

2010 Scholar Profiles

"Pipeline to the Future"

About Distinguished Alumni Scholars Day

Distinguished Alumni Scholars Day was established in 2006 as an institutional response to the scarce presence of diverse racial/ethnic group members within the faculty ranks of our nation's colleges and universities, and within the Ph.D. programs that produce these faculty. The purpose of this (now) biennial program is to bring Stanford students from cultural groups underrepresented in academia into contact and discussion with distinguished alumni scholars from a broad range of backgrounds, disciplines and institutional types to inspire new generations of students to consider academia as a career. The program's success in its early years resulted in its two-fold expansion in 2008 from 9 to 19 scholars and a broadened programmatic focus the same year to include women in science, engineering and math (STEM) disciplines. The current 2010 program enlarges the scope further to include scholars from biomedical disciplines.

In the one-day program of events organized by the Office of the Provost, in consultation with other university offices and faculty and student leaders, alumni come to campus to meet in small groups with Stanford undergraduate and graduate students, sharing stories about what inspired them to pursue faculty careers, discussing their experiences and lives as faculty members, and providing direction for career planning and preparation. The program culminates in a celebratory dinner at the Faculty Club hosted by the University Provost, and introduced and moderated by the Vice Provost for Graduate Education.

Alumni participating in the first three years of the program are listed below:

2008 Distinguished Alumni Scholars

Kofi Agawu, Princeton University Angela P. Cole, Howard University Raúl Coronado, University of Chicago Ron Durán, Alliant International University Lynford Goddard, University of Illinois at Champaign-Urbana Melissa A. Hines, Cornell University Allison M. Ikamura, Johns Hopkins University Mary James, Reed College Michelle J. Johnson, Marquette University Jia Li, Pennsylvania State University Goodwin Liu, University of California, Berkeley Flora Lu, University of North Carolina at Chapel Hill Leticia Marquez-Magaña, San Francisco State University Nancy Marie Mithlo, University of Wisconsin-Madison Renya K. Ramirez, University of California, Santa Cruz Gary Sandefur, University of Wisconsin-Madison

Jacqueline Stewart, Northwestern University

Caroline S. Turner, Arizona State University

Los Angeles

Miguel M. Unzueta, University of California,

2007 Distinguished Alumni Scholars

Alicia Arrizón, University of California, Riverside Bevan Baas, University of California, Davis Brian Baker, Sacramento State University Kareem Crayton, University of Southern California School of Law Andrew Dean Ho, University of Iowa Benjamin Ortiz, City University of New York, Hunter College Valerie Purdie-Vaughns, Yale University Celine Perrañas Shimizu, University of California, Santa Barbara

2006 Distinguished Alumni Scholars

Brian Baker, California State University
Derrick Brazill, Hunter College
Angelica Duran, Purdue University
Stephanie Fryberg, University of Arizona
Leslie M. Harris, Emory University
Mae Lee, De Anza College
William Massey, Princeton University
Gina Marie Pitti, Arizona State University
Lok Siu, New York University

2010 Distinguished Alumni Scholars

José Bowen, Dean, Professor, Music, Southern Methodist University

Joel Dawson, Associate Professor, Electrical Engineering & Computer Science,
Massachusetts Institute of Technology

Angelique EagleWoman, Associate Professor, Law, University of Idaho

Erich Fox Tree, Assistant Professor, Religious Studies, Hamilton College

Jean Fox Tree, Professor, Psychology, University of California-Santa Cruz

Marcos Frank, Associate Professor, Neuroscience, University of Pennsylvania

Karine Gibbs, Assistant Professor, Molecular and Cellular Biology, Harvard University

Terri Givens, Associate Professor, Government, University of Texas at Austin

Wendell Hill, III, Professor, Physics, University of Maryland

Evelyn Hu-DeHart, Professor, History and Ethnic Studies, Brown University

Elizabeth Loboa, Associate Professor, Material Science and Engineering and Biomedical Engineering, North Carolina State University, and University of North Carolina-Chapel Hill

Elisa Long, Assistant Professor, Operations Management, Yale University

Mary Murphy, Assistant Professor, Psychology, University of Illinois at Chicago

Marisol Negrón, Assistant Professor, American Studies, University of Massachusetts-Boston

Alfred Osborne, Jr., Senior Associate Dean, Professor, Global Economics & Management, University of California-Los Angeles

Pilar Ossorio, Associate Professor, Law and Bioethics, University of Wisconsin

William Perez, Associate Professor, Education, Claremont Graduate University

Rebecca Whelan, Assistant Professor, Chemistry, Oberlin College

Lawrence Wu, Professor, Sociology, New York University

JOSÉ BOWEN DEAN, CHAIR AND PROFESSOR SOUTHERN METHODIST UNIVERSITY

MUSIC



What I hope students take away most from this program is: that there are many paths to success in the academy and that balance is key. VERY few artists are famous and the same is true for professors. Employment and fulfillment are the most important goals.

Degrees / Postdocs

Stanford University, B.S. '84, Ph.D. '94 Stanford Advisor: Karol Berger

Research Interests

History, Ideology and Cultural Practice of Interpretation and Performance, Relationship between Performance and the Musical Work, Jazz and American Cultural Studies, Technology and Teaching

Key Publications

- 1. <u>Jazz: The Smithsonian Anthology</u> (editor with David Baker, Dan Morgenstern, John Hasse, Alyn Shipton) 6 CD set and book (in press, 2010).
- 2. "Teaching Naked: Why Removing Technology from your Classroom Will Improve Student Learning" (*National Forum for Teaching and Learning*, Vol. 16, No. 1, December, 2006), p. 1-5.
- 3. <u>Uncrowded Night</u>, The José Bowen Quartet (José Bowen-piano, Pepe Gonzalez-bass, Ken McNair-drums, Greg Twombley-woodwinds) 8 new compositions by José Bowen (Crossover Music CMCD-224, 2006).

Honors / Awards

- + 2002-03, Georgetown University Faculty Research Grant
- Grant, + 1999-2000, National Endowment for the Humanities (NEH) Fellowship
- + 1998, British Academy Humanities Research Board Small Research Grant
- + 1996, Royal Society for the Arts Fellow (FRSA)
- + 1985, Pulitzer Prize Nominee (Musical Composition: Symphony No. 1)
- + 1993-94, 98-2010 ASCAPLUS Award, American Society of Composers and Publishers (ASCAP) – 14 total awards

Previous Institutions

- 1. Miami University
- 2. Georgetown University
- 3. University of Southampton (UK)

Through my research, I hope to...

I work in lots of different areas but I am interested in performance as cultural practice and how the sound of music changes in relationship to social and cultural factors. Recently this has expanded to art as social practice. But as a Dean, I can make this real and I'm trying to create a school that produces artists who are engaged with communities and creating change.

I choose to work at my institutional type because: I want to be in a place where I can create new things and effect change.

The most fulfilling part of my job as a faculty member is: teaching and sending out vibrant artists into the world.

The career achievement that I am most proud of is: probably my current work in creating a new curriculum in arts entrepreneurship and with new forms of teaching pedagogy.

My most vivid memory of Stanford is: living in my crazy Hammarskjold House.

JOSÉ BOWEN

José Antonio Bowen is Algur H. Meadows Chair and Dean of the Meadows School of the Arts at Southern Methodist University. Bowen has taught at Stanford University, the University of Southampton, England, at Georgetown University (as Director of Performing Arts and the first holder of the endowed Caestecker Chair in Music) and at Miami University (as Dean). He has written over 100 scholarly articles, edited the Cambridge Companion to Conducting (Cambridge University Press, 2003), received a National Endowment for the Humanities (NEH) Fellowship, and contributed to Jazz: The Smithsonian History (Prentice Hall, 2010). He is an editor to the 6-CD set, Jazz: The Smithsonian Anthology for the Smithsonian Institution in Washington DC. In over 30 years as a jazz performer, he has appeared in Europe, Africa, the Middle East and the United States with Stan Getz, Dizzy Gillespie, Bobby McFerrin, Dave Brubeck, Liberace, and many others. His compositions, conducting and playing are featured on numerous recordings and his latest CD, Uncrowded Night features his playing with the José Bowen Quartet. He has written a symphony (which was nominated for the Pulitzer Prize in Music in 1985), a film score, and music for Hubert Laws, Jerry Garcia and many others. He is currently on the Editorial Board for Jazz Research Journal, the Journal of the Society for American Music and Per Musi: Revista Acadêmica de Música. He is also on the Advisory Board for The New Grove Dictionary of American Music, a Founding Board Member of the National Recording Preservation Board for the Library of Congress, and a Fellow of the Royal Society of Arts (FRSA) in England.



JOEL DAWSON

ASSOCIATE PROFESSOR
MASSACHUSETTS INSTITUTE OF
TECHNOLOGY

ELECTRICAL ENGINEERING & COMPUTER SCIENCE



What I hope students take away most from this program is: that faculty are ordinary people.

Degrees / Postdocs

Massachusetts Institute of Technology, S.B. '96, M.Eng. '97

Stanford University, Ph.D. '03

Stanford Advisor: Thomas Lee

Research Interests

Integrated circuit (microchip) design for wireless systems

Key Publications

- 1. S. Chung, J.W. Holloway, and J.L. Dawson, "Energy-Efficient Digital Predistortion with Lookup Table Training Using Analog Cartesian Feedback," IEEE Transactions on Microwave Theory and Techniques, pp. 2248-2258, Oct. 2008.
- 2. J.L. Bohorquez, A.P. Chandrakasan, and J. L. Dawson, "A 350μW CMOS MSK Transmitter and 400μW OOK Super-Regenerative Receiver for Medical Implant Communications," IEEE Journal of Solid-State Circuits (VLSI Symposium Special Issue), pp. 1248-1259, Apr. 2009.
- 3. P. Godoy, D.J. Perreault, and J. L. Dawson, "Outphasing Energy Recovery Amplifier with Resistance Compression for Improved Efficiency," IEEE Transactions on Microwave Theory and Techniques, pp. 2895-2906, Dec. 2009.

Honors / Awards

- + 2009, Presidential Early Career Award for Scientists and Engineers (PECASE)
- + 2008, NSF Faculty Early Career Development (CAREER) Award
- + 2006, Jerome H. Saltzer Teaching Award, 2006
- + NSF Fellowship
- + Stanford Graduate Fellowship

Through my research, I hope to: advance understanding of broadband wireless connectivity in portable devices.

I choose to work at my institutional type because: I enjoy the research environment, and I enjoy the students.

The most fulfilling part of my job as a faculty member is: working with students.

The career achievement that I am most proud of is: winning a Presidential Early Career Award for Scientists and Engineers (PECASE).

My most vivid memory of Stanford is: the beautiful campus.

JOEL DAWSON

JOEL L. DAWSON

I am interested in microchip design for wireless systems. Electronics in general, and radio in particular, has been an interest of mine ever since my elementary school library got an Apple II computer when I was in the third grade.

This interest led me to MIT as an undergraduate, where I was given the opportunity by one of my professors to be an intern at AT&T Bell Laboratories in Murray Hill, NJ. This was in the early nineties, and at that time Bell Labs was still an incredibly stimulating, inspiring place to be. As a result of being immersed in all of that exciting research, my grand vision became that I would get a Ph.D. and, if possible, come back to work at Bell Labs. My plan hit a snag when, as I neared graduation from Stanford's Ph.D. program, Bell Labs...disappeared. All of the amazing people that I thought would be there for decades had left or were forced to leave. AT&T could no longer afford to run the Labs as a prestige research wing.

