Sustainability Research Inventory 2017
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On the Cover: The Power-to-Gas (P2G) project run by UCI’s Advanced Power and Energy Program is a first-of-its-kind project in the U.S. The research project converts excess solar power generated by UCI solar photovoltaic systems into renewable hydrogen, which is then blended with natural gas and fed to the campus’s Central Energy plant where it is used to produce carbon-free heat and electricity. The project will allow for more extensive research into the opportunities to use P2G as a storage medium for the power derived from the increased use of solar and wind power in utility grid networks throughout the world. Photo: Steve Zylius UCI
About the Sustainability Research Inventory

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 2016, 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. In addition, UCI made The Princeton Review Green Honor Roll in 2016 for the fourth year in a row, receiving a perfect score on a survey of environmental practices, policies and academic offerings.

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 2017 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, 2016 and again in 2017, 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, 2016 and again in 2017, 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 previous inventories. 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. In 2017, a URL to the respective online forms was distributed in an initial email to the two faculty groups. The faculty responses have been incorporated.
- Prior to finalizing the 2017 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 2016 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 2017 UCI Sustainability Research Inventory is publicly available on the UCI Sustainability website.

Katie Babcock
Environmental Planning & Sustainability

March 2017
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) is committed to the development of creative, practical, and effective conservation strategies in the fields of environmental and land use law. Through its targeted programming, publications, and advocacy, the Center provides educational opportunities and advances interdisciplinary research on environmental problems, facilitates dialogue and collaboration among diverse stakeholders, and helps shape environmental policy both locally and globally. In addition to its annual program of public conferences, seminars, guest speakers, and literature and film discussions, CLEANR’s core initiative is the development of an innovative series of Workshop Roundtables. Bringing together leading policymakers, practitioners, industry representatives, activists, scientists, and scholars, CLEANR Roundtables play a critical role in the Center’s ongoing efforts to identify and address gaps in existing research, cultivate strategic partnerships with conservation organizations and government authorities, and promote concrete policy action on important and emerging environmental issues. CLEANR’s wide-ranging program has addressed environmental topics including climate justice, ice melt, ocean acidification, de-extinction, terrestrial habitat conservation, Arctic marine governance, marine protected areas, renewable energy development in Indian Country, open meeting laws and community participation, and Native Nation and California Coastal Commission relations in coastal conservation.

Center for Occupational and Environmental Health
The UC Centers for Occupational 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.

Center for Research in Sustainability, Collapse-preparedness and Information Technology (RiS CIT)
In his keynote address at a 2012 NSF-funded National Academies symposium, John Holdren, then Director 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
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regional and national research into policy and practice, serving as a
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the mission of the Center for Solar
Energy (CISE) is to study the fundamental
principles of solar energy conversion and
to educate scientists, students, and the general
public about harnessing our most abundant
energy resource.

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 (CISE) 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
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,
allovering 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
tackle 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, Berkeley, and Los Angeles – 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. From 2011 through 2016, ITS-Irvine served 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. In 2017, ITS-Irvine is initiating a major, multi-year research effort funded by the California Energy Commission to study sustainable freight solutions for the state. Other currently 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.

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.

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.

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 Aquaponics
UCI Aquaponics is a student-led project which features the symbiotic cultivation of plants and aquatic animals in a balanced recirculating environment. Our primary goal is to demonstrate that aquaponics is an economically feasible and environmentally sustainable method for the local generation of food in Irvine, CA. Accordingly, our research goals are to define the parameters which optimize aquaponics system efficiency, sustainability, and economy in a university context. With aquaponics, campus food waste promises to be diverted into fish food, which in turn fertilizes the growth of edible vegetables. This closed loop method simultaneously conserves significant water resources while much of California struggles in extreme drought. Finally, UC Irvine Aquaponics is poised to provide structured, experiential learning for UCI students, as well as local elementary, middle, and high school students.

