

The Irvine Division of the Academic Senate of the University of California
is pleased to present its Distinguished Faculty Awards for 2009-2010

THURSDAY, DECEMBER 3, 2009

7:00 p.m.

UCI University Club

Kenneth L. Pomeranz

Professor of History

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

LAND, WATER, AND ECONOMIC DEVELOPMENT IN CHINA:
Historical Perspectives and Contemporary Implications

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In addition, the following Senate Awards for 2009-2010 will be presented:

Maria Q. Feng

Professor of Civil and Environmental Engineering
Distinguished Mid-Career Faculty Award for Research

Stanislaw M. Jarecki

Professor of Computer Science
Distinguished Assistant Professor Award for Research

Linda J. Levine

Professor of Psychology and Social Behavior
Distinguished Faculty Award for Teaching

Marcelo Wood

Professor of Neurobiology and Behavior
Distinguished Assistant Professor Award for Teaching

Timothy J. Bradley

Professor of Ecology and Evolutionary Biology
Daniel G. Aldrich Jr. Distinguished University Service Award

Victoria Basolo

Professor of Planning, Policy and Design
Distinguished Mid-Career Faculty Award for Service

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Chancellor Michael V. Drake cordially invites you
to a reception immediately following the lectures.

Distinguished Faculty Award for Research

Kenneth Pomeranz
Professor of History

I have been at UC Irvine since 1988, and am now Chancellor's Professor of History; I also have courtesy appointments in East Asian Language and Literature, and in the School of Social Ecology. I am founding director of the University of California's Multi-Campus Research Program in World History, which has been operating since 1999, and founding co-editor of the *Journal of Global History* and a book series in world history at University of California Press.

I was trained primarily as a historian of late imperial and 20th century China. My research interests include comparative economic development, state formation and empire, environmental history, peasant movements, and the history of popular religion. Probably my best-know work is *The Great Divergence: China, Europe, and the Making of the Modern World Economy* (which won the John K. Fairbank Prize from the American Historical Association for best book in East Asian history, and shared the book of the year prize from the World History Association), which re-interpreted the origins of the Industrial Revolution by showing that several of the features of 18th century Western European society conventionally used to explain this event had very close analogues elsewhere (especially in East Asia), and needed a better explanation also required supplemented attention to environmental factors (especially related to energy supplies) and to a set of global conjunctures that enabled Britain in particular to break free of ecological constraints that they had previously shared with relatively prosperous places elsewhere in the world. My other publications prior to this year were *The Making of a Hinterland: State, Society and Economy in Inland North China, 1853-1937* (which also won the Fairbank Prize), *The World that Trade Created* (with Steven Topik), a co-edited encyclopedia of the history of trade, and numerous articles.

In 2009, I have published three edited and two co-edited volumes: *The Environment and World History, 1500-2000* (with Terry Burke), *China in 2008: A Year of Great Significance* (with Kate Merkel-Hess and Jeffrey Wasserstrom), and *The Pacific in the Age of Early Industrialization*. My most recent article, which has a contemporary focus, is "The Great Himalayan Watershed: Agrarian Crisis, Mega-Dams, and the Environment," looks at how water shortages, hydro-projects, river diversion schemes, and climate change are interacting to affect the environment of almost half of the world's people in South, Southeast and East Asia whose water supplies depend in large part on snow and ice from the Himalayan plateau. Other articles newly in print or coming out soon range from the history of controversies about the goddess of Taishan (a sacred mountain in North China), to a general history of commerce for the *Oxford Concise Companion to History*, an explanation of how land markets worked in pre-revolutionary China, and two essays that revisit debates over the origins of industrialization and the modern world.

I am a Fellow of the American Academy of Arts and Sciences, and have received fellowships from the Guggenheim Foundation, the American Philosophical Society, American Council of Learned Societies, the UC President's research Fellowship in the Humanities and other sources. I have given approximately 165 invited academic lectures in 15 countries during the last dozen years.

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Distinguished Mid-Career Award for Research

Maria Q. Feng
Professor of Civil and Environmental Engineering

Engineering was a natural career choice for me, in part because I grew up in a big family with many engineers and scientists. My eldest uncle, whom I greatly admired, built the very first railroad, now more than sixty years ago, in the steep mountains of southwest China. I listened in fascination as he described how they used primitive survey tools to excavate a tunnel from both sides of a mountain at once, yet meeting perfectly in the center. The creativity of engineering inspired me. After obtaining my B.S. in China, I was fortunate to be selected in 1984 for a Japanese government fellowship for graduate study in Japan. After studying robotics for my M.S. thesis, I decided to apply concepts from robotic intelligence to monitor and control the motion of buildings and bridges under wind and seismic stress. This became an emerging research subject at that time. My Ph.D. research at the University of Tokyo on smart buildings with self-sensing and self-controlling capability landed me a researcher position at Princeton University, and later an assistant professorship here at UCI in 1992.