Almost completely at a loss, I called my old MIT advisor for career advice sometime in 2001. He suggested that I apply for a faculty position at MIT. This wound up being a critical piece of mentorship. That someone I admired thought I would be a good fit as a colleague really made me look hard at a career choice that I had never consciously considered. The short story is that I applied for the job and was offered a position. In order for this to happen, a number of pieces must fall into place that are not under a candidate's control. Since they fell into place for me, I felt that I should give it a shot. I started as an assistant professor at MIT in 2004.

It has been fun. Microchips over the last few decades have gone from having just a few transistors on a single chip to over a *billion*. This is astounding progress, and computers have benefited greatly from this progress. The story is more complicated in the wireless transceivers that are in your cell phones, wireless cards, and cellular basestations. The architectures for those systems do not fully exploit the huge number of devices that are now available. The goal of our research program is to use modern digital microelectronics to make radio transceivers that are smaller, more power efficient, and that enable higher data-rate connections.



ANGELIQUE EAGLEWOMAN ASSOCIATE PROFESSOR UNIVERSITY OF IDAHO

LAW



What I hope students take away most from this program is: they each have something valuable to contribute to the world and getting a Stanford education will provide them with a springboard to accomplish their dreams.

Degrees / Postdocs

Stanford University, B.A. '93 University of North Dakota, J.D. '98 University of Tulsa, L.L.M. '04

Research Interests

Tribal Nation Economics and Law; The Development of International Indigenous Legal Principles and Protections

Key Publications

- 1. "Tribal Nation Economics: Rebuilding Commercial Prosperity In Spite of U.S. Trade Restraints -Recommendations for Economic Revitalization in Indian Country," 44 Tulsa Law Review 383 (2008).
- 2. "Tribal Values of Taxation Within the Tribalist Economic Theory," 18 Kansas Journal of Law & Public Policy 1 (2008).
- 3. International Indigenous Legal Principles and Protections: "The Eagle and the Condor of the Western Hemisphere: Application of International Indigenous Principles to Halt the United States Border Wall," 45 Idaho Law Review 555 (2009).

Honors / Awards

- + 2010 Emerging Scholar designation by Diverse Issues
- in Higher Education (Vol. 26 No. 24) + 2010, William F. and Joan L. Boyd Excellence in Teaching Award, University of Idaho College of Law
- + 2008, Crystal Eagle Award, University of Kansas
- + 2000, Martin Luther King, Jr. Award, University of North Dakota

Previous Institutions

1. Hamline University

Through my research, I hope to:

advance understanding of the challenges and potential solutions for Tribal Nation economic development, and also to bring international indigenous principles into the discourse in the United States on the relationship between the federal government and the Tribal Nations.

I choose to work at my institutional type because: the University of Idaho College of Law welcomed my proposal to develop a Native Law Program and a specialization for upper level law students.

The most fulfilling part of my job as a faculty member is: the opportunity to see my students grow and develop their analytical thinking skills, receive the coveted internship within the field that they aspire to practice in, and to advise my students as they chart their future course. Above all, I want my students to dream big and know that they are contributing to the legal profession and making a difference in the world. These were values I absorbed from my professors as an undergraduate at Stanford.

The career achievement that I am most proud of is: building a Native Law Program at the University of Idaho College of Law, but there are other highlights......

My most vivid memory of Stanford

is: being an officer with the Stanford American Indian Organization and working with the Peoples' Platform to bring diverse issues to the forefront for the student body.

ANGELIQUE EAGLEWOMAN

Angelique EagleWoman (Wambdi A. WasteWin) brings a diverse background to her faculty position that includes tribal economic development, legal code development, litigation, criminal law and scholarly in international indigenous law to her work at the University of Idaho Law. She received her L.L.M. in American Indian and Indigenous Studies in 2004 from the University of Tulsa College of Law. Professor EagleWoman teaches in the areas of Native American Law, Native Natural Resources Law, Tribal Nation Economics & Law and Civil Procedure.

She has served several terms as a Board member of the National Native American Bar Association and believes in staying firmly tied to the Native legal field. She also maintains membership in the Bar Associations of the District of Columbia, Oklahoma, North Dakota and South Dakota. Highlights of her legal career include serving as General Counsel to the Sisseton-Wahpeton (Dakota) Oyate of the Lake Traverse Reservation, working as an associate attorney with Sonosky, Chambers, Sachse & Endreson in Washington, D.C. and serving as Tribal Public Defender for the Kaw Nation and the Ponca Nation, both of Oklahoma.

Angelique EagleWoman is a citizen of the Sisseton-Wahpeton Dakota Oyate of the Lake Traverse Reservation.

Professor EagleWoman was formerly a member of the law faculty at Hamline University School of Law in St. Paul, Minnesota and held a visitorship position at the University of Kansas in the KU School of Law and the Indigenous Nations Program. In the spring of 2008, she was selected as the recipient of the KU Center for Indigenous Nation's Crystal Eagle Award for showing leadership and dedication toward helping community members or students within indigenous communities.



ERICH FOX TREE ASSISTANT PROFESSOR HAMILTON COLLEGE

RELIGIOUS STUDIES



What I hope students take away most from this program is: that the struggle doesn't end with one's degree; in many ways, the real work of schooling only begins once one has the degree in hand.

Degrees / Postdocs

Harvard University, A.B. '91 University of Pennsylvania, A.M. '94 Stanford University, Ph.D. '04 Stanford Advisor: George Collier Postdocs: UNC – Chapel Hill, 2004-06 Wellesley College, 2006-08

Research Interests

- Pan-Indigenous Social Organizing, especially in the context of "Maya Movement" in Guatemala and indigenous Latin American immigration communities in the USA;
- Ethnohistory and Politics, especially in relation to Mesoamerican colonial chronicles, sacred texts, land disputes, and state violence; and
- language ideologies, especially in relationship to Mayan languages and indigenous sign languages.

Key Publications

- 1. "Meemul Tziij: An Indigenous Sign Language Complex of Mesoameruca," Sign Language Studies, Spring 2009, 10(3): 324-366.
- 2. "Grounded Utopian Movements: Objects of Neglect," coauthored by Charles Price, Donald Nonini, and Erich Fox Tree. *Anthropological Quarterly*, March 2008, 81(1): 127-159.
- Reconstrucción de la Memoria Collectiva del Municipio de Nahualá y Sistematización de los Principios y Valores Culturales, by Marta Estela Gutierrez, Rodrigo Batres, et al., revised and expanded by Erich Fox Tree. Guatemala: Asociación Comunitaria de Desarrollo Integral Nahualá (CODEIN), 2008.

Honors / Awards

- + 2006, Fieldwork grant from the Endangered Language Fund
- + 2000-01, Doctoral fellowship from the MacArthur Consortium for Peace & Cooperation
- + 1999-2000, Ford Foundation Dissertation Fellowship for Minorities
- + 1997-98, USIA Fulbright grant for research abroad in Guatemala

Previous Institutions

- 1. Wellesley College
- 2. UNC Chapel Hill

Through my research, I hope to:

advance understanding of the importance of indigenous struggles and dialogic ethnographic studies of indigenous issues to so many issues that occupy so much of the attention of dominant groups in national and global communities, ranging from issues of ecological stewardship and sustainable land use, to issues of social justice, language, religion, and education.

I choose to work at my institutional type because: I believe in the broad interdisciplinarity and real-world application of scholarship traditionally supported by liberal arts programs.

The most fulfilling part of my job as a faculty member is: directing and mentoring students engaged in promising new research.

The career achievement that I am most proud of is: my success collaborating with indigenous people of Maya communities in Guatemala to produce books and articles that represent the collective wisdom, knowledge and scholarship of those communities.

My most vivid memory of Stanford

is: intense, but relaxed scholarly discussions and solidarity-building over meals and drinks, from dinner with professors, to chatting with fellow students about coursework, readings, and academic politics in Coho or during my department's weekly "Beer Hour."

ERICH FOX TREE

Erich Fox Tree teaches courses on Native American spirituality that emphasize Euramerican colonial mythologies, coloniality, political ecology, globalization, and language ideology across the Americas, with special attention given to Mesoamerica and the U.S. Holding a doctorate In Anthropology from Stanford University (2004) and an earlier master's degree in American Civilizations from the University of Pennsylvania (1994), Prof. Fox Tree joined Hamilton's Department of Religious Studies in the fall of 2009 having taught courses in the fields of Anthropology, Latin American Studies, and Peace and Justice Studies. In addition to research carried out with tribal nations, pan-indigenous organizations, and diasporic indigenous communities in the eastern United States, he has conducted extensive archival and field research in Guatemala on the Maya Movement, Mayan linguistics, Mayan sacred texts, land disputes, and state violence. He is currently investigating the structure, contemporary politics, and ancient pictorial "writing" of sign languages in Mexico and Guatemala. Fox Tree's recent articles include: "Meemul Tziij: An Indigenous Sign Language Complex of Mesoamerica," in the journal Sign Language Studies (2009) and "Junamaam Ib': solidaridad y defensa colectiva en Nahualá durante la violencia guatemalteca" (with Julia Gómez Ixmatá) in the journal Mesoamerica (2007).



JEAN FOX TREE

PROFESSOR

PSYCHOLOGY

UNIVERSITY OF CALIFORNIA-SANTA CRUZ



What I hope students take away most from this program is: that good colleagues significantly enhance the enjoyment of an academic career.

Degrees / Postdocs

Harvard University, A.B. '88

University of Edinburgh (UK), M.Sc. '90

Stanford University, Ph.D. '93

Stanford Advisor: Herbert Clark

Postdoc: NSF-NATO Fellowship, 1993-94

Research Interests

Spontaneous Speech Production and Comprehension

Key Publications

- 1. Fox Tree, J. E. (2006). Placing *like* in telling stories. *Discourse Studies*, *8*(6), 749-770.
- 2. Fox Tree, J. E. (2001). Listeners' uses of um and uh in speech comprehension. *Memory and Cognition*, 29(2), 320-326.
- 3. Fox Tree, J. E. (1999). Listening in on monologues and dialogues. *Discourse Processes*, 27, 35-53.

Honors / Awards

- + 2007, Research Grant awarded by the journal Language Learning
- + 2006, Psi Chi Research Mentorship Award, UCSC
- + 2001, American Council of Learned Societies Fellowship
- + 2000, American Association of University Women Educational Foundation Research Grant
- + 1999, Golden Apple Social Sciences Division Teaching Award
- + 1992-93, Stanford University Graduate Fellowship
- +1988-91, NSF Graduate Fellowship

Through my research, I hope to: advance understanding of how people communicate.

I choose to work at my institutional type because: I enjoy conducting research and creating knowledge, teaching at the undergraduate and graduate levels, and contributing to the university's mission through committee work.

The most fulfilling parts of my job as a faculty member are: getting papers published, creating new courses and programs, and enjoying my students' successful careers.

The career achievement that I am most proud of is: getting my PhD.

My most vivid memories of Stanford include: orchestra rehearsal, working late in the shared computer lab in the psychology department, and socializing with my advisor and lab group.

JEAN FOX TREE

Jean E. Fox Tree

I study how people communicate when talking on the fly — in unrehearsed, unprepared conversational settings. A broad theoretical motivation behind my work is to explore the hypothesis that everything a person does in a communicative setting has meaning. That is, in addition to the conventional words uttered, meaning can be conveyed by how those words are expressed, how eye gaze is used, how the face and body are used, and how utterances like *um* and *oh* are used. In most of my published work to date, I have focused on non-conventional words such as *um*, *like*, *you know*, and *oh*. But I have also looked at the role of the melody of speech, both in conveying intention and in syntactic processing. In addition, I have studied how different settings of spontaneous language use affect communication, such as vicarious learning settings and written settings.

