - Ali Mohraz
  - Allon Hochbaum
  - Daniel R. Mumm
  - Julie M. Schoenung
  - Martha L. Mecartney
  - Nancy Da Silva
- Civil and Environmental Engineering
  - Ayman S. Mosallam
  - Betty H. Olson
  - Brett Sanders
  - C. Sunny Jiang
  - Diego Rosso
  - Jan Scherfig
  - Jasper Vrugt
  - Jean-Daniel Saphores
  - Kristen A. Davis
  - Kuo-lin Hsu
  - Masanobu Shinozuka
- R. Jayakrishnan
- Soroosh Sorooshian
- Stanley Grant
- Stephen G. Ritchie
- Wenlong Jin
- Wilfred R. Recker
- William J. Cooper
- Xiaogang Gao

- Electrical Engineering and Computer Science
  - Ahmed Eltawil
  - Fadi Kurdahi
  - G.P. Li
  - Kumar Wickramasinghe
  - Mohammad Abdullah Al Faruque

- Mechanical and Aerospace Engineering
  - Derek Dunn-Rankin
  - Donald Dabdub
  - Faryar Jabbari
  - Jack Brouwer
  - Larry Muzio
  - Scott Samuelsen
  - Vince McDonell
  - William R. “Randy” Seeker
  - Yun Wang

- Informatics
  - Bill Tomlinson
  - Bonnie Nardi
  - Cristina Lopes
  - Debra J. Richardson
  - Donald J. Patterson
  - Joshua Tanenbaum
  - Melissa Mazmanian

- Statistics
  - Hal Stern
  - Yaming Yu

**College of Health Sciences**
- Program in Public Health
  - Andrew Noymer
  - Jun Wu
  - Lisa Grant Ludwig
  - Oladele Ogunseitan
  - Scott Bartell
  - Sharon Stern
  - Suellen Hopfer
  - Veronica Vieira

**School of Humanities**
- Comparative Literature
  - Gabriele Schwab
- History
  - Patricia Seed
- Art History
  - James Nisbet

**Donald Bren School of Information and Computer Sciences**
- Computer Science
  - Eric D. Mjolsness
  - Marco Levorato
  - Nalini Vankatasubramanian
  - Patrick J. “Padhraic” Smyth
  - Sharad Mehrotra
  - Wayne B. Hayes

- Informatics
  - Bill Tomlinson
  - Bonnie Nardi
  - Cristina Lopes
  - Debra J. Richardson
  - Donald J. Patterson
  - Joshua Tanenbaum
  - Melissa Mazmanian

- Statistics
  - Hal Stern
  - Yaming Yu

**School of Law**
- Alejandro E. Camacho
- Benjamin van Rooij
- Carrie Menkel-Meadow
- Gregory Shaffer
- Joseph DiMento
- Michael Robinson-Dorn
- Michele Goodwin
- Robert Solomon
- Seth Davis

**School of Medicine**
- Biological Chemistry
  - Suzanne Sandmeyer
- Community & Environmental Medicine
  - Ronald C. Shank
- Emergency Medicine
  - Bharath Chakravarthy
  - Carl H. Schultz
  - Christopher Eric McCoy
  - Craig L. Anderson
  - J. Christian Fox
  - Kristi L. Koenig
  - Merritt Schreiber
  - Shahram Lotfipour
  - Wirachin Ying Hoonponsimanont
- Epidemiology
  - Ralph J. Delfino
  - Rufus Edwards
• Internal Medicine
  - Alpesh Amin
• Medicine
  - BongKyoo Choi
  - Dean Baker
  - Leslie M. Israel
  - M. Joseph Fedoruk
  - Michael T. Kleinman
  - Peter L. Schnall
  - Robert R. Phalen
  - Stephen C. Bondy
  - Ulrike Luderer
• Psychiatry and Human Behavior
  - Roger Walsh

School of Physical Sciences
• Chemistry
  - Aaron P. Esser-Kahn
  - Alan Heyduk
  - Athan J. Shaka
  - Barbara Finlayson-Pitts
  - Donald R. Blake
  - Douglas J. Tobias
  - Filipp Furche
  - Jenny Y. Yang
  - John C. Hemminger
  - Kenneth Janda
  - Liz Jarvo
  - Matthew D. Law
  - R. Benny Gerber
  - Reginald Penner
  - Robert M. Corn
  - Sergey Nizkorodov
  - Shane Ardo
  - Vy Maria Dong
  - William J. Evans
• Earth System Science
  - Adam Martiny
  - Charlie Zender
  - Claudia Czimczik
  - Ellen Druffel
  - Eric Rignot
  - Eric S. Saltzman
  - Francois W. Primeau
  - Gudrun Magnusdottir
  - Isabella Velicogna
  - James T. Randerson
  - Jay Famiglietti
  - Jin-Yi Yu
  - Katherine Mackey
  - Kathleen R. Johnson
  - Michael Goulden
  - Michael J. Prather
  - Steven J. Davis
  - Susan E. Trumbore
  - Todd Dupont
• Mathematics
  - John S. Lowengrub
• Physics and Astronomy
  - David P. Kirkby
  - Dennis Silverman
  - Ilya Krivorotov
  - Liu Chen
  - Peter Taborek
  - Roger D. McWilliams
  - Ruqian Wu
  - Toshiki Tajima
  - William W. Heidbrink
  - Wilson Ho
  - Zachary Fisk
  - Zhihong Lin

School of Social Ecology
• Criminology, Law and Society
  - Geoff Ward
  - Teresa Dalton
• Planning, Policy and Design
  - Ajay Garde
  - Daniel Stokols
  - David L. Feldman
  - Jae Hong Kim
  - John D. “Doug” Houston
  - Raul P. Lejano
  - Richard Matthew
  - Sanjoy Mazumdar
  - Scott A. Bollens
  - Victoria Basolo

School of Social Sciences
• Anthropology
  - Bill Maurer
  - Julia Elyachar
  - Michael Burton
  - Michael Montoya
  - Paula Garb
  - Tom Boellstorff
- Valerie Olson
- Cognitive Sciences
  - Barbara Sarnecka
- Economics
  - David Brownstone
  - Jan Brueckner
  - Kenneth Small
  - Kevin Roth
  - Linda Cohen
  - Martin C. McGuire
  - Michael McBride
- Political Science
  - Cecelia Lynch
- Sociology
  - Ann M. Hironaka
  - David A. Smith
  - David J. Frank
  - David S. Meyer
  - Evan Schofer
  - Frank D. Bean
  - Susan K. Brown
Faculty Engaged in Sustainability Research
(Alphabetical Listing)

Al Faruque
Mohammad Abdullah Al Faruque
Assistant Professor
Department of Electrical Engineering and Computer Science
The Henry Samueli School of Engineering
http://aicps.eng.uci.edu/
Research: cyber-physical Energy Systems; demand side energy management at the distribution grid level; modeling, co-simulation, design automation tools, scheduling algorithm, and communication

Allison
Steven D. Allison
Associate Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
Earth System Science, School of Physical Sciences
http://allison.bio.uci.edu
Research: microbial ecology, global change, and carbon cycling

Amin
Alpesh Amin
Professor & Chair, Department of Medicine
Department of Internal Medicine, School of Medicine
http://www.faculty.uci.edu/profile.cfm?faculty_id=5173
Research: implementation science in the area of quality and safety that lead to sustainability research and outcomes

Anderson
Craig L. Anderson
Research Director, Center for Trauma and Injury Prevention Research
Research Specialist
Department of Emergency Medicine, School of Medicine
http://www.faculty.uci.edu/profile.cfm?faculty_id=5797&name=Craig%20L%20Anderson
Research: reducing the burden of injury through research

Ardo
Shane Ardo
Assistant Professor
Department of Chemistry, School of Physical Sciences
http://www.chem.uci.edu/~ardo/
Research: solar cells, solar fuels, solar seawater desalination, flow batteries
Avise

**John C. Avise**
Distinguished Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5292
Research: ecological and evolutionary genetics, natural history, conservation biology

Ayala

**Francisco J. Ayala**
University Professor and Donald Bren Professor of Biological Sciences
Department of Ecology and Evolutionary Biology, School of Biological Sciences
Professor
Department of Philosophy, School of Humanities
Department of Logic and Philosophy of Science, School of Social Sciences
Affiliate: UC Network for Experimental Research on Evolution
http://www.faculty.uci.edu/profile.cfm?faculty_id=2134
Research: evolutionary genetics

Azizi

**Eman “Manny” Azizi**
Assistant Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5841
Research: muscle biology, locomotion, biomechanics

Baker

**Dean Baker**
Chief, Division of Occupational and Environmental Medicine
Director, UCI Center for Occupational and Environmental Health
Professor of Pediatrics, Professor of Epidemiology
Department of Medicine, School of Medicine
http://www.coeh.uci.edu/faculty/coeh_fac/dr_baker.htm
Research: environmental epidemiology; occupational epidemiology; occupational medicine; toxicology; children's health; developmental toxicity; exposure, study design; occupational stress; asthma; pesticides; hazardous waste; environment; biological markers

