



UNIVERSITY of CALIFORNIA • IRVINE

The Irvine Division of the Academic Senate of the University of California  
is pleased to present its Distinguished Faculty Awards for 2014-2015

**TUESDAY, DECEMBER 2, 2014**

4:30 p.m.

Newkirk Alumni Center

**Jonathan Alexander**

Professor of English

Distinguished Mid-Career Faculty Award for Service

**Andrea J. Tenner**

Professor of Molecular Biology and Biochemistry

Daniel G. Aldrich Jr. Distinguished University Service Award

**Teresa A. Dalton**

Lecturer of Criminology, Law and Society

Distinguished Assistant Professor Award for Teaching

**Matthew Beckmann**

Associate Professor of Political Science

Distinguished Faculty Award for Teaching

**Ali Mortazavi**

Assistant Professor of Developmental and Cell Biology

Distinguished Assistant Professor Award for Research

**Chuansheng Chen**

Professor of Psychology and Social Behavior

Distinguished Mid-Career Faculty Award for Research

**H. Kumar Wickramasinghe**

Professor of Electrical Engineering and Computer Science

The recipient of the Distinguished Faculty Award for Research will present a lecture:

SCANNING PROBE MICROSCOPY – AN ENABLER FOR NANOTECHNOLOGY

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Chancellor Howard Gillman cordially invites you  
to a reception immediately following the lectures.

## Distinguished Mid-Career Award for Service

**Jonathan Alexander**  
**Professor of English**

I am Professor of English, with affiliate appointments in Education and Gender & Sexuality Studies. From 2007-2014, I served as the UCI Campus Writing Coordinator, and in 2012 I became the founding director of the Center for Excellence in Writing & Communication. The author, co-author, or editor of nine books, my work focuses primarily on the use of emerging communications technologies in the teaching of writing and in shifting conceptions of what writing, composing, and authoring mean. My most recent books include *On Multimodality: New Media in Composition Studies* and, with Elizabeth Losh, the graphic book *Understanding Rhetoric: A Graphic Guide to Writing*. I also work at the intersection of the fields of writing studies and sexuality studies, where I explore what discursive theories of sexuality have to teach us about literacy and literate practice in pluralistic democracies.

I am a three-time recipient of the Ellen Nold Award for Best Articles in the field of Computers and Composition Studies, and my books have been nominated for various awards, including the Lambda Literary Award. In 2011, I was awarded the Charles Moran Award for Distinguished Contributions to the Field of Computers and Writing Studies. Given the intersectional nature of my work, I also served as interim chair for the Department of Gender & Sexuality Studies in 2013-2014. Most recently, I was named the new general editor of *College Composition and Communication*, the flagship journal in the field of composition/rhetoric and writing studies.

## Daniel G. Aldrich Jr. Distinguished University Service Award

**Andrea J. Tenner**  
**Professor of Molecular Biology and Biochemistry**

I am very honored to be the recipient of The Daniel G. Aldrich, Jr. Distinguished University Service Award. Furthermore, I am deeply moved and so appreciative of those who took the time and energy to nominate and support me for this distinction. The real importance of the award is not just for the recipient, as there are many deserving recognition, but to acknowledge the value of both scholarly pursuits and contributions through service. It has been wonderful to be on a campus where so many individuals from different arenas join together to solve (or proactively avoid) problems and build the future. These many individuals provided the opportunity to enjoy years of science and years of participation in the progress of UCI as it achieved and became internationally recognized for excellence.

My research area is focused on mechanisms of inflammation, with a strong focus on a part of the immune system that is called the complement pathway. This system helps to destroy pathogens but when activation of this pathway is excessive or inappropriate, it contributes in a detrimental way to a wide range of inflammatory disorders. The exceptionally strong neuroscience research program here at UCI and the inclusive and forward thinking investigators in many disciplines enabled me to broaden my investigation to the influence of this system on neurodegeneration with a focus on Alzheimer's disease. The goals of my laboratory were, and remain, to understand the molecular players involved in normal processes and in dysfunctional states, such that therapeutic interventions to limit damaging inflammation or enhance protective immune responses can be designed. Many individuals have contributed to the efforts of my laboratory over the years and to the excitement of discovery. I was and am excited by science itself, committed to mentoring and training excellent future research scientists and physicians, and facilitating the progress toward amelioration of inflammatory and degenerative diseases through both basic and clinically applied research. Thus, service to the University to help promote its research and teaching mission, mentoring efforts for the individuals doing research and active participation in professional organizations naturally evolved.