I am currently working on projects investigating the use of *like* as a discourse marker, the use of *like* as an enquoting device, the production of fillers and elongations in Spanish and English, the effects of prolongations and uptalk on on-line speech processing, the effects of backchannels and listeners' beliefs on the recall of story details, the auditory illusion of stress shift in beat clash phenomena, the use of cross-modal communication to optimize knowledge and awareness, and the effectiveness of written versus verbal feedback in an instructional setting, among other projects. I use a variety of techniques to explore these topics, including corpora analyses, reaction time experiments, questionnaires, referential communication tasks, and analyses of speech produced under controlled conditions.

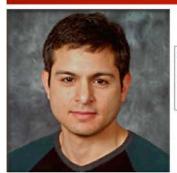
Results from projects like mine provide theory and data relevant to many disciplines, including psychology (understanding the comprehension and production of spontaneous speech), linguistics (the structure and function of signals produced in natural settings), sociology (insight into variations in use of signals by different groups or under different circumstances), communication/media studies (how communication varies when the medium changes, such as face-to-face versus instant messaging, or how communication is affected by the common practice of editing out signals such as *ums* and *likes* from talk), computer science (modeling signal use in automatic speech recognizers or producers, or in the dialogue used by characters in games), and education (how signals are used in distance learning or vicarious learning).

In addition to my research work, I have taught a variety of courses at the graduate and undergraduate levels. New courses that I developed include a course on telling the difference between science and pseudoscience, a course on how conversations work which culminates in statistical analyses of pooled class data, and a course on grant writing. I have mentored dozens of graduate students, and have been the primary advisor for nine students. Of these nine, four have graduated and hold academic positions and five are working towards their PhDs.



MARCOS FRANK ASSOCIATE PROFESSOR UNIVERSITY OF PENNSYLVANIA

NEUROSCIENCE



What I hope students take away most from this program is: that this can be the first step to an incredibly fulfilling career.

Degrees / Postdocs

University of California-Santa Cruz, B.A. '91

Stanford University, Ph.D. '97

Stanford Advisor: Craig Heller

Postdoc: UCSF, 1997-2001

Research Interests

Sleep, Synaptic

Key Publications

- 1. Aton, S.J., Seibt, J., Dumoulin, M., Jha, S.K., Steinmetz, N., Coleman, T., Naidoo, N., and Frank, M.G. (2009). Mechanisms of sleep-dependent consolidation of cortical plasticity. Neuron 61, 454-466.
- 2. Halassa, M.M., Florian, C., Fellin, T., Munoz, J.R., Lee, S.Y., Abel, T., Haydon, P.G., and Frank, M.G. (2009). Astrocytic modulation of sleep homeostasis and cognitive consequences of sleep loss. Neuron 61, 213-219.
- 3. Frank, M. G., Issa, N. P. Stryker, M. P. Sleep enhances plasticity in developing visual cortex. Neuron, 30 (2001), 275-287.

Honors / Awards

- +2007, Nominee for Basic Science Teaching Award University of Pennsylvania School of Medicine +2002, Sleep Research Societies Young Investigato
- +2002, Sieep Research Societies Young Investigator Award
- +2001 &1995, World Federation of Sleep Research Societies Travel Award
- +1997, National Research Service Award
- +1994, Stanford Neuroscience Training Grant Award
- +1994, National Institutes of Mental Health predoctoral fellow
- +1991 , National Science Foundation pre-doctoral fellow

Through my research, I hope to:

advance understanding of how sleep and experience shape synaptic circuitry.

I choose to work at my institutional type because: of the quality of my peers and colleagues and the material support.

The most fulfilling part of my job as a faculty member is: working with graduate students and postdocs.

The career achievement that I am most proud of is: providing an environment where my students can do excellent science.

My most vivid memory of Stanford

is: the first day – being welcomed by the dean and chair of the department.

MARCOS FRANK

Marcos G. Frank

My scientific trajectory has very deep roots. It began, as I suspect is true for many scientists, in childhood. I was always deeply fascinated with the natural world. This manifested itself initially in the typical pursuits of a boy with access to parks, where I collected tadpoles, snakes and lizards—which mostly remained safely stored in my aquariums. In later years this became coupled with an interest in the internal world of the human mind, which I began to explore scientifically as an undergraduate at the University of California Santa Cruz (UCSC). It was during that time, after working in a biology and cognitive psychology laboratory that I realized that my future path lay in science. I was very fortunate to attend Stanford and work under the tutelage of Dr. H. Craig Heller who encouraged intellectual freedom and gave me an opportunity to develop as a scientist. Although my interest in sleep as a scientific topic began at UCSC, it flourished in Craig's laboratory and is now a central focus of my own laboratory.

My work with Dr. Heller focused on the ontogenesis of sleep and sleep regulation in rodents. To complement this research, I then conducted post-doctoral research in the laboratory of Michael P. Stryker at the University of California, San Francisco demonstrating a role for sleep in a canonical form of in vivo cortical synaptic plasticity, originally described by David Hubel and Torsten Wiesel. Although combining these different fields was difficult, it proved to be extremely rewarding. We were fortunate to make a number of very interesting discoveries about how experience and sleep together shape cortical circuits. After my post-doctoral appointment, I joined the Department of Neuroscience at the University of Pennsylvania as an Assistant Professor.

One of the things one must accept as a scientist is that things rarely get easier as one climbs the academic ladder. For me, this was most acutely felt during my first few years as a new professor. I often tell my post-doctoral fellows, as they prepare for their own careers, that they will face few challenges as daunting as creating a functional laboratory from...nothing. Of course, you usually begin with a sizeable amount of money (i.e. 'start-up' funds), but essentially, for most of us, our first impression of the lab we will one day call our own is a series of empty rooms and a phone, and maybe boxes of equipment. From this, you must create an environment full of people, grants, and objects that produces science. This indeed was the most challenging part of my career—but also the most rewarding in the final analyses. Now as an Associate Professor, my deepest pleasure comes from watching my students excel and make new and exciting discoveries, especially when they run counter to my own ideas. Two vivid examples of this are our recent studies of the cellular basis for sleep-dependent cortical plasticity, and an unexpected role of glial astrocytes in sleep. Both areas of research were guided by me, but spear-headed by my students.

So, I am pleased to say, that after all the tribulations of graduate school, post-doctoral appointments and the green years of being a professor, innate curiosity and love of discovery do not vanish. Rather, they mature, as you do, and give you strength and contentment.



KARINE GIBBS ASSISTANT PROFESSOR HARVARD UNIVERSITY

MOLECULAR AND CELLULAR BIOLOGY



What I hope students take away most from this program is: that it's important to love what you do as a career. That's not to say that you'll like all aspects of your job, but It's easier to work hard when you truly enjoy what you're doing.

Degrees / Postdocs

Harvard University, B.A. '00 Stanford University, Ph.D. '05 Stanford Advisor: Julie Theriot

Postdocs: Stanford University, 2005-06

University of Washington, 2006-09

Research Interests

Sociomicrobiology, Biochemistry, Cell Biology and Genetics

Key Publications

- 1. Gibbs, K.A., M.L. Urbanowski and E.P. Greenberg (2008) "Self identity and social recognition in bacteria." Science. 321(5886): 256-259.
- 2. Gibbs, K.A., D.D. Isaac, J. Xu, R.W. Hendrix, T.J. Silhavy, and J.A. Theriot (2004) "Complex spatial distribution and dynamics of an abundant Escherichia coli outer membrane protein, LamB." Mol. Microbiol. 53(6): 1771-1783.

Honors / Awards

- + 2006-08, NIH-sponsored Interdisciplinary Program in Bacterial Pathogenesis Fellowship
- + 2005, Stanford University Professor Sidney Raffel Award
- + 2003-05, American Society for Microbiology Robert D. Watkins Minority Graduate Research Fellow
- + 2004, American Society for Cell Biology Corporate Student Travel Grant Award
- + 2004, American Society for Microbiology Corporate Student Travel Grant Award
- + 2000-03, National Science Foundation Graduate Research Fellow
- + 2000-03, Stanford Graduate Fellow/Lucille P. Markey Biomedical Research Fellow

Through my research, I hope to:

advance understanding of how cells and organisms distinguish between self and other.

I choose to work at my institutional type because: of the large quantity of resources for research and the high caliber of colleagues and students. There is a vibrant atmosphere in our MCB community here at Harvard, in which scientists from many different disciplines—neuroscience, systems biology, physics, genetics—work together and I wanted to be part of that.

The most fulfilling part of my job as a faculty member is: interacting with members of my lab (postdoctoral fellows, graduate students, undergraduate students), doing research experiments, and collaborating with other scientists.

The career achievement that I am most proud of is: balancing my home life with my research career. I hope to continue to be at least modestly successful in both.

My most vivid memory of Stanford

is: walking across campus in the sun while enjoying conversations with friends, many of whom I met in classes and/or in Julie Theriot's lab.

KARINE GIBBS

Karine A. Gibbs

I love puzzles, and for me, bench research is a thrilling medium—trying to piece together results into a comprehensive scientific picture. I decided to pursue a doctorate degree after undergraduate studies because I wanted to become a research professor. My goal was, and in fact continues to be, to establish a laboratory of my own where I can share the exciting process of unraveling novel biological and chemical puzzles through research mentorship, teaching, and collaboration within a larger community of other scholars.

Attending Stanford University as a graduate student was a refreshing and enlightening experience. Beyond the obvious access to high-class research, Stanford was the place where I first learned to breathe. What I mean by "breathe" is that the community at Stanford, especially my advisor Dr. Julie Theriot, encourages students to enjoy life outside of lab and to reflect deeply on one's career goals. As a Ph.D. student, I studied the cell biology of pathogens and developed tools to follow the movements of proteins on the bacterial surface. I was a Stanford Graduate Fellow, a National Science Foundation Graduate Research Fellow, and an ASM Robert D. Watkins Minority Graduate Research Fellow. A similar emphasis on a work/life balance was present in Dr. E. Peter Greenberg's research group at the University of Washington in Seattle. In my postdoctoral fellowship with Dr. Greenberg, I studied cell-cell communication and social behaviors in bacteria, specifically focusing on territorial behaviors in *Proteus mirabilis*. Our research was published in *Science Magazine* and profiled in *Nature Reviews Microbiology*.

I recently joined Harvard University as an Assistant Professor in the Department of Molecular and Cellular Biology. Here I am building a research group that examines the interface of two emerging fields, sociomicrobiology and bacterial cell biology. We are investigating the molecular mechanisms underlying the ability of cells to discriminate self from non-self in the uropathogen *P. mirabilis*, a leading cause of urinary tract infections in the elderly. A visible boundary forms between swarms of different *P. mirabilis* strains. In contrast, swarms of the same strain do not give rise to a visible boundary and merge, indicating that *P. mirabilis* swarms are capable of self/non-self recognition. This self/non-self recognition behavior is similar to allorecognition in vertebrate immunity and is analogous to territoriality in animals. Fundamentally my research strives to answer: how does an organism distinguish, and subsequently separate, self from other?



TERRI GIVENS ASSOCIATE PROFESSOR UNIVERSITY OF TEXAS AT AUSTIN

GOVERNMENT



What I hope students take away most from this program is: that becoming a faculty member is rewarding and that there are many opportunities for women and minorities, despite the obstacles.