Bartell

**Scott Bartell**
Associate Professor
Program in Public Health
http://www.faculty.uci.edu/profile.cfm?faculty_id=5377
Research: methods in public health: probabilistic models and statistical methods for exposure assessment, environmental epidemiology, and risk/decision analysis

Basolo

**Victoria Basolo**
Associate Professor
Department of Planning, Policy and Design, School of Social Ecology
http://social ecology.uci.edu/faculty/basolo/
Research: housing planning and policy, economic and community development, and urban disasters
Bauman Christopher W. Bauman
Assistant Professor
The Paul Merage School of Business
http://merage.uci.edu/Faculty/FacultyDirectory/FacultyProfiles.aspx?FacultyID=8477
Affiliate: Center for Global Leadership
Research: corporate social responsibility, business ethics, and negotiations

Bean Frank D. Bean
Director, Center for Research on Immigration, Population and Public Policy
Chancellor’s Professor
Department of Sociology, School of Social Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4622
Research: international migration, demography, racial and ethnic relations, economic sociology, family

Bennett Albert F. Bennett
Vice Provost for Academic Initiatives
Professor Emeritus
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4546
Research: evolutionary and comparative physiology, the interaction of living things with their environments, particularly with regard to temperature and energy exchange

Blake Donald R. Blake
Professor
Department of Chemistry, School of Physical Sciences
Department of Earth System Science, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4579
Research: atmospheric chemistry

Blumberg Bruce Blumberg
Professor
Department of Developmental and Cell Biology, School of Biological Sciences
http://blumberg-lab.bio.uci.edu/index.htm
Research: gene regulation and intercellular signaling during embryonic development

Boellstorff Tom Boellstorff
Professor
Department of Anthropology, School of Social Sciences
http://faculty.sites.uci.edu/boellstorff/
Research: internet culture, virtual worlds, sexuality and globalization, disability, attitudes toward “native plants”
Bollens

Scott A. Bollens
Professor
Warmington Chair in Peace and International Cooperation
Department of Planning, Policy and Design, School of Social Ecology
http://socialecology.uci.edu/faculty/bollens
Research: social sustainability in politically and ethnically divided cities, and sustainable land use policy and regional governance

Bondy

Stephen C. Bondy
Professor
Environmental Health Science Program
Center for Occupational and Environmental Health
Department of Medicine, School of Medicine
http://www.coeh.uci.edu/faculty/coeh_fac/dr_bondy.htm
Research: the potential role of toxic agents in the promotion of brain aging and neurological disease

Bowker

Geoffrey Bowker
Professor
Department of Informatics, Donald Bren School of Information and Computer Sciences
http://www.ics.uci.edu/~gbowker/
Research: cyberinfrastructures for environmental science; and the use of environmental databases in policy development.

Bowler

Peter A. Bowler
Director, UCI Arboretum and Herbarium
Director, Interdisciplinary Minor in Global Sustainability
Faculty Manager, San Joaquin Marsh Reserve and Burns Piñon Ridge Desert Reserve
Oversees use and management of the UCI Ecological Preserve
Senior Lecturer SOE
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=2119&name=Peter%20A.%20Bowler
Research: ecological restoration, wetland restoration, coastal scrub sage

Bracken

Matthew Bracken
Associate Professor
Department of Ecology & Evolutionary Biology, School of Biological Sciences
http://faculty.sites.uci.edu/biodiversity/
Research: causes and consequences of biodiversity change in marine ecosystems
Bradley

**Timothy J. Bradley**

Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
Affiliate: UC Network for Experimental Research on Evolution
http://www.faculty.uci.edu/profile.cfm?faculty_id=2131
Research: physiology, ecology, cell biology, and pathology of insects

Briscoe

**Adriana D. Briscoe**

Associate Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
Affiliate: UC Network for Experimental Research on Evolution
http://www.faculty.uci.edu/profile.cfm?faculty_id=5288
Research: molecular evolution, evolutionary physiology, color vision, color, behavior

Brouillette

**Liane Brouillette**

Co-Director, Center for Learning in the Arts, Sciences, and Sustainability
Associate Professor
School of Education
http://www.faculty.uci.edu/profile.cfm?faculty_id=4510
Research: using arts education to help students from low-income neighborhoods better understand the language of science

Brouwer

**Jack Brouwer**

Associate Director, National Fuel Cell Research Center
Assistant Professor of Mechanical, Aerospace, and Environmental Engineering
Department of Mechanical and Aerospace Engineering
http://www.eng.uci.edu/users/jack-brouwer
The Henry Samueli School of Engineering
Research: advanced energy technologies, fuel cells, energy sources and pollutant emissions

Brown

**Susan K. Brown**

Associate Professor
Department of Sociology, School of Social Sciences
Affiliate: Center for Research on Immigration, Population and Public Policy
http://www.faculty.uci.edu/profile.cfm?faculty_id=4670
Research: international migration, demography, educational inequality and urban sociology

Brownstone

**David Brownstone**

Professor
Department of Economics, School of Social Sciences
http://www.economics.uci.edu/~dbrownst/
Affiliate: Institute of Transportation Studies
Research: demand for efficient vehicles and sustainable transportation
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Department/Institution</th>
<th>Research topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brueckner</td>
<td>Jan Brueckner</td>
<td>Chancellor's Professor</td>
<td>Energy use in cities, taking into account both residential and transportation usage</td>
</tr>
<tr>
<td>Burley</td>
<td>Nancy Tyler Burley</td>
<td>Professor</td>
<td>Evolutionary significance of mate preferences, using Zebra finches as experimental models</td>
</tr>
<tr>
<td>Burton</td>
<td>Michael L. Burton</td>
<td>Professor Emeritus, Department of Anthropology</td>
<td>Social life in critically stressed environments, food production and gender systems, agriculture, farming and herding throughout global environments, climate change and greenhouse gasses, impacts of climate change on global food production</td>
</tr>
<tr>
<td>Camacho</td>
<td>Alejandro E. Camacho</td>
<td>Director, Center for Land, Environment, and Natural Resources</td>
<td>Environmental, land use, and natural resources law; adaptive management; collaborative governance; climate change</td>
</tr>
<tr>
<td>Campbell</td>
<td>Diane Campbell</td>
<td>Professor</td>
<td>Evolution in natural populations, pollination, invasive species</td>
</tr>
<tr>
<td>Carpenter</td>
<td>F. Lynn Carpenter</td>
<td>Professor Emeritus, Department of Ecology and Evolutionary Biology</td>
<td>Restoring native trees and soil fertility to eroded pasture land in the Neotropics</td>
</tr>
</tbody>
</table>
Chakravarthy  

**Bharath Chakravarthy**  
Associate Director, Center for Trauma and Injury Prevention Research  
Assistant Professor  
Department of Emergency Medicine, School of Medicine  
http://www.faculty.uci.edu/profile.cfm?faculty_id=5752&name=Bharath%20%20Chakravarthy  
Research: population-based sustainable reduction of the burden of disease caused by behavioral emergencies

---

Chen  

**Liu Chen**  
Professor  
Department of Physics and Astronomy, School of Physical Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2034  
Research: controlled thermonuclear fusion research

---

Choi  

**BongKyoo Choi**  
Assistant Professor  
Center for Occupational and Environmental Health  
Department of Medicine, School of Medicine  
Program in Public Health  
http://www.coeh.uci.edu/faculty/coeh_fac/dr_choi.htm  
Research: psychosocial occupational epidemiology, work stress theories and methodologies, work stress physiology, cross-cultural studies, and quality of working life policies

---

Clegg  

**Michael T. Clegg**  
Professor  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
Affiliate: UC Network for Experimental Research on Evolution  
http://www.faculty.uci.edu/profile.cfm?faculty_id=5127  
Research: plant genetics, population genetics, molecular evolution

---

Cohen  

**Linda Cohen**  
Professor  
Department of Economics, School of Social Sciences  
Affiliate: Center for Economic Public Policy, Center for the Study of Democracy, the Institute for Mathematical Behavioral Sciences, UC Center for Energy and Environmental Economics  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2222  
Research: energy economics, environmental economics, economics of innovation, with a focus on understanding how innovation for environmental and energy industries responds to public policies and economic institutions
Cooper  William J. Cooper
Director, Urban Water Research Center
Professor
Department of Civil and Environmental Engineering
The Henry Samueli School of Engineering
Research: the design and optimization of low-cost and efficient constructed wetlands for the treatment of water from storm water, the environmental fate of pharmaceuticals in natural waters, optimization of processes in indirect potable reuse of wastewater

Corn  Robert M. Corn
Professor
Department of Chemistry, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5123
Research: surface chemistry, nanoparticles for microinverters

Czimczik  Claudia Czimczik
Assistant Professor
Department of Earth System Science, School of Physical Sciences
http://www.ess.uci.edu/people/czimczik/
Research: carbon cycling in terrestrial ecosystems, sources of airborne particulate matter