UCI has nurtured my academic career by giving me the freedom to explore challenging problems that reflect a societal need, and pursue innovative solutions. One such problem is our aging civil infrastructure, including highway bridges and underground water pipes. Frequent ruptures of buried pipes and the tragic collapse of the I-35W bridge in Minnesota in 2007 highlight the financial and human costs of an increasingly vulnerable civil infrastructure. Just as medicine must diagnose a health problem before it can treat the human body, civil engineering needs tools more advanced than visual inspection to discover hidden problems. My work has focused on the diagnosis of civil infrastructure through the development of advanced sensors and instruments, as well as data processing techniques. Using various sensors to monitor long-term structural performance and to explore sensor-based, real-time, remote post-event damage assessment, as well as early warning, I have wired a number of bridges and buildings, including the Calit2 building at UCI. As our built environment ages and grows in size and density, along with increasing threats of natural disasters due to global warming, this research continues to be, not only interesting and challenging, but truly important to protect the integrity of our civil infrastructure and the safety of the general public.

My work has been described as "innovative, interdisciplinary, and practical", and blessed with recognition and awards that include the Early Faculty Career Award from the National Science Foundation, three awards from the American Society of Civil Engineers (ASCE): The Collingwood Prize, the Charles Pankow Finalist Award for Innovation, and the Walter L. Huber Civil Engineering Research Prize; the Best Presentation and Best Paper Awards from the Japan Society of Instrument and Control Engineers; and The Alfred Noble Prize, named for the past president of ASCE and presented by the combined American engineering societies. However, nothing compares to the joy and honor of being recognized by my colleagues at UCI. I am extremely humbled and grateful for this Distinguished Mid-Career Faculty Award for Research.

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Distinguished Assistant Professor Award for Research

Stanislaw M. Jarecki
Professor of Computer Science

My research interests are in theory and applications of cryptography, with a focus on the design of protocols that meet security requirements demanded by real-life applications and yet are efficient enough to be of practical value. The immediate contributions of such research are algorithms that enable some secure computer systems, but a broader motivation is that such protocols rely on cryptographic tools with novel security properties, and development of such tools deepens our understanding of cryptography. Indeed, the design of faster and more resilient protocols usually comes down to modifying the underlying cryptosystems so that they withstand new classes of attacks to which their usage in such protocols effectively subjects them. Thus the excitement of research on secure protocols, for me, stems from the fact that it constantly poses novel questions for cryptography, and hence it is a challenging and fun intellectual game, and at the same time, luckily perhaps, it seems to offer useful tools for the real world.

My first involvement with modern cryptography was as a research intern with a fantastic group of researchers at the IBM T.J. Watson Labs in New York, including Amir Herzberg, Hugo Krawczyk, Shai Kutten, and Moti Yung. This experience led to my admission to the M.I.T. graduate school, where I studied under the guidance of Prof. Shafi Goldwasser, and where I also had the pleasure to work with many up and coming researchers in cryptography, including Ran Canetti, Yevgeni Dodis, Rosario Gennaro, Anna Lysyanskaya, Tal Malkin, and Tal Rabin. After graduating in 2001 I joined the research lab of Intertrust, a Silicon Valley company that aimed to inject cryptographic protections to entertainment distribution over the internet. This was an interesting experience, but I was happy to go back to the freedom of academia, first as a postdoc with Prof. Dan Boneh at Stanford, and then as an assistant professor of computer science at UCI.

At UCI my research got a great boost thanks to the support of my department, and a string of productive collaborations with other researchers, especially with fellow cryptographer Prof. Gene Tsudik. I have also had the pleasure to teach inquisitive undergraduates and to work with many bright graduate students whose excitement and creativity propel me in my research. I thank the UCI Academic Senate for the honor bestowed upon me by this award.

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Distinguished Faculty Award for Teaching

Linda J. Levine
Professor of Psychology and Social Behavior

I grew up in a gated community, filled with oak and maple trees, on the outskirts of Chicago. It is not what you think. My dad was an administrator at a State of Illinois correctional institute for delinquent adolescents. The gates were not to keep riffraff out but troubled kids in. Although Dad did not talk much about his work, he occasionally provided glimpses of the daunting knot of social and personal challenges facing his students. My fascination with psychology probably started there.