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 Metropolitan Futures Initiative
The Metropolitan Futures Initiative aims to develop an improved understanding of communities and their potential for integrative and collaborative
planning and action to ensure a bright future for the region. It approaches these goals by bringing together an interdisciplinary research team along with the insights and techniques of “big data” research. By combining various large longitudinal and spatial data sources, and then employing cutting edge statistical analyses, the goal is to come to a better understanding of how the various dimensions of the social ecology of a region move together to produce the outcomes observed within our neighborhoods.

The Metropolitan Futures Initiative is interested in understanding how various regions operate, and in understanding differences across regions. Nonetheless, we pay particular attention to Orange County and its location within the larger Southern California area. The Metropolitan Futures Initiative is a commitment to building communities that are economically vibrant, environmentally sustainable, and socially just by partnering Social Ecology’s world class, boundary-crossing scholarship with expertise throughout Southern California.

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 Polycultures
The Sustainable Polyculture project at UCI aims to help people in Southern California design sustainable polycultures for personal use. A sustainable polyculture is a mutually dependent group of perennial and self-seeding annual plants designed to thrive with little or no external inputs and provide significant amounts of human resources.

The Sustainable Polyculture project is working with local community members and Agroecology researchers to identify what novice growers need to design and grow sustainable polycultures for personal use. In this pursuit, the Sustainable Polycultures project has engaged community members in building a sustainable polyculture at the demonstration site at the UCI Arboretum.

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 trans-disciplinary 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 applied 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.
Field Research – UC Natural Reserve System

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 biogas 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 a founding member and serves as a research partner in multiple aspects of the project. NFCRC in 2002 and then developed further through research and collaboration with partners such as Air Products and Chemicals, Inc. and FuelCell Energy, Inc., eventually leading to the current demonstration at the Orange County Sanitation District. 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 refueling 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 partners such as 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
  - Brad Hughes
  - Brandon S. Gaut
  - Cascade Sorte
  - Catherine “Kate” Loudon
  - Celia Faiola
  - Diane Campbell
  - Dominik Wodarz
  - Donovan German
  - Eman “Manny” Azizi
  - F. Lynn Carpenter
  - Francisco J. Ayala
  - James W. Hicks
  - Jennifer Martiny
  - Jessica Pratt
  - John C. Avise
  - Jose Ranz
  - Kailen A. Mooney
  - Kathleen K. Treseider
  - 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 Shanikhumar
- L. Robin Keller
- Kerry Vandell
- Luyi Gui

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
  - R. Jayakrishnan
  - Soroosh Sorooshian
  - Stanley Grant
  - Stephen G. Ritchie
- Wenlong Jin
- Wilfred R. Recker
- William J. Cooper
- Electrical Engineering and Computer Science
  - Ahmed Eltawil
  - Fadi Kurdaht
  - 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 Samuelson
  - Vince McDonell
  - Yun Wang

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
- East Asian Languages and Literatures
  - Margherita Long
- History
  - David Igler
  - Kristina Shull
  - 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

Informatics
- Bill Tomlinson
- Bonnie Nardi
- Cristina Lopes
- Debra J. Richardson
- 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 Hoonpongsimanont
- Epidemiology
  - Ralph J. Delfino
  - Rufus Edwards
- Internal Medicine
  - Alpesh Amin
- Medicine
  - BongKyoo Choi
  - Dean Baker
  - M. Joseph Fedoruk
  - Masashi Kitazawa
  - Michael T. Kleinman
  - Peter L. Schnall
School of Physical Sciences
- Chemistry
  - Aaron P. Esser-Kahn
  - Alan Heyduk
  - Annmarie Carlton
  - Athan J. Shaka
  - Barbara Finlayson-Pitts
  - Donald R. Blake
  - Douglas J. Tobias
  - Filipp Furche
  - James Smith
  - Jenny Y. Yang
  - John C. Hemminger
  - Kenneth Janda
  - Liz Jarvo
  - Manabu Shiraiwa
  - 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
  - Alex Guenther
  - Charlie Zender
  - Claudia Czimczik
  - Elizabeth Crook
  - Ellen Druffel
  - Eric Rignot
  - Eric S. Saltzman
  - Francois W. Primeau
  - Gudrun Magnusdottir
  - Isabella Velicogna
  - James T. Randerson
  - Jin-Yi Yu
  - Katherine Mackey
  - Kathleen R. Johnson
  - Mathieu Morlighem
  - Michael Goulden
  - Michael J. Prather
  - Steven J. Davis
  - Susan E. Trumbore