Dabdub  Donald Dabdub
Professor
Department of Mechanical and Aerospace Engineering
The Henry Samueli School of Engineering
http://www.faculty.uci.edu/profile.cfm?faculty_id=3297
Research: air pollution modeling, energy, transportation, and air quality

Dalton  Teresa Dalton
Lecturer, SOE
Department of Criminology, Law & Society, School of Social Ecology
http://sociology.uci.edu/faculty/tdalton
Research: Environmental impact of food choices, both how environmental issues affect nutritional choices and how food consumption decisions affect the environment

Da Silva  Nancy Da Silva
Professor
Department of Chemical Engineering and Materials Science
The Henry Samueli School of Engineering
http://www.eng.uci.edu/users/nancy-da-silva
Research: biofuels and biorenewable chemicals
Davis

Kristen A. Davis
Assistant Professor
Department of Civil & Environmental Engineering
The Henry Samueli School of Engineering
http://davis.eng.uci.edu/
Research: coastal oceanography, environmental fluid mechanics, turbulent mixing

Davis

Seth Davis
Assistant Professor
School of Law
http://www.law.uci.edu/faculty/full-time/davis/
Research: public administration, federal Indian law, energy law and policy

Davis

Steven J. Davis
Assistant Professor
Department of Earth System Science, School of Physical Sciences
http://ess.uci.edu/~sjdavis
Research: global environmental change, environmental economics, energy systems, international trade

Delfino

Ralph J. Delfino
Professor
Department of Epidemiology, School of Medicine
http://www.faculty.uci.edu/profile.cfm?faculty_id=5070
Research: environmental epidemiology, health effects of air pollution on human populations

DiMento

Joseph DiMento
Professor
Department of Planning, Policy and Design, School of Social Ecology
Affiliate: Center for Land, Environment, and Natural Resources, School of Law
http://www.faculty.uci.edu/profile.cfm?faculty_id=4768
Research: planning, land use and environmental law, use of social science in policy making, legal control of corporate behavior

Dong

Vy Maria Dong
Professor
Department of Chemistry, School of Physical Sciences
http://www.chem.uci.edu/~dongv/
Research: organic chemistry, catalysis, sustainable synthesis, green chemistry
Druffel

Ellen Druffel
Professor
Department of Earth System Science, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=2027
Research: marine carbon tracking

Dunn-Rankin

Derek Dunn-Rankin
Professor
Department of Mechanical and Aerospace Engineering
The Henry Samueli School of Engineering
http://www.faculty.uci.edu/profile.cfm?faculty_id=2366
Research: combustion, optical particle sizing, particle aerodynamics, laser diagnostics and spectroscopy, indoor air quality

Dupont

Todd Dupont
Assistant Professor
Department of Earth System Science, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5438
Research: climate change and ice sheet dynamics

Edwards

Rufus Edwards
Associate Professor
Department of Epidemiology, School of Medicine
Program in Public Health, College of Health Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4990
Research: emissions and human exposures to air pollution

Eltawil

Ahmed Eltawil
Associate Professor
The Henry Samueli School of Engineering
Electrical Engineering and Computer Science
http://newport.eecs.uci.edu/~aeltawil/
Research: precision irrigation and water management, sensor networks for civil infrastructure sustainability

Elyachar

Julia Elyachar
Director, Center for Global Peace & Conflict Studies
Associate Professor
Department of Anthropology, School of Social Sciences
http://faculty.sites.uci.edu/elyachar
Research: sustainable markets, sustainable economic activity, water sustainability, water infrastructures, biosecurities, botanical decolonization and environmental ethics
Esser-Kahn  Aaron P. Esser-Kahn  Assistant Professor  Department of Chemistry, School of Physical Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=5835  
Research: carbon capture, waste heat conversion

Evans  William J. Evans  Professor  Department of Chemistry, School of Physical Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2024  
Research: catalysis, nuclear fuels, rare earth single molecule magnets

Famiglietti  Jay Famiglietti  Department of Earth System Science, School of Physical Sciences  
Department of Civil and Environmental Engineering  
The Henry Samueli School of Engineering  
http://www.faculty.uci.edu/profile.cfm?faculty_id=4738  
Research: hydrology and climate, terrestrial and global water cycles, hydrological and Earth system modeling

Fedoruk  M. Joseph Fedoruk  Clinical Professor of Medicine  
Center for Occupational and Environmental Health  
Department of Medicine, School of Medicine  
http://www.coeh.uci.edu/faculty/coeh_fac/dr_fedoruk.htm  
Research: assessment of health effects of mold, pesticides, and other toxic exposures; microbial and indoor air quality issues; hazardous material incidents; exposure assessment

Feldman  David L. Feldman  Director, Water UCI  
Professor and Chair  
Department of Planning, Policy and Design, School of Social Ecology  
http://www.faculty.uci.edu/profile.cfm?faculty_id=5594  
Research: water resources, climate change policy, environmental ethics and policy, and environmental risk management

Finlayson-Pitts  Barbara Finlayson-Pitts  Founding Director, Atmospheric Integrated Research at UCI (AirUCI)  
Professor  
Department of Chemistry, School of Physical Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2194  
Research: analytical atmospheric chemistry
Fisk
Zachary Fisk
Distinguished Professor
Department of Physics and Astronomy, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5451
Research: superconductors

Fox
J. Christian Fox
Director of Instructional Ultrasound
Professor of Clinical Emergency Medicine
Department of Emergency Medicine, School of Medicine
http://www.faculty.uci.edu/profile.cfm?faculty_id=5770
Research: the use and promotion of ultrasound as a sustainable medical diagnostic technique

Frank
David John Frank
Professor
Department of Sociology, School of Social Sciences
https://webfiles.uci.edu/frankd/index.html
Research: global discourse and activity to protect the natural environment

Frank
Steven A. Frank
Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
Affiliate: UC Network for Experimental Research on Evolution
http://www.faculty.uci.edu/profile.cfm?faculty_id=2115
Research: evolutionary genetics, host-parasite interactions

Furche
Filipp Furche
Professor
Department of Chemistry, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5490
Research: computational atmospheric chemistry, electronic structure theory

Gao
Xiaogang Gao
Adjunct Professor
Department of Civil and Environmental Engineering
The Henry Samueli School of Engineering
http://www.faculty.uci.edu/profile.cfm?faculty_id=5093
Research: hydroclimatology, hydrology, fluid dynamics, and engineering mathematics
Garb  Paula Garb
Lecturer
Department of Anthropology, School of Social Science
http://www.uci.academia.edu/PaulaGarb
Research: conflict resolution and environmental sustainability

Garde  Ajay Garde
Associate Professor
Department of Planning, Policy and Design, School of Social Ecology
http://socialecology.uci.edu/faculty/agarde
Research: sustainable design and sustainable neighborhood development in Southern California

Gaut  Brandon S. Gaut
Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4561
Research: population genetics, molecular evolution, genome evolution

Gerber  R. Benny Gerber
Professor
Department of Chemistry, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=2017
Research: quantum chemical simulation of atmospheric systems

German  Donovan German
Assistant Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5858
Research: nutritional physiology, comparative physiology, global change, biogeochemistry

Goodwin  Michele Goodwin
Director, Center for Biotechnology and Global Health Policy
Chancellor’s Professor
School of Law
http://www.law.uci.edu/faculty/full-time/goodwin/
Research: bioethics, constitutional law, family law, human rights, medical law, reproductive rights, torts

Goulden  Michael Goulden
Professor
Department of Earth System Science, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=3245
Research: ecosystem ecology, plant physiology, micrometeorology
Grant

**Stanley Grant**
Professor
Department of Civil and Environmental Engineering
The Henry Samueli School of Engineering
http://www.faculty.uci.edu/profile.cfm?faculty_id=2358
*Research: tidal transport of bacteria, coastal runoff, microbial pollution in urban runoff, water reclamation and sustainable water supply*

Grant Ludwig

**Lisa Grant Ludwig**
Associate Director, California Institute for Hazards Research
Associate Professor
Program in Public Health, College of Health Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4545
*Research: natural hazards, paleoseismology, active faults, San Andreas fault, southern California faults, seismic hazard, environmental health and geology*

Gui

**Luyi Gui**
Assistant Professor
The Paul Merage School of Business
http://merage.uci.edu/Faculty/FacultyDirectory/FacultyProfiles.aspx?FacultyID=8532
*Research: product take-back policy and economics, operations research, theory*

Hawkins

**Bradford A. Hawkins**
Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4562
*Research: biogeography, macroecology, diversity gradients*

Hayes

**Wayne B. Hayes**
Associate Professor
Department of Computer Science, Donald Bren School of Information and Computer Sciences
*Research: ice sheet system modeling, sea level rise, climate change*

Heidbrink

**William W. Heidbrink**
Professor
Department of Physics and Astronomy, School of Physical Sciences
*Research: experimental plasma physics, fusion energy*
Hemminger John C. Hemminger
Vice Chancellor for Research
Professor
Department of Chemistry, School of Physical Sciences
Affiliate: AirUCI, Center for Solar Energy, Urban Water Research Center
Research: surface chemistry and physics, photovoltaic material analysis