Degrees / Postdocs

Stanford University, B.A. '87

Stanford Advisor: Coit (Chip) Blacker

University of California-Los Angeles, M.A. '96, Ph.D. '99

Postdoc: Ford Foundation Fellowship, 2002

Research Interests

European Politics, Immigration Politics, Immigrant Integration, Racism and Antidiscrimination Policy, Political Parties

Key Publications

- 1. Voting Radical Right in Western Europe, Cambridge University Press, October 2005.
- 2. Immigration Policy and Security: U.S., European, and Commonwealth Perspectives. Edited volume with Gary Freeman and David Leal. Routledge, August 2008.
- 3. "Legal Opportunity Structure: The Starting Line Group and the Politics of the Radical Equality Directive" with Rhonda Evans Case. *Journal of Common Market Studies*, March 2010.

Honors / Awards

- + 2006, German Marshall Fund Fellow
- + 2005, Dean's Fellowship, UT-Austin
- + 2003, UC Berkeley, Chancellor's Postdoctoral Fellowship (declined)
- + 2002, Center for West European Studies Travel Grant
- + 2002, Junior Faculty Development Grant, University of Washington
- + 2001, Max-Planck Institut für Gesellschaftsforschung, Research Grant

Previous Institutions

1. University of Washington

Through my research, I hope to:

advance understanding of the factors which are impacting the development of immigration policy in Europe, including the rise of anti-immigrant political parties, the role of immigrants in national economies and the importance of antidiscrimination policy.

I choose to work at my institutional type because: I enjoy working with both undergraduate and graduate students.

The most fulfilling part of my job as a faculty member is: helping students gain confidence in their abilities, helping them to learn more about the world outside of the U.S. and encouraging them to consider graduate school, when it is appropriate.

The career achievement that I am most proud of is: becoming Vice Provost and making major changes in the approach to international studies at the University of Texas at Austin.

My most vivid memory of Stanford

is: fountain hopping after winning a football game.

TERRI GIVENS

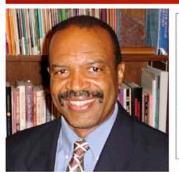
Terri E. Givens is Associate Professor in the Government Department at The University of Texas at Austin and Director of the Texas Language Roadmap. She is formerly Vice Provost, International Activities and Undergraduate Curriculum, Director of the Robert S. Strauss Center's European Union Center of Excellence, and Co-Director of the Longhorn Scholars Program. She also directed the Center for European Studies and the France-UT Institute for Interdisciplinary Studies from 2004-2006. She has faculty appointments in the LBJ School of Public Affairs, European Studies, and is affiliated with the Center for Women and Gender Studies, Center for African and African-American Studies and is a Distinguished Scholar in the Robert S. Strauss Center for International Law and Security. Her academic interests include radical right parties, immigration politics, and immigrant integration in Europe. She has conducted extensive research in Europe, particularly in France, Germany, Austria, Denmark and Britain.

She has received Fellowships from the Ford Foundation, the German Marshall Fund, the Max-Planck Institute for the Study of Society, and various other grants and fellowships to support her research in Europe. Her first book, Voting Radical Right in Western Europe, was published in Fall 2005 with Cambridge University Press. She has also edited the book Immigration Policy and Security: U.S., European, and Commonwealth Perspectives, published in Fall 2008 with Gary Freeman and David Leal. Her articles have appeared in Political Communication, Comparative Political Studies, the Journal of Common Market Studies, the Policy Studies Journal, and Comparative European Politics. She is currently working on a book on antidiscrimination policy and the politics of immigration in Europe. She is an active member of the American Political Science Association, and is currently co-chairing a task force on Political Science in the 21st Century. She is a member of the KLRU (public television) board of directors, and chairs the Government Affairs Committee. While being the proud mother of two very handsome boys in elementary school, she manages to find time to run a marathon or two every year. She and her husband, Mike Scott, also enjoy listening to jazz and attending dance performances and the symphony.



WENDELL HILL, III **PROFESSOR** UNIVERSITY OF MARYLAND

PHYSICS



What I hope students take away most from this program is: that the road ahead may be punctuated with steep climbs, setbacks and roadblocks, but the trek is worth the effort, unquestionably. As a professor, you will possess a voice that will be heard by those who follow you as well as your contemporaries; you will frame the future of your field both scholastically and socially.

Degrees / Postdocs

University of California-Irvine, B.A. '74

Stanford University, PhD '80

Stanford Advisor: Art Schawlow

Postdoc: National Institute of Standards & Technology, (through NRC Fellowship), 1980-82

Research Interests

Ultrafast Dynamics, Atom Optics and Quantum Information, Ultraintense Laser-Matter Interaction

Key Publications

- 1. Light-Matter Interaction: Atoms and Molecules in External Fields and Nonlinear Optics, Wendell T. Hill, III and Chi, Lee (256 pages) Copyright @ 2007 WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim. ISBN: 978-3-527-40661-6.
- 2. "Adaptive control of CO2 bending vibration: Deciphering field-system dynamics," G. Y. Chen, Z. W. Wang and W. T. Hill, III, Phys. Rev. A 79, 011401 (R) (2009).
- 3. "Role of Non-Coulombic Potential Curves in Intense Field Dissociative Ionization of Diatomic Molecules," W. T. Hill, III, J. Zhu, D. L. Hatten, Y. Cui, J. Goldhar and S. Yang, Phys. Rev. Letts. 69, 2646-2646 (1992).

Honors / Awards

- + 2006, Fellow, National Society of Black Physicists
- + 2001-02, Distinguished Lecturer, Society of Sigma Xi + 1999, Fellow, American Physical Society + 1985-90 NSF Presidential Young Investigator

- + 1974-75, IBM Graduate Fellowship

Through my research, I hope to:

advance understanding of collective quantum behavior and how to exploit light to manipulate transient internal and external states of atoms, molecules, their ions and electrons.

I choose to work at my institutional type because: I am driven by research and the quest to learn...I chose Maryland because of the quality of the physics program and the fact that there were others working in my area.

The most fulfilling part of my job as a faculty member is three-fold:

- -- watching students experience the joy and excitement of understanding something fundamental about how the universe operates;
- -- being challenged and taught by bright young minds working with me; and
- -- discovering things not known, developing novel experimental techniques and building innovative devices.

The career achievement that I am most proud of is: my latest experiment, calculation or paper....The milestones would be publication of my book and being among the first to conduct experiments in photoelectric approach to measuring atomic absorption strengths and developing the first Coulomb explosion imaging apparatus.

The best memories of Stanford are:

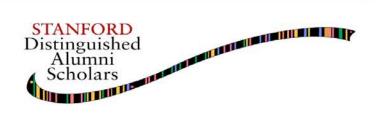
being part of the Schawlow-Hänsch group. We were very close, shared ideas and worked very hard...On a purely personal level, Stanford is where I met my wife.

WENDELL HILL, III

Wendell T. Hill, III holds the rank of Professor at the University of Maryland, College Park, with appointments in the Institute for Physical Science and Technology and the Department of Physics, and he is also a fellow of the Joint Quantum Institute. He is a guest worker at Lawrence Livermore National Labs and at the National Institute of Standards & Technology, where he was a postdoc before joining the faculty of the University of Maryland in 1982. He has held visiting positions with Instituto Venezalano de Investigaciones (Venezuela), Université de Paris-Sud, Orsay France and JILA at the University of Colorado. Hill's honors include Fellow of the American Physical Society; Fellow of the National Society of Black Physicists; Presidential Young Investigator (the predecessor to the NSF CAREER awards).

Hill's research interests are broad with publications ranging from high-energy particle physics to atom optics. His current thrusts are: (i) ultrafast atomic and molecular dynamics; (ii) atom optics and quantum information; and (iii) ultraintense laser-matter interaction. Hill and his team exploit evolutionary and genetic algorithms in (i) to optimize temporally-shaped laser pulses to guide and control ultrafast classical and quantum dynamics. It is well known that while these so-called closed-loop searches can be very efficient, the optimal pulses are generally unintelligible, revealing little about the underlying physics responsible for the control. The primary goal of Hill's program is to decipher such pulses and to develop approaches that can be generalized to enable the transient, intermediate states associated with ultrafast dynamics to be revealed. Recently, carefully crafted spatially-shaped laser beams have experienced a dramatic increase in usage for containing, transporting and manipulating properties of thermal and degenerate atomic ensembles. Nevertheless, the full advantage of their potential for creating novel, flexible and dynamic environments for studying fundamental processes in atomic physics to condensed matter or for creating new paradigms for quantum computing to atomtronics (neutral atom analog to electronics) has not yet been fully realized. Hill's program focuses on filling this void under (ii). At the highest intensity regimes, lasers can produce high-energy density plasmas that are found naturally only in stellar media. The concomitant, very energetic charged particles associated with these plasmas not only reveal details about their dynamics, they could lead to new energy sources and medical devices. The violent, short-lived conditions, however, create unique challenges for quantitative probes. In particular, there is a conspicuous paucity of timedependent studies, which are essential to modeling and is where Hill is making a contribution in (iii).

Hill has served on numerous committees for the American Physical Society (APS), the Optical Society of America (OSA) and the National Science Foundation. Most notably, he was a member of the APS Council and Executive Board and the Technical Council of the OSA. He co-chaired the organizing committee for the first Atomic, Molecular and Optical Physics (AMO) Science Congressional Reception and chaired the National Academy of Science's Committee on AMO Science.



PROFESSOR BROWN UNIVERSITY

HISTORY AND ETHNIC STUDIES



What I hope students take away most from this program is: we have to continue to light the path and open new pathways for women, minority, immigrant, low income and working class students to attend and succeed at Stanford and similar institutions of higher learning.

Degrees / Postdocs

Stanford University, B.A. '68 University of Texas at Austin, Ph.D. '76 Postdoc: Social Science Research Council Grant

Research Interests

Asians in Latin America and the Caribbean; Social History and Indigenous Peoples of the U.S.-Mexico Borderlands; Race and Ethnicity in the Americas

Key Publications

- 1. "Afro-Asia" Special Issue of Afro-Hispanic Review, 27:1, Spring 2008.
- Across the Pacific: Asian Americans and Globalization (Editor). Philadelphia: Temple University Press, 1999.
- 3. Yaqui Resistance and Survival: Struggle for Land and Autonomy, 1821-1910. Madison:University of Wisconsin Press, 1984.

Honors / Awards

- + 2009, Karen T. Romer Award for Undergraduate Advising and Mentoring, Brown University
- +2005-06, Brown-Keio University (Tokyo) Exchange Scholar/ Faculty (2 grants)
- + 2005, Kellogg Fellows Leadership Alliance Grant, Institute for Non-Traditional Leadership
- + 2003, Doctor of Laws, *honoris causa*, University of Notre
- +1992-95, Rockefeller Residency Fellowship in the Humanities
- + 1989-90, Ibero-Latin America Center Research Grant, University of Colorado, Boulder
- + 1984-87, Kellogg National Leadership Fellow
- + 1983-84, Fulbright Faculty Research Award, Peru
- + 1971-73, Ford Foreign Area Dissertation Fellowship
- + 1968, Fulbright Grant to Brazil
- + 1968, Dinkelspiel Award, Stanford University

Previous Institutions

- 1. University of Colorado at Boulder
- 2. Lehman College
- 3. Washington University

Through my research, I hope to:

advance understanding of racial formation and race relations in the Americas; the Chinese diaspora worldwide; teaching about race; social and cultural history of Latin America and the Caribbean.