I have had the good fortune to have insightful and well intentioned advisors/mentors at what turned out to be game-changing points in my life. Though neither had a college degree, my parents always stressed the value of education and the importance of contributing something to society. Subsequently, the mentoring of a "little old nun" at my very small liberal arts college got me into a research lab with a tremendous scientist, who changed my view of what I was going to pursue as my professional activity and then pointed out to me that I could pursue it and all other realms as "one life". That one life became entwined with a lifelong love and calming influence that enabled me to have "a wonderful life" sharing all the excitement, inspiration and challenges that go with 3 terrific kids and academic research. My colleagues in various endeavors from California to Maryland and back, as well as students and trainees have informed me graciously as well, and I am so thankful to all.

I would like to encourage those embarking on any career, to see the various service commitments or requests that seem at times irrelevant to one's own professional or independent progress, as otherwise unattainable opportunities to see some aspect of this world, this life, through the eyes of others. And, with the right intention and the will to commit effort with little, no or "delayed gratification" in sight at the time, one can try to use that unique awareness to collectively contribute to a better situation for all and thereby "be happy".

## Distinguished Assistant Professor Award for Teaching

Teresa A. Dalton  
Lecturer of Criminology, Law and Society

At the beginning of every quarter an opportunity presents itself for redefining a course and looking at the entire pedagogical enterprise anew. The course can take on an innovative shape—the subject matter may be examined from a different perspective, assessment altered to try new techniques, and classroom time adjusted for a unique mix of lectures, learning enhancement activities and discussion times. The term *design science* has been bandied about lately in an effort to get to the heart of teaching in the twenty-first century. It is precisely this creative outlet that has inspired me to pursue education and brought me to this award I am profoundly honored to be receiving.

Here at UCI, my teaching portfolio includes numerous hybrid and online courses. I have presented workshops both nationally and internationally on best practices for delivering student centered learning and I have given several invited talks on campus for faculty interested in creating hybrid courses and making teaching video-modules.

A major focus of my overall teaching strategy is to cultivate in my students a passion for lifelong learning. Whether I'm teaching hierarchical linear modeling or an introductory course in criminology, law and society, I use a wide range of pedagogical techniques to both measure learning and stimulate student curiosity. In my fourteen years of teaching I have learned much, including that a commitment to excellence in teaching requires my continued professional development and evaluation of methods as technology provides new answers.

My students have enthusiastically embraced my new pedagogical techniques and have exhibited genuine appreciation for the opportunities afforded them. They begin the quarter eager to learn and end it with the same enthusiasm. They have brought their children, moms, dads, uncles, aunts, and grandparents to meet me. In my two years at UCI, I have already heard from many students who have graduated, keeping me abreast of their life trajectories. My students make me look good, but more importantly they make me feel good about what I do.

Here at UCI I am immersed in a culture of teaching professionalism of the highest caliber. There are many individuals who have helped me in my efforts to perfect my art of teaching—they all share in my accomplishments: The team at Teaching, Learning & Technology offer a multitude of workshops and seminars demonstrating how to flip, blend and hybrid my courses; the Division of Undergraduate Education and their learning strategy consultants bring a zany sense of energy to some truly inspirational talks and workshops; my teaching assistants maintain the highest level of integrity as part of my teaching team, always offering suggestions and critical feedback; and of course, the students—the reason we are all here.

None of what I have accomplished on this campus would have been possible without the support and encouragement of my colleagues in the Criminology, Law and Society Department and others in the School of Social Ecology. The three Chairs I have had an opportunity to work with have given generously of their time and experience; Dean Jenness has inspired me to be the very best I can be, providing absolutely everything I have needed to be successful in my position.

I am grateful for this recognition and I feel privileged to work on a campus that so greatly values the scholarship of teaching.

## Distinguished Faculty Award for Teaching

**Matthew Beckmann**  
**Associate Professor of Political Science**

Thinking critically about the US political system – its philosophical underpinnings, historical roots, and contemporary practice – is among the most important enterprises college students undertake. For in understanding how American politics was designed to work, as well as how it does, students develop an analytical framework for making thoughtful, reasoned judgments about the nation's past, present, and future. It is for good reason the University of California demands students study American history and government.

For the past decade, my job has been to examine how American politics works (or does not), and also to help UCI students do the same. I have taught introductory courses that help students understand Congress and the Presidency, Elections and Public Opinion, the Supreme Court and the Budget, as well as upper-division courses that allow students to discover the practice and potential of presidential leadership in postwar America. To help bridge these academic lessons to real-world practice, I have recently become the faculty director for UC Irvine's internship programs in Sacramento and Washington, DC.

Suffice it to say (I hope), I feel incredibly fortunate to have such a great job at such a great University. Indeed, while my luck and gratitude vastly outpace my space for spelling them out here, several people deserve mention: my parents, who valued ideas and evidence, and whose love was unconditional; my professors, who encouraged independence and analysis, and who empowered me develop my own voice; my colleagues, who offered insights and encouragement, not to mention friendship; and, most of all, my wife, whose love and example made everything else not only possible, but also enjoyable.