Heyduk Alan Heyduk
Associate Professor
Department of Chemistry, School of Physical Sciences
Affiliate: Center for Solar Energy
http://www.faculty.uci.edu/profile.cfm?faculty_id=4940
Research: energy conversion chemistry

Hicks James W. Hicks
Associate Vice Chancellor for Research
Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=2158
Research: comparative physiology of circulation and gas exchange

Hironaka Ann M. Hironaka
Professor
Department of Sociology, School of Social Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5489
Research: world society and environmental protection outcomes

Ho Wilson Ho
Donald Bren Professor
Department of Physics and Astronomy, School of Physical Sciences
Department of Chemistry, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4583
Research: fundamental understanding of bonding and reactions for control of chemistry

Hochbaum Allon Hochbaum
Assistant Professor
Department of Chemical Engineering and Materials Science
The Henry Samueli School of Engineering
Department of Chemistry, School of Physical Sciences
Affiliate: Center for Solar Energy, and the Institute for Complex Adaptive Matter
http://www.faculty.uci.edu/profile.cfm?faculty_id=5863
Research: nanoscale materials and hybrid bio-inorganic devices for applications in clean energy
Hoonponsimanont  Wirachin Ying Hoonponsimanont
Assistant Professor
Department of Emergency Medicine, School of Medicine
Affiliate: Center for Trauma and Injury Prevention Research
http://www.faculty.uci.edu/profile.cfm?faculty_id=5876
Research: reducing the burden of disease through injury prevention research and emergency medicine education

Hopfer  Suellen Hopfer
Assistant Professor
Program in Public Health, College of Health Sciences
http://publichealth.uci.edu/ph/_faculty
Research: surveying Californians about attitudes and awareness on climate change and how it impacts their lives, using frames to engage the public and policy makers, health communication, message design, and intervention design to bring about advocated behavior changes for public health

Houston  John D. “Doug” Houston
Assistant Professor
Department of Planning, Policy and Design, School of Social Ecology
Affiliate: Institute of Transportation Studies and C-DASA
http://socialecology.uci.edu/faculty/houston
Research: transportation, air pollution, urban inequality, environmental equity, spatial analysis

Hsu  Kuo-lin Hsu
Associate Professor
Department of Civil and Environmental Engineering
The Henry Samueli School of Engineering
http://www.faculty.uci.edu/profile.cfm?faculty_id=5092
Research: remote sensing of precipitation, hydrologic systems modeling, stochastic hydrology, and water resources systems planning

Hughes  Brad Hughes
Co-Director, Center for Learning in the Arts, Sciences, and Sustainability
Lecturer SOE
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5587
Research: science education, experimental evolution, sustainable energy, educational media production, marine science, ecological modeling
Huxman

**Travis Huxman**
Director, Center for Environmental Biology
Director, UCI Sustainability Initiative
Director, Steele/Burnand Anza-Borrego Desert Research Center
Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5907

*Research: the evolution of plant traits and the impacts of climate change on ecosystems*

Israel

**Leslie M. Israel**
Associate Professor
Center for Occupational and Environmental Health
Department of Medicine, School of Medicine
http://www.faculty.uci.edu/profile.cfm?faculty_id=5709

*Research: implementation of a national wellness and fitness examination for Orange County Fire Authority firefighters, biomonitoring in firefighters*

Jabbari

**Faryar Jabbari**
Professor
Department of Mechanical and Aerospace Engineering
The Henry Samueli School of Engineering
http://www.faculty.uci.edu/profile.cfm?faculty_id=2368

*Research: optimal control theory, distributed parameter systems, parameter identification, comprehensive approach for combustion control, dynamic modeling and control issues in Fuel Cells*

Jackson

**Jesse Colin Jackson**
Assistant Professor
Department of Art, Claire Trevor School of the Arts
http://www.jessecolinjackson.com

*Research: creative practice engaged with sustainability issues*

Janda

**Kenneth Janda**
Dean, School of Physical Sciences
Professor
Department of Chemistry, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=2048

*Research: chemical physics, gas hydrates*

Jarvo

**Liz Jarvo**
Assistant Professor
Department of Chemistry, School of Physical Sciences

*Research: green chemistry, catalysis*
Jayakrishnan  
R. Jayakrishnan  
Professor  
Department of Civil and Environmental Engineering,  
The Henry Samueli School of Engineering  
Affiliate: Institute of Transportation Studies  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2514  
Research: transportation systems analysis

Jiang  
C. Sunny Jiang  
Professor  
Department of Civil and Environmental Engineering  
The Henry Samueli School of Engineering  
Adjunct Professor  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=4873  
Research: environmental biotechnology, water quality and pollution microbiology, microbial ecology

Jin  
Wenlong Jin  
Assistant Professor  
Department of Civil and Environmental Engineering  
The Henry Samueli School of Engineering  
Affiliate: Institute of Transportation Studies  
http://www.its.uci.edu/~wiin/  
Research: traffic flow theory, transportation network analysis, intelligent transportation systems

Johnson  
Kathleen R. Johnson  
Assistant Professor  
Department of Earth System Science, School of Physical Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=5444  
Research: reconstructing past hydroclimate using speleothems (cave deposits) and other archives; isotope and trace element geochemistry

Keller  
L. Robin Keller  
Professor  
Operations and Decision Technologies  
The Paul Merage School of Business  
http://faculty.sites.uci.edu/lrkeller/  
Affiliate: The Institute for Mathematical Behavioral Sciences  
Research: water resources in Arizona and flood risk in California
Kim
Jae Hong Kim
Assistant Professor
Department of Planning, Policy and Design, School of Social Ecology
http://socialecology.uci.edu/faculty/jaehk6
Research: regional economic development, land use, economic–physical development nexus, location choice, urban system modeling

Kirkby
David P. Kirkby
Professor
Department of Physics and Astronomy, School of Physical Sciences
Affiliate:
http://www.faculty.uci.edu/profile.cfm?faculty_id=4844
Research: experimental particle physics, energy efficiency

Kleinman
Michael T. Kleinman
Adjunct Professor
Center for Occupational and Environmental Health
Department of Medicine, School of Medicine
http://www.coeh.uci.edu/faculty/coeh_fac/dr_kleinman.htm
Research: potential links between environmental pollutants and preventable neurological, cardiological, and pulmonary diseases

Koenig
Kristi L. Koenig
Director, Center for Disaster Medical Sciences
Director, Public Health Preparedness
Director, International EMS and Disaster Medical Sciences Fellowship
Professor
Department of Emergency Medicine, School of Medicine
http://www.faculty.uci.edu/profile.cfm?faculty_id=5400
Research: surge capacity, crisis care, disaster nomenclature, disaster medicine, emergency management systems, public health preparedness

Krivorotov
Ilya Krivorotov
Associate Professor
Department of Physics and Astronomy, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5305
Research: superconducting nanostructures

Kurdahi
Fadi Kurdahi
Professor
The Henry Samueli School of Engineering
Center for Embedded & Cyber-physical Systems
www.eng.uci.edu/~kurdahi
Research: cyber-physical systems modeling for water systems focusing on irrigation
Matthew D. Law
Assistant Professor
Department of Chemistry, School of Physical Sciences
Affiliate: Center for Solar Energy
http://www.faculty.uci.edu/profile.cfm?faculty_id=5535
Research: nanoscale materials and devices, solar energy conversion

Abraham P. Lee
Director, Micro/Nano Fluidics Fundamentals Focus Center
Director, Center for Advanced Design and Manufacturing of Integrated Microfluidics
Professor and Chair
Department of Biomedical Engineering
Professor, Mechanical and Aerospace Engineering
The Henry Samueli School of Engineering
http://www.eng.uci.edu/users/abraham-lee
Research: integrated micro- and nano-fluidic chip processors for the manipulation and self-assembly of biomolecules and other synthesized nanoparticles

Marco Levorato
Assistant Professor
Department of Computer Science
Donald Bren School of Information and Computer Science
http://www.ics.uci.edu/~mlevorat/
Research: Smart energy grids, Communications for smart grids, smart buildings

G.P. Li
Director, UCI Division, California Institute for Telecommunications and Information Technology
Director, Integrated Nanosystems Research Facility
Interim Director, California Plug Load Research Center
Professor
Departments of Electrical Engineering and Computer Science, Biomedical Engineering, and Chemical Engineering and Materials Science
The Henry Samueli School of Engineering
http://www.eng.uci.edu/users/gp-li
Research: high-speed semiconductor technology, optoelectronic devices, integrated circuits, technologies for efficient energy utilization and consumption, and e-health

Zihong Lin
Professor
Department of Physics and Astronomy, School of Physical Sciences
http://phoenix.ps.uci.edu/zlin/
Research: instability, turbulence, and transport in laboratory and space plasmas; fusion energy
Long

Anthony D. Long
Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
Affiliate: UC Network for Experimental Research on Evolution
http://www.faculty.uci.edu/profile.cfm?faculty_id=4563
Research: quantitative and population genetics