After college, I briefly considered pursuing a career in clinical psychology. To try it out, I enrolled in a Master's program in Counseling Psychology at Harvard University. But learning about different approaches to counseling left me far more interested in understanding the interaction of basic psychological processes, such as emotion and memory, than in clinical practice. So I headed back to the Midwest to work with Professors Nancy Stein and Tom Trabasso in a Ph.D. program at the University of Chicago. They were investigating the types of interpretations of events that lead children and adults to experience specific emotions.

Since coming to UC Irvine, I have continued to explore the cognitive and motivational processes that evoke emotions and the effects of emotions on subsequent thinking and behavior. Traditionally, emotion and reasoning have been viewed as antagonistic processes. In contrast, my research, and that of my mentors and colleagues, indicates that emotions fulfill important functions within the cognitive system. Emotions alert people that a change has occurred in their ability to attain or maintain states that they value. Once evoked, emotions motivate people to change negative situations, maintain positive ones, and revise their goals and expectations.

The function of emotion is nowhere as apparent as in its effect on memory. When teaching, I sometimes ask students, "What were you doing when you first learned of the terrorist attacks on September 11th, 2001?" "What was your emotional reaction to the news?" For most of us, recalling these events and feelings from eight years ago is easier than recalling what we did and felt last Tuesday. This illustrates the basic finding that emotion enhances memory for information that is important and relevant to survival. But the picture is actually more complicated. Emotion often strengthens memory for central features of events at the expense of peripheral details. Moreover, the features of events people consider to be of central importance depend on the specific emotion they are feeling at the time. My research, then, examines how specific emotions (such as fear, sadness, and happiness) influence the features of events people attend to, find important, and later remember. I have also examined sources of bias in people's memories for their past emotional reactions -- for instance, why some people remember stressful experiences as even more distressing than they reported at the time while others remember comparable experiences as less distressing. In related research, I have explored the development of children's ability to use cognitive strategies to regulate their emotions. I have been gratified to find that many students are also fascinated by these issues.

Having come to UC Irvine directly from graduate school, with a semester as a teaching assistant under my belt, I am honored and humbled to receive this award. I thank the outstanding scholars and teachers in my department and on this campus who inspired me, and the students who bore with me (even when bored by me) and taught me how to teach.

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Distinguished Assistant Professor Award for Teaching

Marcelo A. Wood
Professor of Neurobiology and Behavior

There are two defining moments of my education that changed the direction of my scientific interests and goals. The first moment came when I was an undergraduate senior at the University of Colorado, Boulder. I was a declared Chemical Engineering major and had enrolled in a biochemistry lab course to fulfill a credit requirement to receive a biochemistry minor. In the second half of this laboratory course, I had the opportunity to work with Dr. Karla Kirkegaard. My project in her lab involved examining the interaction between proteins using Western blot analysis. I was hooked by the first gel I ran, especially because I was learning about the molecular mechanisms underlying a real scientific question, in a real lab. Within three weeks I knew that I wanted to attend graduate school to study molecular biology. Dr. Kirkegaard opened my eyes to what it meant to be a scientist and a molecular biologist, which was incomprehensible to me from the course work I had done up to that point.

The next defining moment came when I was a graduate student at Princeton University studying molecular biology. I was fascinated by cancer molecular biology and entered my first year of graduate school with naive high hopes of understanding how an oncogene transforms a normal cell into a tumor cell. It was at the beginning of my fifth year when I was searching on PubMed for a paper on a specific tumor suppressor gene that I came across a paper on memory suppressor genes. It compared oncogenes (which become constitutively active) and tumor suppressor genes (which are turned off in order to transform a cell) in cancer biology to similar counterparts in the neurobiology of learning and memory. Thus, specific genes were turned on and specific genes were turned off in order to form a long-term memory. I was enthralled by the comparison between cancer biology and the neurobiology of memory. This kindled a passion that pervades every aspect of my current research interests.

At the time, a rapidly emerging theme in cancer biology was the role of chromatin modification and remodeling in regulating gene expression profiles underlying cellular transformation. Chromatin is the protein-DNA complex that condenses genomic DNA so it may fit within the nucleus of a cell and it also provides immense regulation of gene expression. Going back to the similarity in regulatory mechanisms between cellular transformation and the neurobiology of memory, I was fascinated by the idea that chromatin modification and remodeling mechanisms may be necessary for the regulation of transcription required for memory formation. I set off to explore this idea in Dr. Ted Abel's lab at the University of Pennsylvania (one of the authors of the memory suppressor gene paper) for my postdoctoral career.