I choose to work at my institutional type because:

- -- I believe in connecting research to teaching;
- research institutions are best endowed and hence have more resources to offer faculty and students to succeed;
- and these institutions are also committed to a strong liberal arts education for undergraduates.

The most fulfilling part of my job as a faculty member is: mentoring students of color, low income and working class students to succeed at the highest level (up to the Ph.D) and in the most rigorous and competitive academic environments.

The career achievement that I am most proud of is: developing TWO programs in Race and Ethnic Studies -- at the University of Colorado at Boulder (a public flagship research institution) and at Brown University (a premier private Ivy League institution).

My most vivid memory of Stanford

was: being locked out of Roble during my freshman year because I stayed out at the Reserve Readling Room past the 10 PM weekday curfew for women students at the time (1964).

EVELYN HU-DEHART

Evelyn Hu-DeHart often describes herself as a multicultural person who speaks several languages (including English, Chinese, French, and Spanish) and moves easily among several cultures. Her professional life has focused on what Cuban historian Juan Perez de la Riva calls "historia de la gente sin historia."

Evelyn Hu-DeHart is Professor of History, and Director of the Center for the Study of Race and Ethnicity in America at Brown. She joined Brown from the University of Colorado at Boulder where she was Chair of the Department of Ethnic Studies and Director of the Center for Studies of Ethnicity and Race in America. She has also taught at the City University of New York system, New York University, Washington University in St. Louis, University of Arizona and University of Michigan, as well as lectured at universities and research institutes in Mexico, Peru, Cuba, France, Hongkong, Taiwan, and China.

Professor Hu-DeHart was born in China and immigrated to the United States with her parents when she was 12. As an undergraduate at Stanford University she studied in Brazil on an exchange program. She became fascinated with Latin America and that interest eventually led her to a Ph.D. in Latin American history. She has written two books on the Yaqui Indians, and is now engaged in a large research project on the Asian diaspora in Latin America and the Caribbean.

The goal of Professor Hu-DeHart's diaspora project is to uncover and recover the history of Asian migration to Latin America and the Caribbean, and to document and analyze the contributions of these immigrants to the formation of Latin/Caribbean societies and cultures. It should also contribute towards theorizing diasporas and transnationalism. The importance and timeliness of this research was most recently demonstrated by the election of Alberto Fujimori, son of Japanese immigrants, as president of Peru. Hu-DeHart also hopes that her work will broaden the scope of Asian American studies as well as contribute to an area not well covered within Latin American studies.



ELIZABETH LOBOA ASSOCIATE PROFESSOR UNC-CHAPEL HILL AND NORTH CAROLINA STATE UNIVERSITY

BIOMEDICAL ENGINEERING AND MATERIAL SCIENCE AND ENGINEERING



What I hope students take away most from this program is: Stanford provides an incredible launching platform to do whatever you want in your future career. Regardless of how hard classes/curriculum/research seems, you CAN do it and make it through your program. Be open to any and all opportunities and take advantage of whatever comes your way. You never know if something is a good fit until you give it a try...

Degrees / Postdocs

University of California, Davis, B.S. '95 Stanford University, Ph.D. '02

Stanford Advisor: Dennis Carter

Research Interests

Functional tissue engineering using human stem cells; stem cell mechanobiology; mechanobiology of musculoskeletal tissues; biomaterials for functional tissue engineering using human stem cells.

Key Publications

- 1. Loboa EG, Fang TD, Warren SM, Lindsey DP, Fong KD, Longaker MT, and Carter DR. Mechanobiology of mandibular distraction osteogenesis: experimental analyses with a rat model. *Bone* 34:336-343 (2004).
- 2. Wall ME, Rachlin A, Otey CA, Loboa EG. Mesenchymal stem cells upregulate palladin during osteogenesis and in response to cyclic tensile strain. *Am J of Physiology: Cell Physiology* Nov;293(5):C1532-8 (2007).
- 3. McCullen SD, Haslauer CM, Loboa EG. Musculoskeletal Mechanobiology: Interpretation by External Force and Engineered Substratum. *Cell Mechanobiology special issue of the Journal of Biomechanics*. 2009 Oct 6. [Epub ahead of print]. Invited submission.

Honors / Awards

- + 2009, UK-US Stem Cell Collaboration Development Award
- + 2009, Sigma Xi Faculty Research Award
- + 2005, Ralph E. Powe Junior Faculty Award
- + 2002, Participant, Science and Engineering Education Scholars Program
- + 2000, Alternate Selected Professions Fellow, AAU
- + 2000, Jeffrey K. Lyons Award for Outstanding Service to the Stanford Community
- + 2000, Stanford Graduate Service Recognition Award

Previous Institutions

1. Stanford University

Through my research, I hope to:

advance understanding of patient-specific functional tissue engineering of musculoskeletal tissues using autologous stem cells.

I chose to work at my institutional type because it:

- -- allowed me to play a significant role in building the new biomedical engineering department (I was the first external hire);
- -- provided a supportive atmosphere for work/ life balance (I started my position 6 months pregnant); and
- -- provided me the autonomy and support to pursue my research endeavors.

The most fulfilling parts of my job as a faculty member are: mentoring students and watching them succeed; playing a strong role in curriculum and departmental development at my university; and working in an exciting research field in which we are having a significant impact.

The career achievement that I am most proud of is: success I have achieved in my academic career to date while simultaneously having and raising 2 beautiful and happy children (now 6 and 4 years old).

One of MANY vivid memories of Stanford is: 3:00 a.m. in Sweet Hall working on my finite element analysis project when the entire band and dance team came in and did an impromptu performance. All of us "coders" looking up at them in a daze/haze with blank expressions on our faces feeling we had all just arrived in an episode of the Twilight Zone.

ELIZABETH LOBOA

Elizabeth Loboa received her Ph.D. from Stanford University in Mechanical Engineering (Biomechanical Engineering Division) in 2002. She then stayed on at Stanford for another semester as an Acting Assistant Professor teaching ME 80:Stress, Strain, and Strength prior to beginning her position as an Assistant Professor in the Joint Department of Biomedical Engineering at UNC-Chapel Hill and NC State University. Dr. Loboa was the first external hire to this newly formed department in 2003 and enjoyed taking an active role in its development. While her graduate research at Stanford was predominantly computational, when she started her own lab she focused the majority of her investigations at the cell level, with an emphasis on human stem cells. Her current research is aimed at understanding and elucidating human stem cell mechanobiology for successful functional tissue engineering of bone, cartilage, and other musculoskeletal tissues on a patient-specific basis. The majority of her studies utilize human stem cells isolated from bone marrow or fat and, via biomaterials- and/or mechanical stimuli-based approaches using custom bio-inspired bioreactors, directing human stem cell differentiation and extracellular matrix production in order to create structurally robust skeletal tissues that can successfully withstand in vivo loading. Loboa has received the Ralph E. Powe Junior Faculty Award, Sigma Xi Faculty Research Award, and a UK-US Stem Cell Collaboration Development Award.



ELISA LONG ASSISTANT PROFESSOR YALE UNIVERSITY

OPERATIONS MANAGEMENT



What I hope students take away most from this program is: if you choose a career in academia, you must pursue research that you find interesting. A friend once told me there are three traits necessary to have a successful career: intelligence, diligence, and passion. Any Stanford student likely possesses the first two traits. But I think being passionate about our work is fundamentally why we're choosing a research career in academia.

Degrees / Postdocs

Cornell University, B.S. '03 Stanford University, Ph.D. '08

Stanford Advisor: Margaret Brandeau

Research Interests

Health policy modeling and decision analysis; costeffectiveness analysis and medical technology assessment; HIV/AIDS epidemic modeling; resource allocation; stochastic disease network models; dynamic systems.

Key Publications

- 1. Long EF, Brandeau ML, Owens DK. "Potential Population Health Outcomes and Expenditures of HIV Vaccination Strategies in the United States", *Vaccine*, 2009, 27(39):5402-10.
- 2. Long EF, Vaidya NK, Brandeau ML. "Controlling Coepidemics: Analysis of HIV and Tuberculosis Infection Dynamics", *Operations Research*, 2008, 56(6):1366-81.
- 3. Long EF, Brandeau ML, Galvin CM, Vinichenko T, Tole SP, Schwartz A, Sanders GD, Owens DK. "Effectiveness and Cost-effectiveness of Strategies to Expand Antiretroviral Therapy in St. Petersburg, Russia", <u>AIDS</u>, 2006, 20:2207-15.

Honors / Awards

- + 2005, Lee B. Lusted Award for Best Student Oral Presentation, Society for Medical Decision Making + 2005, Seth Bonder Scholarship for Applied Operations Research in Health Services, Institute for Operations Research and Management Sciences
- + 2003, Cortland and Jean Van Rensselear Graduate Fellowship, Stanford University
- + 2003, Merrill Presidential Scholar, Cornell University
- + 2002, Ormond Scholar, University of Melbourne, Australia
- + 2001, Lockheed Martin Engineering Scholar Award, Cornell University

Through my research, I hope to:

advance understanding of how to effectively translate complex mathematical models of infectious disease transmission into meaningful, transparent policy recommendations.

I choose to work at my institutional type because: one of the core missions of the Yale School of Management is to promote interdisciplinary research, and I have enjoyed several wonderful opportunities teaching students and working with faculty in medicine, public health, economics, and engineering.

The most fulfilling part of my job as a faculty member is: mentoring students who are interested in pursuing a career in research or academia. And I love being part of such an intellectually stimulating and diverse research environment.

The career achievement that I am most proud of is: receiving the Bonder Scholarship for Applied Operations Research in Health Services, which allowed me to develop a mathematical model of HIV-TB in India. I presented my findings at a national conference and published the study in a leading journal.

My most vivid memory of Stanford

is: attending classes and going to seminars by some of the brightest, most passionate, leading scholars in their field. And of course I remember my first earthquake, while studying late at night in Terman!

ELISA LONG

Elisa F. Long

Prior to arriving at Stanford in 2003, I was an undergraduate at Cornell University, majoring in operations research and industrial engineering, and quite uncertain about my future. Among a sea of seniors competing for highly coveted analyst positions at Goldman or JPMorgan (Google wasn't the behemoth it is today and Facebook was still a distant pipedream), I decided to swim against the tide and apply to graduate school. While my friends were fantasizing about five-figure bonuses, I was preparing for five more years of finals, qualifying exams, and graduate dorm life. I hedged my decision by thinking, 'if the PhD program is not for me, I can always get a job as a consultant.' Little did I know.

As an undergrad, I honed my quantitative skills, taking courses in nonlinear optimization, stochastic programming and differential equations. But it wasn't until I arrived at Stanford that I understood how I could use these tools to study really exciting and important issues. I initially enrolled in Margaret Brandeau's class, Health Policy Modeling, because the title piqued my interest and I had never taken an applied class like this before. After hearing about the many applications of engineering principles to problems in medicine, I was hooked. I had found my PhD advisor and that year, I developed my first HIV epidemic model in a resource-limited setting.

Russia is experiencing one of the fastest growing HIV epidemics, with prevalence doubling in the past ten years. Antiretroviral treatment is virtually nonexistent. 85% of HIV infections occur among injection drug users yet substitution therapy is illegal and the only needle-exchange program operates out of an old bus, which its clients are reticent to enter because of potential arrest. Under the mentorship of Margaret Brandeau and my co-advisor, Doug Owens, we developed a mathematical model predicting the spread of HIV in Russia over the next 20 years, under the current scenario and alternative antiretroviral treatment strategies. In a nutshell, we found that ignoring drug users in treatment scale-up is akin to spraying a forest fire with a garden hose. In order to avoid an epidemic of catastrophic proportions, Russia needs to scale-up prevention and treatment aimed at drug users, the key drivers of the epidemic. We presented our findings at a medical conference in St. Petersburg and published the study in a leading medical journal. Although the country has made some progress, it is still far short of what's necessary.