Lopes

Cristina Lopes
Associate Professor
Department of Informatics, Donald Bren School of Information and Computer Sciences
http://www.ics.uci.edu/~lopes/
Research: programming languages and systems; software engineering; ubiquitous computing; increased knowledge about communication, in particular in systems that involve humans and machines

Lotfipour

Shahram Lotfipour
Director, Center for Trauma and Injury Prevention Research
Professor
Department of Emergency Medicine, School of Medicine
Program in Public Health, College of Health Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5163&name=Shahram%20%20Lotfipour
Research: reducing the burden of injury through screening and brief intervention for alcohol in the ED and trauma setting

Loudon

Catherine “Kate” Loudon
Senior Lecturer SOE
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5386
Research: biomechanics, insect physiology, sensory ecology, biomimetic methods for insect control

Lowengrub

John S. Lowengrub
Professor
Department of Mathematics, School of Physical Sciences
Departments of Biomedical Engineering and Chemical & Materials Science
The Henry Samueli School of Engineering
http://www.faculty.uci.edu/profile.cfm?faculty_id=5697
Research: modeling of photovoltaic material growth
Luderer Ulrike Luderer
Director, Environmental Health Science Graduate Program
Professor
Center for Occupational and Environmental Health
Department of Medicine, School of Medicine
Department of Developmental and Cell Biology, School of Biological Sciences
Program in Public Health, College of Health Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4535&name=Ulrike%20Luderer
Research: reproductive toxicology, developmental toxicology

Lynch Cecelia Lynch
Director, International Studies
Professor
Department of Political Science, School of Social Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4537
Research: international humanitarianism and sustainability, non-governmental organization work in Africa and Middle East, blog editor: The CIHA Blog

Mackey Katherine Mackey
Assistant Professor
Department of Earth System Science, School of Physical Sciences
http://www.ess.uci.edu/people/kmackey
Research: phytoplankton, photosynthesis, biogeography, biogeochemistry, carbon cycle, global change

Magnusdottir Gudrun Magnusdottir
Professor and Chair
Department of Earth System Science, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4467
Research: atmospheric dynamics, climate dynamics, atmospheric/ocean interactions, atmospheric/sea-ice interactions

Martiny Adam Martiny
Associate Professor
Department of Earth System Science, School of Physical Sciences
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5362
Research: microbiology, environmental genomics, oceanography

Martiny Jennifer Martiny
Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5363
Research: community ecology, microbial diversity, and global change biology
<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Department</th>
<th>Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matthew</td>
<td>Richard A. Matthew</td>
<td>Founding Director, Center for Unconventional</td>
<td>security implications of unsustainable process and systems, challenges</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Security Affairs</td>
<td>of implementing sustainability into post-conflict peacebuilding and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Professor</td>
<td>post-disaster reconstruction, and the use of social media to educate</td>
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<td></td>
<td>Department of Planning, Policy and Design</td>
<td>and mobilize around sustainability</td>
</tr>
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<td></td>
<td></td>
<td>School of Social Ecology</td>
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<td>Department of Political Science, School of</td>
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<td>Social Science</td>
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<tr>
<td></td>
<td></td>
<td>Senior Fellow, International Institute for</td>
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<td>Sustainable Development</td>
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<td>Senior Member, United Nations Expert Group on</td>
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<td>Environment, Conflict and Peace</td>
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<tr>
<td></td>
<td></td>
<td>Senior Fellow, Munk School, University of</td>
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<td></td>
<td></td>
<td>Toronto</td>
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<td><a href="http://www.faculty.uci.edu/profile.cfm?faculty_id=4770">http://www.faculty.uci.edu/profile.cfm?faculty_id=4770</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Research: security implications of unsustainable process and systems, challenges of implementing sustainability into post-conflict peacebuilding and post-disaster reconstruction, and the use of social media to educate and mobilize around sustainability</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maurer</td>
<td>Bill Maurer</td>
<td>Dean, School of Social Sciences</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Professor</td>
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<td>Department of Anthropology, School of Social</td>
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<td>Sciences</td>
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<td>Research: anthropology of law, globalization, anthropology of money and finance, alternative models of economic growth and financial inclusion, gender and kinship</td>
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<tr>
<td>Mazmanian</td>
<td>Melissa Mazmanian</td>
<td>Assistant Professor</td>
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<td>Department of Informatics</td>
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<td>Donald Bren School of Information and Computer</td>
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<td><a href="http://www.ics.uci.edu/~mmazmani/Site/Home.html">http://www.ics.uci.edu/~mmazmani/Site/Home.html</a></td>
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<td>Research: mobile communication technologies and sustainable lives, socio-materiality and information technologies, organizational coordination and communication practices</td>
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<tr>
<td>Mazumdar</td>
<td>Sanjoy Mazumdar</td>
<td>Professor</td>
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<td>Department of Planning, Policy and Design</td>
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<td>School of Social Ecology</td>
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<td><a href="http://socialecology.uci.edu/faculty/mazumdar">http://socialecology.uci.edu/faculty/mazumdar</a></td>
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<td>Research: passive techniques for the design of buildings and</td>
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<td>professional requirements for sustainability</td>
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<td>(e.g., LEED)</td>
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<tr>
<td>McBride</td>
<td>Michael McBride</td>
<td>Associate Professor</td>
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<td>Department of Economics, School of Social</td>
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<td><a href="http://www.economics.uci.edu/~mcbride/">http://www.economics.uci.edu/~mcbride/</a></td>
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<td>Research: collective action, conflict, experimental methods</td>
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</table>
McCoy Christopher Eric McCoy
Assistant Clinical Professor
Director of Simulation Education
Director of Education and Training, Center for Disaster Medical Sciences
Director of Emergency Medical Services
Department of Emergency Medicine, School of Medicine
http://www.faculty.uci.edu/profile.cfm?faculty_id=5789&name=Christopher
Research: reducing the burden of disease and improving healthcare systems via emergency medicine and disaster management simulation development and training

McDonell Vince McDonell
Associate Director, UCI Combustion Laboratory
Advanced Power and Energy Program
Adjunct Professor
Department of Mechanical and Aerospace Engineering
The Henry Samueli School of Engineering
http://www.apep.uci.edu/
Research: characterization of and application of advanced diagnostics and modeling to alternative and renewable liquid and gaseous fuels for advanced combustion and distributed generation systems

McGuire Martin C. McGuire
Clifford S. Heinz Professor for Economics of Global Peace and Security
Professor Emeritus
Department of Economics, School of Social Sciences
Affiliate: Center for Global Peace and Conflict Studies
http://www.faculty.uci.edu/profile.cfm?faculty_id=2454
Research: political economy of redistribution, social investment, and conflict resolution; international conflict, economic development and strategic competition; international trade and security

McHenry Matt McHenry
Associate Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5273
Research: biomechanics, locomotion, sensory biology

McWilliams Roger D. McWilliams
Professor
Department of Physics and Astronomy, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=2735
Research: experimental plasma physics, fusion energy, lasers, intellectual property law
Mecartney

Martha L. Mecartney
Professor
Department of Chemical Engineering and Materials Science
The Henry Samueli School of Engineering
http://www.eng.uci.edu/users/martha-mecartney
Research: New electrolytes for solid oxide fuel cells, ceramics for nuclear energy waste and recycled fuel, low energy routes to ceramic superplastic forming

Mehrotra

Sharad Mehrotra
Professor
Department of Computer Science
Donald Bren School of Information and Computer Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4685
Research: distributed network systems in both water utilities and water distribution systems, data management and distributed systems-data mining, OLAP, event-oriented systems, multimedia systems, spatio-temporal analysis, uncertainty, privacy, service-oriented architectures, sensors, mobility, and localization

Menkel-Meadow

Carrie Menkel-Meadow
Chancellor’s Professor
Center for Land, Environment, and Natural Resources
School of Law
http://ssrn.com/author=98428
Research: conflict resolution and facilitation of land use, environmental and community issues

Meyer

David S. Meyer
Professor
Department of Sociology, School of Social Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4654
Research: social movements, public policy, peace and war, social justice

Mjolsness

Eric D. Mjolsness
Director, Center for Computational Morphodynamics
Professor
Department of Computer Science
Donald Bren School of Information and Computer Sciences
Department of Mathematics, School of Physical Sciences
http://www.ics.uci.edu/~emj/
Affiliate: UCI Institute for Genomics and Bioinformatics, UCI Center for Complex Biological Systems, Caltech Biological Network Modeling Center
Research: systems biology, scientific inference systems, and mathematical methods; “The Computable Plant;” metabolic modeling
Ali Mohraz
Assistant Professor
Department of Chemical Engineering and Materials Science
The Henry Samueli School of Engineering
http://www.eng.uci.edu/users/ali-mohraz
Research: designing microstructural materials with enhanced functionality for composites, biomimetic applications, alternative energy, and environmental remediation