Of course, there is one more group to thank: my students. During my time at UC Irvine, I have had the wonderful fortune of getting to know thousands of students who exude interest and intelligence, humility and promise. It is these qualities that led me to integrate scores of undergraduate students into my research. The simple truth is they make my work better and more fun. Inasmuch as this teaching award indicates my students feel similarly, I am truly honored. And for that I cannot thank my colleagues or the Academic Senate enough.

## Distinguished Assistant Professor Award for Research

Ali Mortazavi

### Assistant Professor of Developmental and Cell Biology

I have been interested in science for as long as I can remember. My Iranian parents were graduate students in Paris, France who encouraged me to read. I devoured every book I could get my hands on and I enjoyed the most those on science and science fiction. When I was five, I commandeered a really big walk-in closet to become my very first laboratory. I conducted a set of studies mixing various milk and fruit juices to see under the microscope what grew after fermentation, which could be charitably described as microbiology experiments. While I was always interested in biology and what I like to describe as the unity of life, it would take me several more decades to see biology as a viable profession for me.

My father earned two PhDs in civil engineering and geophysics while my mother earned a PhD in urban planning when I was young. I inherited from them a love of science and maps respectively. I wanted to be a scientist and I had my heart set on astrophysics. But my first serious encounter with physics as an undergraduate at the California Institute of Technology (Caltech) left me cold. I found myself more interested in the history of science and computer science instead. Having given up on physics because of lack of interest and poor grades, I cast around for another major. I still had an interest in biology, and one of my history of science professors told me that if Einstein had been a student in the present day (this was in the 90s), he would be studying biology. I enjoyed programming so I decided to major in engineering, but my computer science professor told me about this young new assistant professor, Paul Sternberg, doing genetics with worms. I spent a few months in his lab, learning how to cross strains of *C. elegans*. While I left his lab to go work in the lab of Eric Davidson, where they needed someone with computational skills, I would return 15 years later to Paul's lab as a postdoctoral fellow for 3 years before joining UCI.

I was deeply influenced as an undergraduate in the Davidson lab with the idea of development as a genetic program, where the transcriptional regulation of genes is encoded in the logic of DNA regulatory elements. All of the work in my lab today is ultimately connected to understanding the programming logic of development in the form of gene regulatory networks. However my route from undergraduate back to graduate school took a 10-year detour outside of academia, when I worked as a systems engineer and later as a programmer.

It is only through the urging of my wife Shantika that I returned to graduate school, first earning a Masters in Chemistry and Biochemistry at Cal State LA in 2004, before returning for a PhD in biology at Caltech. I had a simple plan: graduate in 3 years and join a biotech firm. I joined the lab of Barbara Wold, who is a former student of Eric Davidson, but who is also very interested in mammalian function genomics. I developed in Barbara's lab two new techniques called ChIP-seq and RNA-seq using high-throughput sequencing that have become since then a core part of functional genomics. While I managed to graduate in 3.5 years in 2008, Barbara convinced me to stay in academia to follow my passion for gene regulation. My PhD work opened many doors for me such as my assistant professorship in Developmental and Cell Biology here at UC Irvine in 2011, where my students and I map out the developmental programs in animals as diverse as human, mouse, frogs, worms, and hydra. Our goal is to understand how the logic of development encoded in the DNA of organisms using functional genomics and how small changes to this program lead to diseases such as cancer.

I am honored to receive this award and I wish to thank the Academic Senate, my colleagues in Developmental and Cell Biology, and my students.

## **Distinguished Mid-Career Award for Research**

**Chuansheng Chen**  
**Professor of Psychology and Social Behavior**

From growing up in rural China during the Cultural Revolution to teaching at the University of California at Irvine, I have had my share of culture shocks. I witnessed the introduction of electricity and loudspeakers to my village in the mid-1970s, spent my high school years in two adobe buildings in a forest, had my first train ride to attend college, learned Mandarin Chinese and ABCs and met the first non-Chinese in college, took my first flight to cross the Pacific to attend the psychology graduate program at the University of Michigan in mid-1980s, experienced overwhelming American hospitality but also encountered incidents of blatant racism, and moved to the culturally diverse Southern California in early 1990s. Since then, I have experienced the dramatic growth of UCI and witnessed even more dramatic social, economic, and cultural changes in China on my yearly visits there. It is probably always the right time, but this has to be one of the best times, to study the powerful impact of culture and its rapid change on human behavior. I have been fortunate enough to conduct research in this field for the past three decades.

Even more fortunately, I have never needed to do any of it alone because I have been supported throughout my academic career by numerous mentors, collaborators, colleagues, and students. They are more deserving than I am of whatever awards and recognitions given to me. Regrettably I can only name a few of them in the limited space allowed.