I spent the following few years continuing to work on HIV epidemic modeling and resource allocation. After receiving the Seth Bonder Scholarship for Applied Operations Research in Health Services, I was able to travel to Geneva to meet with the WHO, and all over India to meet with physicians, NGOs, and researchers working on reducing HIV there. My research investigated how increased prevention and treatment of HIV or tuberculosis affected the complementary epidemic. As the country with the largest TB burden, India has made substantial progress toward fighting this disease, but HIV is still a highly stigmatized, neglected part of the national health program. We again presented our study at several conferences and published the paper in an engineering journal.

During my time at Stanford, I learned a tremendous amount about identifying important research questions and effectively communicating the results. First and foremost, I think having a great mentor or advisor is an absolute must. Margaret and Doug challenged me to really push myself intellectually, which has made me a better researcher and enabled me to start building my own research agenda.

I chose to pursue a career in academia because I wanted to continue studying a topic I am passionate about, and to educate the next generation of researchers. The past two years as an assistant professor at Yale have been both incredibly rewarding and stressful. The time goes by faster than I ever imagined. It feels like just yesterday I was doing a fly-out interview, and now I'm preparing for my third year review. Everything I heard about academia is true. There is always pressure to publish that next paper. Rejection still stings. Prepping a new course sometimes requires staying up until 2am. But witnessing a 'teaching moment' where a student finally understands Bayes' Rule, or getting great feedback from a journal review, or discussing a new idea with brilliant colleagues over beers, makes it worthwhile. It's been quite a rollercoaster ride and I'm definitely looking forward to the next stage!



MARY MURPHY ASSISTANT PROFESSOR UNIVERSITY OF ILLINOIS AT CHICAGO

PSYCHOLOGY



What I hope students take away most from this program is: that it does not take any specialized, rare talent to succeed in graduate school or in one's career. What it takes most is perseverance and an attitude that everything is a learning experience. If we give up, or become defensive, we lose out on what might have been.

Degrees / Postdocs

University of Texas at Austin, B.A. '00

Stanford University, Ph.D. '07

Stanford Advisor: Claude Steele

Postdoc: Northwestern University, 2007-08

Research Interests

Stereotype Threat, Social Identity Threat, Self and Social Identity, Group-Level Lay Theories of Intelligence, Intergroup Relations, Interracial Interactions, Interracial Friendship

Key Publications

- 1. Murphy M. C., Steele, C. M. & Gross, J. J. (2007). Signaling Threat: How situational cues affect women in math science, and engineering settings. Psychological Science, 18, 879-885.
- 2. Murphy M. C. & Dweck, C. S. (2010). A Culture of Genius: How environments' lay theories shape people's cognition, affect, and behavior. Personality and Social Psychology Bulletin, 36, 283-296.
- 3. Murphy, M. C., Richeson, J. A., Shelton, J. A., Rheinschmidt, M., & Bergsieker H. (under review, invited resubmission). Cognitive costs of subtle v. blatant racial bias during interracial interactions. Journal of Experimental Social Psychology.

Honors / Awards

- + 2009-10, Junior Faculty Research and Travel Award, University of Illinois at Chicago (UIC) 2 awards + 2009-10, UIC College of Liberal Arts and Sciences Undergraduate Research Initiative Faculty Mentor
- Award
- + 2008, Spencer Foundation Exemplary Dissertation
- +2006-07, Spencer Foundation Graduate Dissertation Fellowship
- + 2006-07, Stanford University RICSRE Dissertation Fellowship
- + 2007-09, NSF Minority Postdoctoral Fellowship
- +2000-04, NSF Graduate Research Fellowship

Through my research, I hope to:

advance understanding of the situational factors that create settings that suggest identity-threat or identity-safety.

I choose to work at my institutional type because: of the diverse student population. University of Illinois at Chicago is one of the most diverse universities in the country. Because I study issues of diversity, stereotyping and prejudice, this is the place to

The most fulfilling part of my job as a faculty member is: interacting with the graduate and undergraduate students. Feeling as though you are making a difference in their understanding of the world and working together to create new knowledge about important societal problems is the best part of the job.

The career achievement that I am most proud of is: finishing my PhD and attaining a tenure-track job. I am the first in my family to attain a graduate degree, and in this job market, I feel especially proud to have attained a tenure-track job and to do the work I was trained to do.

My most vivid memory of Stanford

is: the first time I heard my advisor, Dr. Claude Steele, give a talk. He spoke about the lab's recent work in our first year graduate seminar. At the end of the talk, he put up a list of all the students he worked with. There, among the names, was my own name. It was affirmation that I really belonged—among these amazing individuals, and at Stanford.

MARY MURPHY

Mary C. Murphy

I arrived at Stanford for graduate school in 2001 after completing my BA at The University of Texas at Austin. At UT, I conducted a senior honors thesis that investigated how stereotype threat —the concern that one might be viewed and judged by others in terms of negative group stereotypes—affected the academic and athletic performance of student athletes. In particular, I recruited the UT football team as participants and examined how making their student vs. athlete identities salient affected their performance on academic and athletic tasks. I had always been fascinated about how our social identities—and their meanings—shape our thoughts, feelings, and behaviors. I received a NSF Graduate Research Fellowship in my senior year of college, and came to Stanford soon thereafter to work with Dr. Claude Steele- the father of stereotype threat research.

I grew up, in many ways, during graduate school—moving far away from home for the first time and not knowing a single person when I arrived. I made wonderful friends there—graduate school is a bond that lasts a lifetime. At Stanford, I learned how to think critically and how to question assumptions about the way we think human behavior works. I became intrigued by the idea that context and cues within our environment can shape our most basic psychological processes—including the way we think about and define ourselves, our aspirations, and our everyday behaviors. In my dissertation I examined how cues within Math, Science, and Engineering settings affected women's social identity threat, cognitive vigilance, motivation, persistence, and even their basic physiology. It was through this work that I began to appreciate how the exact same setting could be experienced in powerfully different ways by groups that are negatively stereotyped compared to those that are not.

After graduate school, I applied for and received a NSF Postdoctoral Fellowship to pursue research on intergroup relations with Dr. Jennifer Richeson at Northwestern University. A postdoc is a time to learn a new skill that will be helpful as one develops an independent research trajectory. During graduate school, I had mostly worked on the question of how stereotypes affected women in Math, Science, and Engineering settings, but I wanted to expand my expertise to study how stereotypes affect majority and minority group members during interracial interaction and interracial friendship. Dr. Richeson is one of the foremost interaction researchers in the country and being mentored by her was truly fantastic.

Following the postdoc, I joined the faculty at the University of Illinois at Chicago in 2009. Conducting research, writing, teaching graduate and undergraduate classes, mentoring students-it has been a challenge to balance it all. But it is a challenge that I absolutely relish. Creating a lab of motivated graduate and undergraduate students has been one of the most rewarding aspects of the last year. Our lab recently received a NSF grant to study how certain situational cues in educational, organizational, and group settings affect people's levels of social identity threat, motivation, cognitive processing, and academic performance. We also study the development and maintenance of group-level theories of intelligence and their effects on people's performance, creativity, and self-construal. Finally, we continue to investigate the dynamics of interracial interactions and interracial friendship. Every day I feel lucky to be surrounded by supportive colleagues, bright students, and new ideas.



MARISOL NEGRÓN ASSISTANT PROFESSOR UNIVERSITY OF MASSACHUSETTS-BOSTON



What I hope students take away most from this program is: that there does not have to be a divide between their communities and their academic pursuits; that mentorship and supportive relationships are necessary for personal, spiritual, and professional growth; and that there are many paths to our goals and sometimes we have to be strong enough to forge our own routes.

AMERICAN STUDIES

Degrees / Postdocs

Dartmouth College, B.A. '93 Stanford University, Ph.D. '06

Stanford Advisor: Yvonne Yarbro-Bejarano

Postdoc: Brandeis University, 2006-08

Research Interests

Latino Literary and Cultural Studies; Popular Culture and Commodification; Migration and Diaspora; Development of Hemispheric Identities; Language and Linguistics; The interlocking relationships between race and ethnicity, gender, sexuality, class, and national and diasporic identities.

Key Publications

- "Our Latin Thing": Salsa as Cultural Sign and Commodity During the 1970's New York Salsa "Boom" (Submitted for Publication).
- 2. Lazú, Jacqueline and Marisol Negrón. "Languages in Dialogue: Reflections on the 4th International Congress of the Puerto Rican Studies Association." *Centro Journal.* XII.1 (Fall 2000): 117-123.
- 3. Rondón, César Miguel. The Book of Salsa: A Chronicle of Urban Music From the Caribbean to New York City. Trans. Frances A. Aparico and Jackie White. Chapel Hill: University of North Carolina Press, 2008. (Forthcoming Fall 2009 in Centro: Journal of the Centro de Estudios Puertorriqueños).

Honors / Awards

- + 2006, Florence Levy Kay Postdoctoral Fellowship
- + 2004, Alternate, Ford Foundation Minority Dissertation Fellowship
- + 2003, Teaching Fellow Book Prize, Stanford University
- + 2003, Woodrow Wilson National Travel and Research Grant
- + 2002, Social Science Research Council, Dissertation Research Grant
- + 2003, Teaching Fellow Book Prize, Stanford University

Through my research, I hope to:

create community-centered approaches to teaching and learning; to replace deficit models often applied to Latino and other racialized communities with methodologies that recognize and value multiple forms of knowledge; and to demonstrate in the process how Latino histories are part of US histories.

I choose to work at my institutional type because: I believe in the urban mission of UMass Boston and am committed to the education of students the institution serves, particularly students of color and those who are the first in their families to attend college.

The most fulfilling parts of my job as a faculty member are:

- -- As a scholar-teacher, the opportunity to bring students' lived experiences into the classroom;
- to bring together my teaching and scholarship;
- -- I also relish talking with colleagues about our work, especially the process when we begin to vibe off each other.

The career achievement that I am most proud of is: completing my Ph.D.

My most vivid memories of Stanford

are: sharing office space at El Centro
Chicano with Evelyn Alsultany, Magdalena
Barrera, Vida Mía García, Raúl Coronado, and
Mónica Perales; speaking in front of the
Faculty Senate in opposition to the proposed
merger of the Division of Literatures, Cultures,
and Languages; and planning and enjoying
happy hours at Celia's and Tresidder.