Michael J. Montoya
Associate Professor
Departments of Anthropology and Chicano/Latin Studies, School of Social Sciences
Program in Public Health, College of Health Sciences
http://faculty.sites.uci.edu/michaelmontoya
Research: community health, chronic disease, participatory action-research, local knowledge, political economy of disease, social studies of science and medicine, Latino health, translational science

Kailen A. Mooney
Associate Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://kmooney.bio.uci.edu/lab/home.html
http://tritrophic.org
Research: studying the consequences of plant local adaptation to the abiotic environment for interactions with associated arthropod communities, and the consequences of such dynamics for response to climate change

Ayman S. Mosallam
Professor
Director of Structural Engineering Testing Hall
Department of Civil and Environmental Engineering
The Henry Samueli School of Engineering
http://www.eng.uci.edu/users/ayman-mosallam
Research: evaluation of structural behavior and sustainability of green construction materials and systems; development of new rating system for green buildings; use of waste and recycled materials including plastics (LDPE, HDPE), tires, and waste concrete for developing new construction materials; Upgrading the structural capacity of wood members both virgin and damaged using advanced composites to reduce the consumption of natural wood; and the use of nanotechnology in developing affordable epoxy-based insulating films for building glass windows

Laurence D. Mueller
Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=2704
Research: theoretical and empirical studies or density-dependent natural selection, population stability and dynamics
Mulligan

R. Michael Mulligan
Professor
Department of Developmental and Cell Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=3342
Research: molecular evolution and molecular mechanisms of RNA editing in plants

Mumm

Daniel R. Mumm
Associate Professor
Department of Chemical Engineering and Material Science
The Henry Samueli School of Engineering
http://www.eng.uci.edu/users/daniel-mumm
Research: advanced materials and structures, primarily the development of materials for power generation systems, propulsion, integrated sensing, advanced vehicle concepts and platform protection

Muzio

Larry Muzio
Adjunct Professor
Department of Mechanical and Aerospace Engineering
The Henry Samueli School of Engineering
http://environment.uci.edu/people/larry-muzio
Research: thermodynamics, combustion, combustion in practical systems, air pollution formation and control, advanced diagnostics applied to practical combustion systems

Nardi

Bonnie Nardi
Professor
Department of Informatics
Donald Bren School of Information and Computer Sciences
Associate: Laboratory for Ubiquitous Computing and Interaction
Research: collapse computing—the study, design, and development of sociotechnical systems in the abundant present for use in a future of scarcity

Nisbet

James Nisbet
Assistant Professor
Department of Art History, School of Humanities
http://www.faculty.uci.edu/profile.cfm?faculty_id=5937
Research: modern and contemporary art, theory and criticism, environmental history, history of photography, media studies

Nizkorodov

Sergey Nizkorodov
Professor
Department of Chemistry, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4905
Research: atmospheric chemistry of organic aerosols
Noymer  
Andrew Noymer  
Associate Professor  
Program in Public Health, College of Health Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=5373  
Research: demography, health

Ogunseitan  
Oladele Ogunseitan  
Chair, Department of Population Health and Disease Prevention  
Director, Lead Campus on Green Materials – UC Toxic Substances Research and Teaching Program  
Professor  
Program in Public Health, College of Health Sciences  
Department of Social Ecology, School of Social Ecology  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2423  
Research: environmental and health effects of industrial development with respect to pollution prevention and remediation, interdisciplinary approaches to environmentally benign product design and life-cycle assessment of materials that affect human health and the environment

Olson  
Betty H. Olson  
Professor  
Department of Civil and Environmental Engineering  
The Henry Samueli School of Engineering  
Community and Environmental Medicine, School of Medicine  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2422  
Research: public health aspects of waters and wastewaters

Olson  
Valerie Olson  
Assistant Professor  
Department of Anthropology  
School of Social Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2422  
Research: environmental anthropology, science and technology studies, ecosystem disasters, sociocultural dynamics and politics of ecosystem science, restoration, sustainability in extreme environments

Patterson  
Donald J. Patterson  
Associate Professor  
Department of Informatics  
Donald Bren School of Information and Computer Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=5316  
Associate: Laboratory for Ubiquitous Computing and Interaction  
Research: collapse computing—the study, design, and development of sociotechnical systems in the abundant present for use in a future of scarcity
Penner  
**Reginald Penner**  
Director, Center for Solar Energy  
Chancellor’s Professor  
Department of Chemistry, School of Physical Sciences  
*Research: thermoelectrics*

Phalen  
**Robert F. Phalen**  
Director, Air Pollution Health Effects Laboratory  
Professor  
Center for Occupational and Environmental Health  
Department of Medicine, School of Medicine  
[http://www.coeh.uci.edu/faculty/coeh_fac/dr_phalen.htm](http://www.coeh.uci.edu/faculty/coeh_fac/dr_phalen.htm)  
*Research: possible long-term consequences for lung disease due to toxic inhalation exposure*

Prather  
**Michael J. Prather**  
Professor  
Department of Earth System Science  
School of Physical Sciences  
[http://www.ess.uci.edu/~prather](http://www.ess.uci.edu/~prather)  
*Research: global change, atmospheric chemistry, climate forcing and air quality*

Primeau  
**Francois W. Primeau**  
Associate Professor  
Department of Earth System Science, School of Physical Sciences  
*Research: transport of tracers by the global ocean circulation, dynamics of the wind-driven ocean circulation, mid-latitude ocean-atmosphere interactions*

Randerson  
**James T. Randerson**  
Professor  
Department of Earth System Science, School of Physical Sciences  
*Research: climate-carbon cycle feedbacks, fires, land cover change, remote sensing, tropical deforestation, global change in arctic and boreal ecosystems, terrestrial ecosystems and climate policy*

Ranz  
**Jose Ranz**  
Associate Professor  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
*Research: functional and comparative genomics, evolution of the expression network, speciation*
**Rasmann**  
**Sergio Rasmann**  
Assistant Professor  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=5974  
*Research: community ecology, agro-ecology*

**Recker**  
**Wilfred W. Recker**  
Professor  
Department of Civil and Environmental Engineering  
The Henry Samueli School of Engineering  
Affiliate: Institute of Transportation Studies  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2874  
*Research: transportation modeling and urban systems*

**Richardson**  
**Debra J. Richardson**  
Managing Director, Center for Research on Sustainability, Collapse-preparedness and Information Technology (RiSCIT)  
Professor  
Department of Informatics, Donald Bren School of Information and Computer Sciences  
Founding Dean, Donald Bren School of Information and Computer Sciences  
http://www.ics.uci.edu/~djr/DebraJRichardson/Home.html  
*Research: Software Engineering for Sustainability – methodology to develop software-intensive IT systems that meet the functional needs of users while reducing environmental and other unsustainable impacts brought about by those systems, including appropriate technologies to treat sustainability as a first-class quality attribute in system development*

**Rignot**  
**Eric Rignot**  
Professor  
Department of Earth System Science, School of Physical Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=5467  
*Research: glaciology, climate change, radar remote sensing, ice sheet modeling, interferometry, radio echo sounding, ice-ocean interactions*

**Ritchie**  
**Stephen G. Ritchie**  
Director, Institute of Transportation Studies  
Professor  
Department of Civil and Environmental Engineering  
The Henry Samueli School of Engineering  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2072  
*Research: transportation systems engineering*
Robinson-Dorn  Michael Robinson-Dorn
Director, Environmental Law Clinic
Clinical Professor of Law
Advisory Committee, Center for Land, Environment, and Natural Resources
School of Law
http://www.law.uci.edu/faculty/page1_m_robinson-dorn.html
Research: law related to climate change, natural resources, pollution control and transboundary resource and environmental issues

Rose  Michael R. Rose
Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
Affiliate and Director: UC Network for Experimental Research on Evolution
http://www.faculty.uci.edu/profile.cfm?faculty_id=5261
Research: experimental evolution, aging, biological immortality, drosophila, human evolution, evolution of sex

Rosso  Diego Rosso
Assistant Professor
Director, UCI Water Energy Nexus (WEX) Center
Department of Civil and Environmental Engineering
The Henry Samueli School of Engineering
http://www.faculty.uci.edu/profile.cfm?faculty_id=5528
Research: environmental process engineering, water and wastewater engineering, carbon and energy footprints, energy conservation

Roth  Kevin Roth
Assistant Professor
Economics, School of Social Sciences
http://faculty.sites.uci.edu/kevinroth/
Research: environmental and transportation economics.