School of Social Ecology
- Criminology, Law and Society
  - Geoff Ward
  - Teresa Dalton
- Planning, Policy and Design
  - Ajay Garde
  - David L. Feldman
  - Jae Hong Kim
  - John D. “Doug” Houston
  - Nicola Ulibarri
  - Nicholas J. Marantz
  - Richard Matthew
  - Sanjoy Mazumdar
  - Scott A. Bollens
  - Victoria Basolo

School of Social Sciences
- Anthropology
  - Bill Maurer
  - Julia Elyachar
  - Michael Burton
  - Michael Montoya
  - Tom Boellstorff
  - Valerie Olson
- Cognitive Sciences
  - Barbara Sarnecka
- Economics
  - David Brownstone
  - Jan Brueckner
  - Kenneth Small
  - Kevin Roth
  - Linda Cohen
  - Martin C. McGuire
- Matthew Harding
- 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)

<table>
<thead>
<tr>
<th>Name</th>
<th>Title and Affiliation</th>
<th>Research Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al Faruque</td>
<td>Mohammad Abdullah Al Faruque, Assistant Professor, Department of Electrical Engineering and Computer Science, The Henry Samueli School of Engineering</td>
<td>Cyber-physical Energy Systems; demand side energy management at the distribution grid level; modeling, co-simulation, design automation tools, scheduling algorithm, and communication</td>
</tr>
<tr>
<td>Allison</td>
<td>Steven D. Allison, Associate Professor, Department of Ecology and Evolutionary Biology, School of Biological Sciences, Earth System Science, School of Physical Sciences</td>
<td>Microbial ecology, global change, and carbon cycling</td>
</tr>
<tr>
<td>Amin</td>
<td>Alpesh Amin, Professor &amp; Chair, Department of Medicine, Department of Internal Medicine, School of Medicine</td>
<td>Implementation science in the area of quality and safety that lead to sustainability research and outcomes</td>
</tr>
<tr>
<td>Anderson</td>
<td>Craig L. Anderson, Research Director, Center for Trauma and Injury Prevention Research, Research Specialist, Department of Emergency Medicine, School of Medicine</td>
<td>Reducing the burden of injury through clinical and prevention studies</td>
</tr>
<tr>
<td>Ardo</td>
<td>Shane Ardo, Assistant Professor, Department of Chemistry, School of Physical Sciences</td>
<td>Solar cells, solar fuels, solar seawater desalination, flow batteries</td>
</tr>
</tbody>
</table>
Avise  
John C. Avise  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
Research: ecological and evolutionary genetics, natural history, conservation biology

Ayala  
Francisco J. Ayala  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
Research: evolutionary genetics

Azizi  
Eman "Manny" Azizi  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
Research: muscle biology, locomotion, biomechanics

Baker  
Dean Baker  
Department of Medicine, School of Medicine  
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  
Program in Public Health  
Research: methods in public health: probabilistic models and statistical methods for exposure assessment, environmental epidemiology, and risk/decision analysis

Basolo  
Victoria Basolo  
Department of Planning, Policy and Design, School of Social Ecology  
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  
Affiliate: Center for Environmental Biology, Sustainability Initiative, Salton Sea Initiative, Water UCI, OCEANS UCI  
www.tinyurl.com/al-bennett  
Research: conservation research and education partnerships with public and non-governmental land management entities

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-environment interactions, gene regulation and inter-cellular signaling in development and physiology