My lab here at UCI continues to examine the role of chromatin modifying enzymes in learning and memory, and very recently, in drug addiction as well. We have shown that a drug called a histone deacetylase (HDAC) inhibitor (an anti-cancer therapeutic agent) can transform a learning event that did not lead to long-term memory into one that does. Further, HDAC inhibition can generate a form of memory that persists beyond the point at which normal memory fails. The general idea behind these experiments is that HDAC inhibition relaxes chromatin structure, facilitating transcription during memory consolidation, and thus resulting in enhanced learning and memory. This is particularly interesting because one alluring aspect of examining the role of chromatin modifications is that these modifications may provide potentially stable epigenetic marks in the service of activating and/or maintaining transcriptional processes required for memory.

I am deeply moved and honored to receive the Distinguished Assistant Professor Award for Teaching. I was fortunate to have met the right professors throughout my education and I can only hope that I can bring my passion and the beautiful nature of scientific inquiry to each class so that students can get excited about science (even without running a Western blot...). I thank the faculty at UCI that have taught me so much in so many regards, and especially the students who taught me how to teach.

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Daniel G. Aldrich Jr. Distinguished University Service Award

Timothy J. Bradley
Professor of Ecology and Evolutionary Biology

I entered the field of biology because of a long-standing interest in animals and their natural history. It has therefore been very satisfying to have been able to spend my career in the study of the physiology, ecology and evolution of organisms. After post-doctoral studies at Berkeley and Albert Einstein College of Medicine, I accepted my first academic appointment as an assistant professor at UCI. I chose UCI because of the excellent colleagues with whom I would work. Thirty years later I am more convinced than ever that my choice was a good one.

Teaching and research are at the core of a professor's professional life. I have also found service to be valuable and very rewarding. Service as Department Chair, on system-wide committees and in the Senate has provided me with knowledge of University processes, and has acquainted me with colleagues on my own campus and around the system. These connections have proven useful in forging friendships, but also in providing contacts that have benefited me in both administrative and research enterprises. Service is an integral part of the professorial duties, and it is a function that draws one out of narrow disciplinary interests and into contact with the larger enterprise that is the University.

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Distinguished Mid-Career Award for Service

Victoria Basolo
Professor of Planning, Policy and Design

I have always been keenly aware of the environment around me. I attribute this awareness to my family, who appreciate natural and man-made wonders, have a deep regard for history and its lessons, routinely discuss environmental and social processes, recognize human struggles and triumphs, and have respect and compassion for people. My development in this rich context profoundly influenced my choice of an academic discipline and career.

I chose City and Regional Planning as a discipline and housing and community development as my subfield within Planning. Within my subfield, my research concerns decision making, both at the macro (public policy) and micro (individual) scale. Theoretically, I focus on explaining the reasons for particular decisions; understanding the process of decision making; and discovering how the decision process and the decision itself affect individuals' opportunity structures. In a related line of inquiry, I also study governance processes, regionalism, urban politics, and intergovernmental relations. To do empirical research along these lines, I have received funding from the U.S. Department of Housing and Urban Development (HUD), the National Science Foundation, the California Policy Research Center, and the Haynes Foundation. My work appears in numerous scholarly journals including the *Journal of Urban Affairs*, *Urban Studies*, *Urban Affairs Review*, *Urban Geography*, *Housing Policy Debate*, *Housing Studies*, and the *Journal of Planning Education and Research*.

I am committed to three goals as a Planning academic: producing consequential research, providing meaningful learning experiences for undergraduate and graduate students, and rendering valuable service to the university, professional, and broader communities. I find these goals work in concert, so that the pursuit of one goal often leads to progress towards another – this interconnectivity of my work is central to my success. Two examples illustrate the point. First, I have an article forthcoming in HUD's peer-reviewed journal, *Cityscape*, which investigates the neighborhood choices of immigrants in the housing voucher program. I collaborated with two public agencies in Orange County to design and implement the study and co-authored the upcoming article with Mai Thi Nguyen, a graduate of UCI's Urban and Regional Planning doctoral program, and currently an assistant professor of Planning at the University of North Carolina, Chapel Hill. The research results have been presented to research and policy audiences in Washington, DC, New York and locally and I discuss the findings and policy implications of this research and related work in my undergraduate and graduate courses in housing policy. Second, I collaborated with the UCI Community Outreach Partnership Center (COPC), several nonprofit organizations, two city agencies, and two graduate students to produce an award winning paper for a national competition aimed at generating theoretically grounded, politically feasible, federal housing policy approaches. Following from these experiences, I am currently working with COPC and two community nonprofit organizations to formulate a research proposal to study immigrants, their neighborhoods and community change in Orange County.

My work as a Planning academic is intellectually challenging, creative, purposive, forward thinking, and socially relevant. I expect it to continue to be so.

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