Sakai  Ann K. Sakai
Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
Affiliate: UC Network for Experimental Research on Evolution
http://www.faculty.uci.edu/profile.cfm?faculty_id=2693
Research: plant population biology and conservation biology, plant breeding systems, population biology of invasive species

Saltzman  Eric S. Saltzman
Professor
Department of Earth System Science, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4740
Research: atmospheric chemistry, biogeochemistry, air-sea exchange
Samuelsen  
Scott Samuelsen  
Professor Emeritus of Mechanical, Aerospace, and Environmental Engineering  
Director, Advanced Power and Energy Program  
Director, National Fuel Cell Research Center  
Director, UCI Combustion Laboratory  
Henry Samuelli Endowed Chair  
Department of Mechanical and Aerospace Engineering  
Department of Civil and Environmental Engineering  
The Henry Samueli School of Engineering  
Affiliate: Institute of Transportation Studies  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2933  
Research: energy, combustion, fuel cells, hydrogen, distributed generation, alternative fuels, gas turbine engines, coal, oil, natural gas, air pollution

Sanders  
Brett Sanders  
Professor and Chair  
Department of Civil and Environmental Engineering  
The Henry Samueli School of Engineering  
http://www.faculty.uci.edu/profile.cfm?faculty_id=3296  
Research: urban flooding, sea level rise and coastal flooding, storm water management

Sandmeyer  
Suzanne Sandmeyer  
Director, UCI Genomics High-Throughput Facility  
Professor  
Departments of Biological Chemistry and Microbiology and Molecular Genetics  
School of Medicine  
Department of Chemical Engineering and Materials Science  
The Henry Samueli School of Engineering  
Affiliate: Center for Biorenewable Chemicals, Center for Complex Biological Systems and the Institute for Genomics and Bioinformatics  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2247  
Research: creating platform chemicals through the bioengineering of microorganisms, in particular Saccharomyces cerevisiae; using genomics, bioinformatics and molecular biology to enhance the ability to produce important hydrocarbons from yeast

Saphores  
Jean-Daniel Saphores  
Professor  
Department of Civil and Environmental Engineering  
The Henry Samueli School of Engineering  
Assistant Professor  
Department of Planning, Policy and Design, School of Social Ecology  
Department of Economics, School of Social Sciences  
Affiliate: Institute of Transportation Studies  
http://www.faculty.uci.edu/profile.cfm?faculty_id=4771  
Research: environmental and natural resource economics and policy, urban economics, waste management, modeling & managing air pollution from transportation, modeling & managing water pollution, transportation systems, decision making under uncertainty
Sarnecka, Barbara
Assistant Professor
Department of Cognitive Science, School of Social Sciences
Research: closing the achievement gap between Latino students from low-income backgrounds and students from higher-income backgrounds

Scherfig, Jan
Professor Emeritus
Department of Civil and Environmental Engineering
The Henry Samueli School of Engineering
http://www.faculty.uci.edu/profile.cfm?faculty_id=2955
Research: water reclamation, waste treatment processes, environmental engineering

Schnall, Peter L.
Professor
Center for Occupational and Environmental Health
Department of Medicine, School of Medicine
http://www.coeh.uci.edu/faculty/coeh_fac/dr_schnall.htm
Research: the role of occupational stress in causing hypertension and cardiovascular disease

Schoenung, Julie M.
Professor
Department of Chemical Engineering and Materials Science
The Henry Samueli School of Engineering
http://engineering.uci.edu/users/julie-schoenung
Research: analysis of factors that guide the materials selection decision-making process, such as economics, environmental impact and toxicity, cost-performance trade-offs, and market potential. Use of tools and datasets from several disciplines including management theory, health risk assessment, life cycle assessment and environmental economics in this research approach.

Schofer, Evan
Professor
Department of Sociology, School of Social Sciences
http://faculty.sites.uci.edu/schofer/
Research: globalization, political participation, education, environmentalism, economic growth, and economic inequality
Schreiber

**Merritt Schreiber**
Director of Psychological Programs, Center for Disaster Medical Sciences
Associate Clinical Professor
Department of Emergency Medicine, School of Medicine
http://faculty.uci.edu/profile.cfm?faculty_id=5890

*Research:* preventing/mitigating the burden of traumatic injuries and disaster/mass casualties/terrorism events on children and adults; impacts of crisis standards of care on healthcare providers in public health emergencies; other sustainable efforts include national policy on mental health effects of disasters, and impact of crisis standards of care in mass casualty events on patients, families and providers.

Schultz

**Carl H. Schultz**
Director of Research, Center for Disaster Medical Sciences
Director, EMS and Disaster Medical Sciences Fellowship
Director, Disaster Medical Services, UCI Medical Center
Professor of Emergency Medicine
Department of Emergency Medicine, School of Medicine
http://www.faculty.uci.edu/profile.cfm?faculty_id=5042

*Research:* reducing the human impacts of earthquakes, allocation of scarce resources in disaster, ethical issues related to the overall care of disaster victims, standard of medical care across populations and over time, hospital responses to Ebola and other potential infectious disease public health threats and disasters.

Schwab

**Gabriele Schwab**
Chancellor’s Professor
Department of Comparative Literature, School of Humanities
Department of Anthropology, School of Social Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=2478

*Research:* ecocritical theories, environmental humanities, biopolitics, biosecurity.

Seed

**Patricia Seed**
Professor and Cartographer
Department of History, School of Humanities
http://www.faculty.uci.edu/profile.cfm?faculty_id=5308

*Research:* served as an expert witness successfully defending the DOJ’s Environmental Resource Division against a Federal lawsuit challenging the status of a wildlife refuge in the Pacific (Kingman Reef), mapped the potential human and environmental impact of rising sea levels on the West African coast, studied the impact of rising sea level’s on bird reproduction, currently studying impact of rising sea levels on oil spills in the Niger Delta.

Seeker

**William R. “Randy” Seeker**
Adjunct Professor
Department of Mechanical and Aerospace Engineering
The Henry Samueli School of Engineering
http://www.eng.uci.edu/users/william-seeker

*Research:* energy and environment.
Shaka
Athan J. Shaka
Professor
Department of Chemistry, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=2175
Research: radio chemistry and nuclear power

Shaffer
Gregory Shaffer
Chancellor’s Professor of Law
School of Law
Director, Center for Globalization, Law, and Society
http://www.law.uci.edu/faculty/full-time/shaffer/
Research: World Trade Organization, trade and environment policies, trade and sustainable development, international law and public goods

Shank
Ronald C. Shank
Professor
Department of Community & Environmental Medicine
School of Medicine
http://www.faculty.uci.edu/profile.cfm?faculty_id=2329
Research: molecular mechanisms of DNA damage by chemical carcinogens, and biochemical activation of environmental carcinogens

Shanthikumar
Devin Shanthikumar
Assistant Professor
The Paul Merage School of Business
http://merage.uci.edu/Faculty/FacultyDirectory/FacultyProfiles.aspx?FacultyID=8428
Research: corporate reporting of sustainability activities, market responses to sustainability information

Shinozuka
Masanobu Shinozuka
Distinguished Professor
Department of Civil and Environmental Engineering
The Henry Samueli School of Engineering
http://www.eng.uci.edu/users/masanobu-shinozuka
Research: earthquake and structural engineering with a special interest in field theory and risk assessment methodology in civil engineering

Shivendu
Shivendu Shivendu
Assistant Professor
The Paul Merage School of Business
Affiliate: California Plug Load Research Center
http://merage.uci.edu/Faculty/FacultyDirectory/FacultyProfiles.aspx?FacultyID=8366
Research: markets, incentives, asymmetric information, and energy efficiency
Silverman

**Dennis Silverman**
Professor Emeritus
Department of Physics and Astronomy, School of Physical Sciences
http://sites.uci.edu/energyobserver/
Research: energy systems

Small

**Kenneth Small**
Professor Emeritus
Department of Economics, School of Social Sciences
Affiliate: Institute of Transportation Studies
http://www.faculty.uci.edu/profile.cfm?faculty_id=2431
Research: energy use in transportation

Smith

**David A. Smith**
Professor
Department of Sociology, School of Social Sciences
Department of Planning, Policy and Design, School of Social Ecology
http://www.faculty.uci.edu/profile.cfm?faculty_id=2529
Research: world systems analysis, urbanization, development, comparative-historical sociology, dependent development in East Asia, global cities

Smyth

**Patrick J. “Padhraic” Smyth**
Director, Center for Machine Learning and Intelligent Systems
Professor
Department of Computer Science
Donald Bren School of Information and Computer Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4518
Research: data mining, pattern recognition, machine learning, time series analysis, artificial intelligence, applied statistics

Solomon

**Robert Solomon**
Clinical Professor of Law
School of Law
http://www.law.uci.edu/faculty/full-time/solomon/
Research: community & economic development, housing, banking, education and domestic violence

Sorooshian

**Soroosh Sorooshian**
Director, Center for Hydrometeorology and Remote Sensing
Co-Director, Community & Economic Development Clinic
Distinguished Professor
Department of Civil and Environmental Engineering
The Henry Samueli School of Engineering
Department of Earth System Science, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5082
Research: hydrology, hydrometeorology and hydroclimate modeling, remote sensing, water resources management
**Sorte**  
**Cascade Sorte**  
Assistant Professor  
Department of Ecology & Evolutionary Biology, School of Biological Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=6026  
http://cascadesorte.org  
*Research: climate change, invasive species, population and community ecology, and marine ecology*