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 Policy 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 Sciences Graduate 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
Brueckner  
Jan Brueckner  
Chancellor's Professor  
Department of Economics, School of Social Sciences  
http://www.socsci.uci.edu/~jkbrueck/  
Research: Energy use in cities, taking into account both residential and transportation usage

Burley  
Nancy Tyler Burley  
Professor  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2138  
Research: evolutionary significance of mate preferences, using Zebra finches as experimental models

Burton  
Michael L. Burton  
Professor Emeritus, Department of Anthropology  
School of Social Sciences  
http://faculty.sites.uci.edu/mlburton/  
Research: social life in critically stressed environments, food production and gender systems, agriculture, farming and herding throughout global environments, climate change and greenhouse gases, impacts of climate change on global food production

Camacho  
Alejandro E. Camacho  
Director, Center for Land, Environment, and Natural Resources  
Professor  
School of Law  
Steering Committee, UCI Oceans  
http://www.law.uci.edu/faculty/full-time/camacho/  
Research: environmental, land use, and natural resources law; adaptive management; collaborative governance; climate change

Campbell  
Diane Campbell  
Professor  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
Affiliate: Center for Environmental Biology  
http://campbell-lab.bio.uci.edu/  
Research: evolution in response to climate, pollination, impacts of invasive species

Carlton  
Annmarie Carlton  
Associate Professor  
Department of Chemistry, School of Physical Sciences  
Affiliate: AirUCI  
http://airuci.uci.edu/faculty/carlton  
Research: biosphere-atmosphere interactions through organic cloud chemistry and particle formation
Carpenter
F. Lynn Carpenter
Professor Emeritus
Department of Ecology and Evolutionary Biology, School of Biological Sciences
http://darwin.bio.uci.edu/~flcarpen/
http://www.rainprogram.org/about/
Research: restoring native trees and soil fertility to eroded pasture land in the Neotropics

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

Crook

Elizabeth Crook
Lecturer PSOE
Department of Earth System Science, School of Physical Sciences
Affiliate: UCI Oceans
https://www.ess.uci.edu/people/ecrook
Research: Ocean acidification, coral reef ecosystems, biogeochemical cycling, and integrating sustainability research in a large-classroom setting

Cooper

William J. Cooper
Director, National Science Foundation
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
Associate 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
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

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

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

Kristen A. Davis
Associate 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

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

Steven J. Davis
Associate 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*

Dollar  
Franklin Dollar  
Assistant Professor  
Department of Physics and Astronomy, School of Physical Sciences  
https://www.physics.uci.edu/people/franklin-dollar  
*Research: plasma physics, laser accelerators, fusion energy*

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  
Fred Kavli Professor  
Department of Earth System Science, School of Physical Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2027  
*Research: marine carbon cycling, past climate reconstruction, ocean circulation*

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*
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*

Faiola

**Celia Faiola**  
Assistant Professor  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
http://faculty.sites.uci.edu/cfaiola/  
*Research: ecological climatology, global change, biosphere-atmosphere interactions, climate change feedbacks*
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
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

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

Guenther  Alex Guenther  
Professor  
Department of Earth System Science, School of Physical Sciences  
Affiliate: AirUCI  
https://www.ess.uci.edu/people/alexguenther  
Research: quantifying emissions of air pollution, climate relevant gases and particles, and predicting their response to land use and climate change

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

Harding  Matthew Harding  
Associate Professor  
Department of Economics, School of Social Sciences  
http://www.socsci.uci.edu/~harding1/  
Research: energy efficiency and conservation through the implementation of behavioral programs, evaluation methods
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  
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  
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
Associate 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
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
Director of Strategic Media Productions, School of Biological Sciences
Senate Faculty SOE
Department of Ecology & Evolutionary Biology, School of Biological Sciences
Affiliate: School of Education, Claire Trevor School of the Arts
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