MARISOL NEGRÓN

Marisol Negrón is Assistant Professor of American Studies and Latino Studiesat UMass Boston, where she is also affiliated with the Women's Studies Department. Originally from Bridgeport, Connecticut, she received her B.A. from Dartmouth College in 1993 and completed her doctoral work in the Department of Spanish and Portuguese at Stanford University in 2006. Professor Negrón's research and teaching interests center around issues of migration and diaspora, popular culture and commodification, the development and maintenance of Spanish among Latinos in the U.S., and discourses of identity in 20th and 21st-century Latino cultural production. Her current book project examines the ways Puerto Ricans negotiated the development of salsa as both commodity and cultural sign during the 1970s "boom." As part of her analysis, she explores the role of salsa in the deployment of Nuyorican subjectivities; the emergence of New York as a site for the production of Caribbean identities; and the impact of Nuvorican identities in Latin American subject formation vis a vis the music's transnational flows. Professor Negrón recently completed an article, titled "Our Latin Thing: Salsa as Commodity and Cultural Sign during the 1970s 'Boom'." She is also co-editing a manual on the teaching of Spanish as a heritage language that brings into dialogue sociolinguistic theories, language pedagogies, and literary and cultural studies methodologies. Her book review of El libro de la salsa [The Book of Salsa] has just been published in Centro: Journal of the Centro de Estudios Puertorriqueños. Professor Negrón is a member of the Steering Committee for the Latino Studies Program at UMass Boston and co-chairs the curriculum committee for the program. In addition to advising minors in Latino Studies, she is the faculty advisor to Casa Latina, one of the Latino organizations on campus. An ex-officio board member of the Dartmouth Association of Latino Alumni, she also serves on the Dartmouth College Alumni Council. During the course of her time at Stanford, Professor Negrón developed graduate programming at El Centro Chicano, where she was also a Scholar-in-Residence; coordinated the Graduate Women's Network at the Women's Community Center; and was Assistant to the Chair of the Chicano/a Studies Program. The recipient of various teaching and service awards while at Stanford, in 2002 El Centro Chicano awarded Professor Negrón the Jerry I. Porras Award for Visionary Leadership. Professor Negrón has lived in Boston since 2004 with her husband Joel Dawson (Stanford PhD '04), an Associate Professor of Electrical Engineering at MIT. As part of an "academic couple," she is thrilled to have solved the so-called "two-body" problem!



STANFORD UNIVERSITY DISTINGUISHED ALUMNI SCHOLAR

ALFRED OSBORNE, JR.

SR. ASSOCIATE DEAN

GLOBAL ECONOMICS & MANAGEMENT

PROFESSOR

UNIVERSITY OF CALIFORNIA-LOS ANGELES



What I hope students take away most from this program is: there are many ways to achieve your goals and, therefore, many ways to be right.

Degrees / Postdocs

Stanford University, B.S. '68, M.B.A. '71, Ph.D. '74

Stanford Advisor: William Dunkelberg

Research Interests

Entrepreneurship; business development; strategic management of not-for-profit organizations; corporate governance

Key Publications

- 1. "The Potential of Black Capitalism in Perspective," (with Michael Granfield), Public Policy, Vol. 24, Fall 1976.
- 2. "Rule 144 Volume Limitations and the Sale of Restricted Stock in the Over the Counter Market." Journal of Finance, Vol. 37, May, 1982.

Honors / Awards

- + 2009, Recognized by Directorship as one of the top
 100 influential corporate directors in America
 + 2008, Inducted into the Minority Business Hall of Fame
- + 2007, Annual Leadership Award, Southern California Minority Business Development Council, Inc.
- + 2006. Recognized by Minority Business News USA in the 1st Annual Issue as one of 100 Men Impacting Supplier Diversity
- + 2004, J. Clayton La Force Distinguished Service and Leadership Award
- + 2000, Ernst and Young Entrepreneur of the Year Award
- + 2000, The Richard J. Riordan Spirit of Entrepreneurship Award
- + 1998, National Head Start Association Award
- +1992, Northern Trust of California Hispanic Excellence Award
- + 1978-79, Securities Exchange Commission Fellow
- + 1977-79, Brookings Institution Economic Policy Fellow

Through my research, I hope to advance understanding of:

- -- entrepreneurial issues;
- -- the role of the Board of Directors;
- -- value creation and liquidity needs of early investors and founders;
- -- business development and capacity building in not-for-profits.

I choose to work at my institutional type because: I enjoy Los Angeles and talented, smart graduate (MBA) students on a campus like UCLA.

The most fulfilling parts of my job as a faculty member are: teaching, innovation in pedagogy, and students with passion who want to leave a mark on society and relish the application of entrepreneurial management principles to diverse organizations.

The career achievement that I am most proud of is:

establishing and building the Price Center for Entrepreneurial Studies. I also brought liquidity to early investors through studies to change Rule 144 in the late 1970's, early 1980's.

My most vivid memories of Stanford are: my days as a resident sponsor in

Wilbur Hall and my year as a yell-leader.

ALFRED OSBORNE, JR.

Alfred E. Osborne, Jr. is Senior Associate Dean of UCLA Anderson. In this role, he oversees a variety of key areas and initiatives within the school, including development, alumni relations, career and corporate initiatives, career management, marketing and communications and executive education.

Dr. Osborne is also Professor of Global Economics & Management and founder and faculty director of the Harold Price Center for Entrepreneurial Studies at UCLA. The Price Center serves to organize all faculty research and student activities and curricula related to the study of entrepreneurship and new business development at UCLA Anderson.

A corporate governance expert, Dr. Osborne formed a Director Education and Certification Program designed to help officers and directors of private firms prepare for the higher level of scrutiny that comes when they take their companies public. This program also educates directors and officers regarding SEC regulations, FASB considerations, Nasdaq rules and the current best practices in corporate governance.

Dr. Osborne is also an expert in social entrepreneurship who has developed several programs that apply business models to the nonprofit world. For more than 13 years, The Price Center has created and run some innovative management development programs, including four in partnership with health care giant Johnson & Johnson: Head Start - Johnson & Johnson Management Fellows Program, UCLA/Johnson & Johnson Health Care Institute, the Johnson & Johnson/UCLA Health Care Executive Program, and the Management Development Institute (MDI) servicing Non Governmental Organizations (NGO) in the AIDS/HIV supply chain in Africa. Other programs include The Institute for the Study of Educational Entrepreneurship (ISEE) and the UCLA/Los Angeles County Office of Education Head Start Leadership Institute.

Dr. Osborne currently serves as a director of Kaiser Aluminum and the Heckmann Corporation, and has served many years on the corporate boards of Times Mirror Company, US Filter Corporation, Greyhound Lines, Inc., First Interstate Bank of California, Nordstrom, Inc. and K2, Inc., among others. He has served as an economic fellow at the Brookings Institution and directed studies at the SEC that contributed to changes in Rule 144, Regulation D, and other exemptive requirements to the securities laws designed to lower costs and improve liquidity and capital market access to venture capitalists and emerging growth firms alike.

Dr. Osborne's current research interests include venture capital and private equity, and the role of the board of directors in private and public corporations. He remains active in the entrepreneurial and venture development community, has served on the editorial boards of several journals, and consults with growing companies and non-profit organizations on business and economic matters.



PILAR OSSORIO ASSOCIATE PROFESSOR UNIVERSITY OF WISCONSIN

LAW AND BIOETHICS



What I hope students take away most from this program is: people do not achieve because they are smart or talented; they achieve because they set a goal and they work towards it unwaveringly and for many, many years.

Degrees / Postdocs

Stanford University, B.S. '83, Ph.D. '90

Stanford Advisor: John Boothroyd

University of California-Berkeley, J.D. '97

Postdoc: Yale University School of Medicine, 1990-93

Research Interests

Governance of research on human subjects, governance of large-scale biomedical research and ethical issues in genomics and other emerging technologies

Key Publications

- 1. Ossorio, About Face: Forensic Genetic Profiling for Race and Visible Traits, 34 J Law, Med. & Ethics 277 (2006).
- 2. Ossorio, *The Human Genome as Common Heritage:* Common Sense or Legal Nonsense?, 35 J. Law, Med. & Ethics 427 (2007).
- 3. Ossorio, P.N., Legal and Ethical issues in Biotechnology Patenting, in A COMPANION TO GENETICS: PHILOSOPHY AND THE GENETIC REVOLUTION (Justine Burley & John Harris, eds., 2002).

Honors / Awards

- + 2000-09, University of Washington Graduate School Research Award (3 awards)
- + 2001-04, American Association for the Advancement of Science (AAAS) Member-at-Large
- + 1998-01, AAAS Electorate Nominating Committee
- + 1998, AAAS Fellow
- + 1997, Order of the Coif, UC-Berkeley

Through my research, I hope to:

advance understanding of how to promote the progress of science while safeguarding the rights and interests of people who participate in science.

I choose to work at my institutional type because: my institution has a commitment to service and because my institution values interdisciplinary research.

The most fulfilling parts of my job as a faculty member are:

- -- the intellectual challenge;
- -- the fact that I can choose what problems I study; and
- -- the fact that I can play a small role in shaping the attitudes and ideas of future lawyers.

The career achievement that I am most proud of is: that my book chapter on gene patenting was the basis for a session of the American Political Science Association, and that a series of articles was published in response to that chapter.

My most vivid memories of Stanford

are: learning important life lessons with my frosh roommate... also, the amazing friendships, glorious laughs, and accomplishments of fellow members of the Rape Education Project. We worked on a deadly serious topic, and I think we did some good in the world.

PILAR OSSORIO

Pilar N. Ossorio is an Associate Professor of Law and Bioethics at the University of Wisconsin at Madison (tenured in the Law School and the School of Medicine and Public Health). She received her Ph.D. in Microbiology and Immunology from Stanford University in 1990, after which she completed a post doctoral fellowship in Cell Biology at Yale University School of Medicine. In 1994 she left the laboratory for a position with the Department of Energy's Program on the Ethical, Legal and Social Implications (ELSI) of the Human Genome Project. She received her law degree in 1997 from the University of California School of Law, where she was elected to the national legal honor society Order of the Coif. Dr. Ossorio currently serves on the Human Embryonic Stem Cell Research Advisory Committee for the Institute of Medicine (IOM) and on the Director's Advisory Council for the National Human Genome Research Institute (NHGRI). She also serves as an advisor for the 1000 Genomes Project, the Human Microbiome Project, the Medical Sequencing Projects and for tissue banking activities at Coriell. She is a fellow of the American Association for the Advancement of Science (AAAS). In 1993 she served on the Ethics Working Group for President Clinton's Health Care Reform Task Force. Her current research interests include: governance of large scale research projects; community consultation as an ethics method; issues at the intersection of race, research and justice; and ethical/ legal issues in genome-wide genetics research (GWAS and large-scale sequencing).



WILLIAM PEREZ ASSOCIATE PROFESSOR CLAREMONT GRADUATE UNIVERSITY

EDUCATION



What I hope students take away most from this program is: Get a clear picture of academia as a profession; learn how to prepare early.

Degrees / Postdocs

Pomona College, B.A. '97 Stanford University, Ph.D. '04 Stanford Advisor: Amado Padilla

Research Interests

Immigration, Acculturation, Ethnic identity development, Achievement Motivation, Race, class, and higher education access, discrimination, Stereotypes and minority student achievement

Key Publications

- 1. Perez, W. (In Press). Exceptional Students, Marginal Lives: Achievement and Civic Engagement Among Undocumented Latino Youths.: Cambridge, MA: Harvard University Press.
- 2. Perez, W. (2009). We ARE Americans: Undocumented Students Pursuing The American Dream. Sterling, VA: Stylus Publishing.
- 3. Perez, W., Espinoza, R., Ramos, K., Coronado, H, Cortes, R. (2009). Academic Resilience Among Undocumented Latino Students. *Hispanic Journal of Behavioral Sciences*, 31(2), 149-181.

Honors / Awards

- + 2009, Association for the Study of Higher Education (ASHE) Mildred Garcia Award
- + 2009, Claremont Graduate University McNair Scholars Program Faculty Award
- + 2002, Spencer Foundation Research Training Grant
- + 2001, Ernesto Galarza Prize for Excellence in Graduate Research
- + 2000, Gates Millennium Scholars Fellowship (declined)
- + 2001-03, Ford Foundation Predoctoral Fellowship
- + 1999-2000, Stanford University Diversity Fellowship and School of Education Graduate Fellowship
- + 1996, U.S. Department of Education McNair Scholar

Through my research, I hope to ...