**Stern**  
**Hal Stern**  
Ted and Janice Smith Family Foundation Dean  
Donald Bren School of Information and Computer Sciences  
Professor  
Department of Statistics  
http://www.faculty.uci.edu/profile.cfm?faculty_id=5011  
*Research: statistics, applications of statistics to biological and social sciences, sports and statistics*

**Stern**  
**Sharon Stern**  
Senior Lecturer SOE  
Program in Public Health, College of Health Sciences  
http://publichealth.uci.edu/ph_docs/faculty#S  
*Research: water pollution and treatment, constructed wetlands, potable reuse, environmental pollution remediation, health and policy*

**Stokols**  
**Daniel Stokols**  
Chancellor’s Professor Emeritus  
Departments of Planning, Policy and Design and Psychology & Social Behavior  
School of Social Ecology  
Department of Epidemiology, School of Medicine  
Program in Public Health, College of Health Sciences  
Program in Nursing Science, College of Health Sciences  
http://www.seweb.uci.edu/stokols  
*Research: theory development in environmental psychology & social ecology, environmental design research, community & worksite health promotion, effects of environmental stressors on behavior & health, environmental psychology of the internet*

**Symanski**  
**Richard Symanski**  
Senior Lecturer  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2731
Taborek

Peter Taborek
Professor
Department of Physics and Astronomy, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=2166
Research: surface physics of gas hydrates

Tajima

Toshiki Tajima
Norman Rostoker Chair Professor
Department of Physics and Astronomy, School of Physical Sciences
http://www.physics.uci.edu/people/toshiki-tajima
Research: plasma physics, laser accelerators, fusion energy

Tanenbaum

Josh Tanenbaum
Assistant Professor
Department of Informatics, Donald Bren School of Information and Computer Sciences
http://uci.academia.edu/JoshuaTanenbaum
Research: games and narrative, identity transformation and empathy in digital games, nonverbal communication and virtual worlds, political and infrastructural dimensions of maker practice, design fictions and science fiction, ubiquitous computing, small-scale fabrication, electronic literature, sustainability games and education

Tobias

Douglas J. Tobias
Professor
Department of Chemistry, School of Physical Sciences
Affiliate: AirUCI
http://www.faculty.uci.edu/profile.cfm?faculty_id=4581
Research: molecular dynamics of atmospheric systems

Tomlinson

Bill Tomlinson
Professor
Department of Informatics, Donald Bren School of Information and Computer Sciences
Technical Director, Center for Research on Sustainability, Collapse-preparedness and Information Technology (RiSCIT)
Affiliate: Laboratory for Ubiquitous Computing and Interaction and the California Institute for Telecommunications and Information Technology
http://www.ics.uci.edu/~wmt/
Research: environmental informatics, sustainability education, software engineering for sustainability, collapse computing (the study, design and development of sociotechnical systems in the abundant present for use in a future of scarcity)

Treseder

Kathleen K. Treseder
Professor
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4968
Research: microbial biogeochemistry, ecosystem ecology, and global change
Trumbore

Susan E. Trumbore
Professor
Department of Earth System Science, School of Physical Sciences
Currently on leave from UCI, at the Max-Planck Institute for Biogeochemistry
http://www.faculty.uci.edu/profile.cfm?faculty_id=2210
Research: use of radiocarbon to trace the global carbon cycle, greenhouse gas production and consumption in terrestrial ecosystems

Vandell

Kerry Vandell
Director, Center for Real Estate
Dean’s Professor of Finance
The Paul Merage School of Business
http://merage.uci.edu/Faculty/FacultyDirectory/FacultyProfiles.aspx?FacultyID=7089
Research: urban/real estate/environmental economics

Van Rooij

Benjamin van Rooij
Professor
School of Law
Director, Long US-China Institute for Business Law
http://www.law.uci.edu/faculty/full-time/van-rooij/
Research: regulatory theory, law and development, environmental law, Chinese law

Velicogna

Isabella Velicogna
Assistant Professor
Department of Earth System Science, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5518
Research: geophysics, glaciology, hydrology, remote sensing

Venkatasubramanian

Nalini Venkatasubramanian
Professor
Department of Computer Science
Donald Bren School of Information and Computer Sciences
http://www.ics.uci.edu/~nalini
Research: distributed Systems, middleware, mobile and pervasive computing systems, multimedia computing, resilient and sustainable cyberphysical systems, smart cities

Venkatesh

Alladi Venkatesh
Professor
The Paul Merage School of Business
Affiliate: California Plug Load Research Center
http://www.faculty.uci.edu/profile.cfm?faculty_id=2643
Research: markets, incentives, asymmetric information, and energy efficiency
Vieira Veronica Vieira
Associate Professor
Program in Public Health, College of Health Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=5993
Research: spatial epidemiology, environmental exposure

Vrugt Jasper Vrugt
Assistant Professor
Department of Civil Engineering, The Henry Samueli School of Engineering
Department of Earth System Science, School of Physical Sciences
http://faculty.sites.uci.edu/jasper/
Research: measurement and modeling to investigate, understand, predict behavior of Earth systems; numerical and statistical approaches to engage complex systems models with observations; models applied to agriculture, atmospheric chemistry and physics, ecohydrology, ecology, hydrogeology, geophysics, remote sensing, soils, water resources

Walsh Roger Walsh
Professor
Department of Psychiatry and Human Behavior, School of Medicine
http://www.faculty.uci.edu/profile.cfm?faculty_id=2372
Research: psychological causes and consequences of sustainability issues

Wang Yun Wang
Director, Renewable Energy Resources Laboratory
Assistant Professor
Department of Mechanical and Aerospace Engineering
The Henry Samueli School of Engineering
http://www.eng.uci.edu/users/yun-wang
Research: fuels cells, hydrogen, wind energy

Ward Geoff Ward
Associate Professor
Department of Criminology, Law and Society, School of Social Ecology
http://socialecology.uci.edu/faculty/gward
Affiliate: Center in Law, Society and Culture
Research: advancing racial equality in juvenile justice, i.e., the fate of the group rests on the equitable development of its children and youth

Weis Arthur E. Weis
Professor Emeritus
Department of Ecology and Evolutionary Biology, School of Biological Sciences
Affiliate: UC Network for Experimental Research on Evolution
http://www.faculty.uci.edu/profile.cfm?faculty_id=3104&name=Arthur%20E.%20Weis
Research: plant ecological genetics, plant-insect interactions
Weller

**Stephen G. Weller**
Professor  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2686  
Research: plant population biology and evolutionary genetics of plant reproductive systems

Wickramasinghe

**Kumar Wickramasinghe**
Professor and Henry Samueli Endowed Chair  
Department of Electrical Engineering and Computer Science  
Professor  
Departments of Biomedical Engineering and Chemical Engineering & Materials Science  
The Henry Samueli School of Engineering  
http://www.eng.uci.edu/users/h-kumar-wickramasinghe  
Research: nanotechnology

Whiteley

**John M. Whiteley**
Professor  
School of Social Ecology  
http://socialecology.uci.edu/faculty/whiteley  
Research: environmental consequences of nuclear weapons development, multidisciplinary perspectives on global sustainability, training next generation of leaders in global sustainability

Wodarz

**Dominik Wodarz**
Professor  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=5128  
Research: mathematical and computational biology

Wu

**Jun Wu**
Associate Professor  
Program in Public Health, College of Health Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=5371  
Research: air pollution exposure assessment, and air pollution epidemiology

Wu

**Ruqian Wu**
Professor  
Department of Physics and Astronomy, School of Physical Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=4848  
Research: density function calculations of photovoltaic materials
Yang

**Jenny Y. Yang**  
Assistant Professor  
Department of Chemistry, School of Physical Sciences  
http://yanggroup.weebly.com/index.html  
*Research: discovery of catalysts for fuel forming and utilization reactions, energy storage from renewable sources*

Yee

**Albert F. Yee**  
Professor  
Department of Chemical Engineering and Materials Science, Department of Biomedical Engineering, The Henry Samueli School of Engineering  
Department of Chemistry, School of Physical Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=5442  
*Research: polymer materials science, plastics, composites, mechanical properties, nanopatterning, nanoimprinting*

Yu

**Jin-Yi Yu**  
Professor  
Department of Earth System Science, School of Physical Sciences  
http://www.ess.uci.edu/~yu/  
*Research: climate dynamics, atmospheric ocean interaction*

Yu

**Yaming Yu**  
Associate Professor  
Department of Statistics, Donald Bren School of Information and Computer Sciences  
http://www.ics.uci.edu/~yamingy/  
*Research: statistical computing, Bayesian analysis, applications to astronomy and earth systems science*

Zender

**Charlie Zender**  
Professor  
Department of Earth System Science, School of Physical Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=4743  
*Research: desert dust, climate, erosion, radiation, snow, soot*
About the cover: UCI and NASA’s Jet Propulsion Laboratory glaciologists aboard the Cape Race mapped for the first time remote Greenland fjords and ice melt that’s raising sea levels around the globe. Pictured, researchers race to retrieve equipment as sloughed-off glacial ice threatens to trap the boat.

Photo credit: Maria Stenzel for UCI