Igler

David Igler
Chair and Professor of History
Department of History, School of Humanities
http://www.faculty.uci.edu/profile.cfm?faculty_id=5334
Research: Environmental History and Climate Studies

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  
Associate 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  
Associate Professor  
Department of Civil and Environmental Engineering, The Henry Samueli School of Engineering  
Affiliate: Institute of Transportation Studies  
http://www.its.uci.edu/~wjin/  
*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
Associate 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

Kitazawa

Masashi Kitazawa
Assistant Professor
Department of Medicine, School of Medicine
Affiliate: Center for Occupational and Environmental Health
http://faculty.sites.uci.edu/kitazawa/
Research: environmental risk factors and neurodegenerative diseases

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

Law
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

Lee
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

Levorato
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

Li
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
Lin

Zhihong 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

Long

Margherita Long
Associate Professor
Department of East Asian Languages and Literatures, School of Humanities
http://www.faculty.uci.edu/profile.cfm?faculty_id=6157
Research: public intellectuals and anti-nuclear movements in Japan after the Fukushima disaster

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
Chancellor's Professor
Department of Mathematics, School of Physical Sciences
Professor
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 Sciences 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
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
Marantz  
**Nicholas J. Marantz**  
Assistant Professor  
Department of Planning, Policy and Design, School of Social Ecology  
Affiliate: UCI School of Law, Center for Land, Environment & Natural Resources (CLEANR)  
http://socialecology.uci.edu/faculty/nmarantz  
Research: Federalism and regional governance; Regulation of the built environment; Housing law and policy; Environmental law and policy

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

Matthew  
**Richard A. Matthew**  
Founding Director, Center for Unconventional Security Affairs  
Professor  
Department of Planning, Policy and Design, School of Social Ecology  
Department of Political Science, School of Social Science  
Senior Fellow, International Institute for Sustainable Development  
Senior Member, United Nations Expert Group on Environment, Conflict and Peace  
Senior Fellow, Munk School, University of Toronto  
http://www.faculty.uci.edu/profile.cfm?faculty_id=4770  
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

Maurer  
**Bill Maurer**  
Dean, School of Social Sciences  
Professor  
Department of Anthropology, School of Social Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=4488  
Research: anthropology of law, globalization, anthropology of money and finance, alternative models of economic growth and financial inclusion, gender and kinship
Mazmanian  
Melissa Mazmanian  
Assistant Professor  
Department of Informatics  
Donald Bren School of Information and Computer Sciences  
http://www.ics.uci.edu/~mmazmani/Site/Home.html  
Research: mobile communication technologies and sustainable lives, socio-materiality and information technologies, organizational coordination and communication practices

Mazumdar  
Sanjoy Mazumdar  
Professor  
Department of Planning, Policy and Design, School of Social Ecology  
http://socialecology.uci.edu/faculty/mazumdar  
Research: sustainable and appropriate design/planning, energy conscious design, sustainable and appropriate disaster planning/design

McBride  
Michael McBride  
Associate Professor  
Department of Economics, School of Social Science  
http://faculty.sites.uci.edu/mcbride/  
Research: collective action, conflict, experimental methods

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.aep.ucp.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  
Affiliate: UCI Institute for Genomics and Bioinformatics, UCI Center for Complex Biological Systems, Caltech Biological Network Modeling Center  
http://www.ics.uci.edu/~emj/  
Research: systems biology, scientific inference systems, and mathematical methods; “The Computable Plant;” metabolic modeling

Mohraz  
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

Montoya  
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

Mooney  
Kailen A. Mooney  
Associate Professor  
Department of Ecology and Evolutionary Biology, School of Biological Sciences  
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
Morlighem

Mathieu Morlighem
Assistant Professor
Department of Earth System Science, School of Physical Sciences
http://sites.uci.edu/morlighem/
Research: Evaluate the ice sheets contribution to sea level rise over the next centuries in response to climate change using numerical modeling