I basically have one research interest—what cultural factors account for similarities and variations in human behavior? Before the advent of modern imaging and molecular genetic methods, this question was studied only at the behavioral level. Earlier in my academic career, my mentor, the late Harold Stevenson, senior collaborators such as Shinying Lee and James Stigler, and I aimed to understand cultural factors (including socialization practices, cultural values and beliefs, classroom teaching, and linguistic factors) that could account for cross-national and ethnic differences in children's school achievement, especially in mathematics. After arriving at UCI, working most closely with Ellen Greenberger and more recently also with Jutta Heckhausen, I extended my cross-cultural research to adolescent development and transition to adulthood focusing on socio-emotional outcomes such as depression, misconduct, and social relationships (with parents, peers, and important non-parental adults). Over the past decade, with increasing accessibility of brain imaging and molecular genetic technologies, I have greatly expanded my research into cognitive neuroscience and behavior genetics. With Qi Dong, Gui Xue, Xinlin Zhou, and Chunming Lu at Beijing Normal University and Zhong-Lin Lu at Ohio State University, we have focused on neural bases (as well as their interactions with cultural factors) of mathematical learning, memory, language learning, speech production, and decision making. Most recently, Qi Dong, Robert Moyzis (UCI), Jun Li, and I integrated brain imaging, molecular genetics, and behavioral research to examine the complex interactions among culture, molecular evolution, genes, brain structure and function, and behaviors. In addition, Elizabeth Loftus and I, and our Chinese colleagues have also studied cognitive, personality, and genetic bases of false and veridical memories. In sum, being in the School of Social Ecology, I tried to adopt the social ecological approach in my research, i.e., multidisciplinary and multi-level analyses of human behaviors.

I feel very honored to receive this prestigious award and want to thank my family and my colleagues for their continuing support. What a way it is to mark the 30th anniversary of my arrival in the U.S.!

## Distinguished Faculty Award for Research

### H. Kumar Wickramasinghe Professor of Electrical Engineering and Computer Science

I was born in Sri Lanka a little island in the Indian Ocean. I grew up in a scientific family. My Dad studied mathematics at Cambridge and all my brothers were aspiring scientists. I recall being fascinated by a Christmas present I received at the age of 10 when I was able to assemble a crystal radio and use it to tune into local radio stations. From that point on it seems I was hooked; I went on to build a radio transmitter and many other electronic instruments using parts collected from junk yards in Colombo. Over the years, it seems I have continued in the trend of building new instruments.

I earned my B.Sc at Kings College London and went on to do a PhD as this was the only way to stay on in London. I had the good fortune to be trained by several luminaries; Sir Eric Ash, my PhD advisor invented Near-Field Scanning Microscopy. My post-doctoral advisor Professor Rudi Kompfner invented the Travelling Wave Tube –an essential amplifier for satellite communication that ushered in the era of wireless communications, and my other postdoctoral advisor Professor Cal Quate who invented the Acoustic Microscope. They all had one thing in common – they challenged existing theories that set boundaries and questioned the status quo. That basic philosophy has been engrained in my research ever since.

After faculty appointments at Stanford and University College London, I moved to IBM Research in Yorktown Heights, NY where I spent the major part of my career. Shortly after joining IBM, I focused my attention on an important problem– what non-destructive metrology tools will they use when the feature sizes of the chips and other devices they were building reached the optical resolution limit of 0,5 micrometer? - almost all the metrology tools at the time were based on visible light. I worked hard on this problem with several postdoctoral students for many years before coming up with the solution based on the Atomic Force Microscope – the Non-Contact Atomic Force Microscope was born. I led the team that developed this instrument moving it from research into all IBM Manufacturing and Development labs and spinning it off so that the wider world community could access them. Along the way, we introduced a family of new microscopes for measuring various Chemical and Physical properties on the nanoscale based on this platform and coined the name Scanning Probe Microscopes for these instruments. This family has grown considerably since we introduced the first few members and has turned out to be very important enabling tools in nanotechnology – they are in essence the eyes that allow us to see what we are doing.

At UCI, I am working on instruments for measuring gene expression in living cells and studying their response to various stimuli such as drugs. We are developing an all electronic chip that can amplify and detect minute quantities of DNA for use in point of care diagnostics and forensics and with the Chemistry Department we are developing the Chemiscope – an instrument that can see chemical reactions at the molecular level.

I have been inducted to the National Academy of Engineering, the National Academy of Inventors and elected Fellow of many organizations the IEEE, APS, Royal Microscopical Society, Institute of Physics, IBM, etc. and I have won several awards. However, I am most honored to receive this award as it is a validation from my peers at UCI.