With a background that combines multiple disciplines including psychology, political science, and sociology, I am dedicated to informing public discourse and policy decisions that impact immigrant students and their families.

I choose to work at my institutional type because: of the institutional commitment to social justice and accountability.

The most fulfilling parts of my job as a faculty member are:

- -- research on immigrant students and families;
- -- mentoring minority graduate students; and
- -- informing public opinion about immigration issues.

The career achievement that I am most proud of is: a research program focused on undocumented students and the important policy implications of my work.

My most vivid memory of Stanford

is: all-night dissertation writing sessions in my student office in CERA, leaving the building at 8am when Dean Shavelson was just arriving.

WILLIAM PEREZ

William Perez, an Associate Professor of Education at Claremont Graduate University, is an emerging leader on research that examines the social and psychological development of immigrant and Latino students. He brings a depth of research experience to bear on the complex problems of academic achievement and higher education access. His recent book We ARE Americans: Undocumented Students Pursuing The American Dream (Stylus, July 2009) blends the inspirational stories of optimism and perseverance of undocumented students with the critical policy implications of the continuing neglect of comprehensive immigration reform. Professor Perez has authored several articles and books focusing on immigrant student achievement, linguistic and cultural diversity, and educational policy. He draws on over ten years of experience working at various research and policy centers including the Tomas Rivera Policy Institute, the UCLA Neuropsychiatric Institute, the Stanford Center for the Study of Higher Education, and the RAND corporation. With a background that combines multiple disciplines including psychology, political science, and sociology, he is dedicated to informing public discourse and policy decisions that impact immigrant students and their families.



REBECCA WHELAN ASSISTANT PROFESSOR OBERLIN COLLEGE

CHEMISTRY



What I hope students take away most from this program is: that there is no single right way to use your Stanford education, but a focus on sharing your knowledge and passion with others – education is one way to do this – is a pretty fun and rewarding way to go.

Degrees / Postdocs

Lawrence University, B.A. '96 Stanford University, Ph.D. '03

Stanford Advisor: Richard (Dick) Zare Postdoc: University of Michigan, 2003-04

Research Interests

Analytic and Bioanalytical Chemistry; Analytical Applications of Affinity Interactions; Biosensors; Aptamers; Capillary Electrophoresis; Surface Plasmon Resonance Spectroscopy; Ovarion Cancer; Biomarkers; Chemical Ecology; Science Writing and Pedagogy

Key Publications

- 1. Whelan, R.J., Levin, T., Owen, J., and Garvin, M.C. "Short-chain Carboxylic Acids from Gray Catbird (*Dumetella carolinensis*) Uropygial Secretions Vary with Testosterone Levels and Photoperiod," *in press.*
- 2. Whelan, R.J., Sunahara, R.K., Neubig, R.R., and Kennedy, R.T., "Affinity Assays using Fluorescence Anisotropy with Capillary Electrophoresis Separation," *Anal. Chem.* 2004, 76, 7380-7386.
- 3. Whelan, R.J., and Zare, R.N. "Single-Cell Immunosensors for Protein Detection," *Biosens. Bioelectron.* 2003, 19, 331-336.

Honors / Awards

- + 2008, Chair's Award, Gordon Research Conference in Bioanalytical Sensors
- + 2008, W.M. Keck Foundation Fellowship
- + 2006, Sigma Xi
- + 1999, Walter J. Gores Award, Stanford University
- + 1999-2000, Abbott Laboratories Fellowship
- + 1996. Phi Beta Kappa
- + 1996, American Institute of Chemists Award

Through my research, I hope to:

advance understanding of the ways that tools familiar to those trained in chemistry—including synthesis, separations, and spectroscopy—may be applied to solving important and interesting problems in biology, ecology, and medicine.

I choose to work at my institutional type because: I wanted a career that involved both research and teaching in a setting that highly values and supports undergraduate education.

The most fulfilling part of my job as a faculty member is: teaching and mentoring very bright and creative undergraduate students. I especially value and enjoy training students as research assistants — introducing them to the scientific process, from designing the experiment through presenting the results. I get to see the students' skills and confidence develop in real time as we work toward our shared research goals.

The career achievement that I am most proud of is: winning the Walter J. Gores Award, Stanford's highest honor recognizing excellence in teaching, in 1999.

My most vivid memories of Stanford

are: spending hours in a darkened basement lab doing light-sensitive microscopy, playing Prokofiev really loud on my tape player to create a conducive environment for work, and taking occasional breaks for strong Peet's coffee and wide-ranging conversation with the quirky, fun, and brilliant members of the Zare research group.

REBECCA WHELAN

Rebecca J. Whelan

After successfully defending my dissertation in January 2003 I returned to the Midwest (specifically to Ann Arbor, Michigan) to do a few years of postdoctoral research. I signed up for a two-year research stint with Robert Kennedy in the Chemistry Department at the University of Michigan.

There is a bit of a story behind my choice of the Kennedy lab as the location for my postdoc. The Zarelab, my graduate lab and home for six years, is characterized by a spectacular diversity of ongoing research areas, from studies of most fundamental reaction $(H + H_2)$ to the use of single cells as living detectors (this was my dissertation research). Although I found this environment intellectually stimulating and abundantly supportive, I wanted my next research experience to be in a lab that was more focused on bioanalytical chemistry, my area of special research interest. Bob Kennedy is a highly regarded and innovative researcher in the area, and I was delighted that he was willing to invite me to join his lab.

While in the Kennedy lab, my first task was to build an instrument that used polarized laser light to detect biological binding events and to couple this detector to the back end of a separation capillary capable of manipulating nanoliters of liquid. Once I had assembled, aligned and tested all the components parts, and had written the software used to interface between a computer and the instrument, I used this system to investigate the interactions of G-proteins with their binding partners. I found the Kennedy lab to be invigorating and supportive as well. While I was there I made some lifelong friendships. I also met my future husband, who was earning his Ph.D. in materials chemistry in a lab across the hall.

Less than one year into my postdoc, I learned about a number of job openings at liberal arts colleges in analytical chemistry, my area of expertise. Even though the typical duration of a chemistry postdoc is two years, I decided to "go on the market," as the phrase has it. When I got the opportunity to interview at Oberlin College, the week of Thanksgiving 2003, I was struck by the enthusiasm of the students, the camaraderie among the faculty, the beauty of the campus setting, and the sophistication of the science facilities. I was happy to accept their offer of a tenure-track job. They were especially kind in letting me defer my start date by a semester, so I could fulfill my two-year commitment to the Kennedy lab. I moved to Oberlin in January 2005.

Since coming to Oberlin, I have been going through the typical assistant-professor activities: becoming an effective classroom and laboratory instructor; writing lots of grant proposals; launching a productive research program; mentoring and advising students; and learning to achieve balance between career and the rest of life. I haven't figured it all out yet, and I actually don't think it's possible to figure it all out. What matters is that, even when the job is tiring and the hours are long, I believe in the importance and worth of what I am doing. Teaching bright undergraduates is what I chose this job for, and I get to do that every day. I also get to involve undergraduates in my research. My ongoing research applies bioanalytical chemistry to human health: specifically my students and I are developing new blood tests for ovarian cancer and understanding the chemical communication involved in West Nile virus cycles.



LAWRENCE WU PROFESSOR NEW YORK UNIVERSITY

SOCIOLOGY



What I hope students take away most from this program is: there are many opportunities for students in academia.

Degrees / Postdocs

Harvard College, A.B. '80 Stanford University, Ph.D. '87 Stanford Advisor: Nancy Tuma

Research Interests

Family, Social Demography, Poverty, Social Change, Statistical Methods

Key Publications

- 1. Wu, Lawrence L., and Brian C. Martinson. 1993. "Family Structure and the Risk of Premarital Birth." American Sociological Review 58 (2): 210-232.
- 2. Wu, Lawrence L. and Barbara Wolfe (Eds.). 2001. Out of Wedlock: Causes and Consequences of Nonmarital Fertility. New York: Russell Sage Foundation.
- 3. Wu, Lawrence L. 2008. "Cohort Estimates of Nonmarital Fertility." *Demography* 45(1): 193-207.

Honors / Awards

- + 1992-98, Faculty Scholar, William T. Grant Foundation + 1991-92, Fellow, Center for Advanced Study in the Behavioral Sciences
- + 1981-84, NSF Graduate Fellowship
- + 1980-81, John H. Wheeler and Elliot H. Wheeler Fellowship, Stanford University

Previous Institutions

- 1. University of Wisconsin-Madison
- 2. Princeton University

Through my research, I hope to:

advance understanding of disadvantaged populations in the United States.

I choose to work at my institutional type because: a university setting allows me to both conduct research and to teach undergraduates and graduate students.

The most fulfilling part of my job as a faculty member is: working collaboratively with graduate students and colleagues.

The career achievement that I am most proud of is: my current research.

My three most vivid memories of Stanford are:

- -- hitting a pothole while riding my bike on campus and flying through the air;
- -- one quarter spent at Stanford's overseas campus in Vienna; and
- -- a "eureka" moment when I looked at some early results from my dissertation research.

LAWRENCE WU

Lawrence L. Wu is Professor of Sociology, Director of the Center for Advanced Social Science Research, and Deputy Director of the Institute on Human Development and Social Change at New York University. He was previously a faculty member in the Department of Sociology at the University of Wisconsin-Madison (1988-2003) and Princeton University (1986-1988). During academic year 2001-2002, he was a visiting faculty member in the Department of Sociology at Yale University and a visiting scholar at the Institute for Social and Economic Policy and Research, Columbia University.

At NYU, he served as Chair of the Department of Sociology from 2003 to 2006, while at Wisconsin, he served as Associate Chair of the Department of Sociology from 1994 to 1997, and was affiliated with the Center for Demography and Ecology (1988present) and the Institute for Research on Poverty (1991-present). He was a Fellow at the Center for Advanced Study in the Behavioral Sciences (1991-1992) and Faculty Scholar of the William T. Grant Foundation (1992-1997). He has served as chair of: the ASA Sections on Population (2006-2007) and Quantitative Methodology (2003-2005); the Technical Review Committee (2002-2006), an advisory panel to the National Longitudinal Surveys at the Bureau of Labor Statistics; the Committee on the PAA Fund (1999-2000); and the ASA Committee on the Status of Gays, Lesbians, Bisexuals in Sociology (1996). He has served as a member of the Board of Directors of the Population Association of America (2002-05), the ASA Committee on Nominations (1999-2000), the Council of the ASA Section on Quantitative Methodology (1997-1999), and as a member of two data oversight boards, the Board of Overseers of the Panel Study of Income Dynamics (1996-2002) and the Technical Review Committee of the National Longitudinal Surveys (1999-2002). He has served as a coorganizer (with P. Gottschalk and R. Moffitt) of the Annual Summer Research Workshop on Problems of the Low-Income Population, Institute for Research on Poverty, University of Wisconsin-Madison (1998-2005). He currently serves as series editor (with M. Alvarez and N. Beck) of Analytical Methods for Social Research (Cambridge, 2003-present) and as book review editor of Sociological Methods and Research (2000-present). He has previously served on the editorial boards of Contexts (2003-2005), the American Journal of Sociology (1989-1991), and the American Sociological Review (1996-1998).

He is a recognized authority on nonmarital fertility, with his research in this area having received funding from NICHD, NSF, the William T. Grant Foundation, and ASPE.



Notes:	

STANFORD UNIVERSITY



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