Mosallam

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

Mueller

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 and Associate Dean for Graduate Studies
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 Samuei 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://faculty/sites.uci.edu/valerieolson/  
Research: environmental anthropology, science and technology studies, ecosystem disasters, sociocultural dynamics and politics of ecosystem science, restoration, sustainability in extreme environments

Penner  
Reginald Penner  
Chancellor’s Professor  
Department of Chemistry, School of Physical Sciences  
http://www.faculty.uci.edu/profile.cfm?faculty_id=2040  
Research: gas sensors, light emitting systems, energy storage, and cancer surveillance

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  
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
Research: global change, atmospheric chemistry, climate forcing and air quality

Pratt
Jessica Pratt
Assistant Professor of Teaching
Department of Ecology and Evolutionary Biology, School of Biological Sciences
Affiliate: Center for Environmental Biology
http://prattecology.weebly.com
Research: Community engaged scholarship, interdisciplinary student training, case study and project based teaching

Primeau
Francois W. Primeau
Associate Professor
Department of Earth System Science, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4739
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
Chancellor’s Professor
Department of Earth System Science, School of Physical Sciences
http://www.faculty.uci.edu/profile.cfm?faculty_id=4971
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
http://www.faculty.uci.edu/profile.cfm?faculty_id=5434
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/full-time/robinson-dorn/
Research: law related to climate change, communities grappling with rising ocean waters, oil and gas fracking, and other legal challenges
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  
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 Sarnecka  
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 Scherfig  
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. Schnall  
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. Schoenung  
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 Schofer  
Professor  
Department of Sociology, School of Social Sciences  
http://faculty.sites.uci.edu/schofer/  
Research: Global environmentalism; international environmental treaties; the environmental movement; environmental Non-Governmental Organizations
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 and Public Health  
Department of Emergency Medicine, School of Medicine  
Affiliate: Center for Disaster Medical Sciences; Center for Unconventional Security Affairs  
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. Represented American Association of Geographers at COP22 in Morocco.

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

Shiraiwa  
Manabu Shiraiwa  
Assistant Professor  
Department of Chemistry, School of Physical Sciences  
Affiliate: AirUCI  
http://www.chem.uci.edu/~mshiraiw/index.html  
Research: properties and multiphase processes of atmospheric aerosols and their effects on atmospheric chemistry, air quality and human health

Shull  
Kristina Shull  
Lecturer  
Department of History, School of Humanities  
http://www.faculty.uci.edu/profile.cfm?faculty_id=6200  
Research: The history, politics, and rhetoric of the climate change debate; climate refugees. UCI Sustainability Initiative grant recipient 2016-17.

Silverman  
Dennis Silverman  
Professor Emeritus  
Department of Physics and Astronomy, School of Physical Sciences  
http://www.physics.uci.edu/~silverma/  
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

Smith

James Smith  
Professor  
Department of Chemistry, School of Physical Sciences  
Affiliate: AirUCI  
http://www.chem.uci.edu/people/jim-smith  
Research: processes by which nanoparticles form and grow in the atmosphere and to understand the impacts of nanoparticles on climate, ecosystems and human welfare

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 & Remote Sensing, Civil & Environmental Engineering, The Henry Samueli School of Engineering
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

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
https://transformativeplay.ics.uci.edu
Research: Design Fiction and game design as tools for exploring and communicating sustainable futures to broad publics and stakeholder groups

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
Ulibarri
Nicola Ulibarri
Assistant Professor
Department of Planning, Policy and Design, School of Social Ecology
Affiliate: Water UCI
http://faculty.sites.uci.edu/ulibarri/
Research: water planning & policy; environmental governance; collaborative decision-making; multipurpose water infrastructure & dams

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
Associate 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  
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  
Associate 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

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  
Chair 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  
Affiliate: Center for Solar Energy  
http://yanggroup.weebly.com  
*Research: Hydrogen Fuel, carbon neutral fuels, fuel cells, photoelectrochemical cells, solar fuels, light driven carbon neutral fuel production*
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

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

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

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