

Past Recipients for the Zumberge Interdisciplinary Awards

2014

Henrike Moll, Psychology, USC Dornsife College of Letters, Arts and Sciences
Elsi Kaiser, Linguistics, USC Dornsife College of Letters, Arts and Sciences
Shrikant Narayanan, Signal & Image Processing, Viterbi School of Engineering
“Challenging Questions: Young Children’s Comprehension of Ambiguous Questions”

Leana Golubchik, Computer Science, Viterbi School of Engineering
Jill McNitt-Gray, Human and Evolutionary Biology, Dornsife College of Letters, Arts and Sciences
Fei Sha, Computer Science, Viterbi School of Engineering
“Towards Data-Driven Human Performance with Applications to Personalized Intervention”

Sarah Hamm-Alvarez, Pharmacology and Pharmaceutical Sciences, USC School of Pharmacy
William Stohl, Medicine, Keck School of Medicine
Wendy Mack, Preventive Medicine – Biostatistics, Keck School of Medicine
Martin Heur, Ophthalmology, Keck School of Medicine
“Development of a Tear Biomarker Panel for Sjögren’s Syndrome Diagnosis”

2013

Donald Arnold, Molecular Biology, Dornsife College of Letters, Arts and Sciences
James Knowles, Psychiatry & The Behavioral Sciences, Keck School of Medicine
“Neurogenomics of Brain and Sociality”

Robert Chow, Physiology & Biophysics, Keck School of Medicine
Koping (Kirk) Shung, Medical Ultrasound Transducer Resource, Viterbi School of Engineering
“Evaluating invasion potential of cancer cells with high-frequency ultrasound”

Dana Goldman, Health Policy and Economics, Sol Price School of Public Policy
Nancy Staudt, Law, The School of Law
“Developing the “Pathways to Health Care Reform Initiative”

Ching-Ling Lien, Pediatrics/Childrens Hospital, Keck School of Medicine
Qilong Ying, Cell & Neurobiology, Keck School of Medicine
Scott Fraser, Biological Sciences and Biomedical Engineering Director of Science Initiatives, Office of the Provost
“Genetically modified rats for regenerative medicine research in heart diseases”

Valter Longo, Gerontology/Administration, Gerontology
Elizabeth Zelinski, Gerontology/Administration, Gerontology
Mara Mather, Gerontology/Administration, Gerontology
Howard Hodis, Medicine – Cardiovascular – ARU, Keck School of Medicine
“Analysis of Cognitive and Cardiovascular Function in Growth Hormone Receptor Deficient (GHRD) humans”

2012

Yigal Arens, Information Sciences Institute, Viterbi School of Engineering
Geoffrey Cowan, Center on Communication Leadership & Policy, Annenberg School for Communication & Journalism
Mark Latonero, Center on Communication Leadership & Policy, Annenberg School for Communication &

Journalism “Developing information technology to disrupt human trafficking and the commercial sexual exploitation of children.”

David Conti, Preventive Medicine, Keck School of Medicine of USC Sergey Nuzhdin, Molecular Biology, Dornsife College of Letters, Arts and Sciences

Paul Thomas, Preventive Medicine, Keck School of Medicine of USC “USC Integrated Functional Genomic Analysis Center”

Tzung Hsiai, Biomedical Engineering, Viterbi School of Engineering

Yang Chai, Center for Cranial Facial Molecular Biology, Herman Ostrow School of Dentistry Kirk

Shung, Biomedical Engineering, Viterbi School of Engineering

David Warburton, Pediatrics at CHLA, Keck School of Medicine of USC “Hybrid BioFlex System for Electromechanical Coupling of Injured and Regenerating Tissues”

Thomas Lyon, Gould School of Law Albert Rizzo, Institute for Creative Technologies Thomas Talbot, Institute for Creative Technologies “Investigative Child Interviewing: Learning through Interaction with a Virtual Child”

Paul Newton, Aerospace and Mechanical Engineering, USC Viterbi School of Engineering Paul Macklin, Center for Applied Molecular Medicine, Keck School of Medicine of USC “Establishing The Center for Integrative Computational Oncology at VSOE/KSOM”

2011

David Baron, Department of Psychiatry, Keck School of Medicine

Marientina Gotsis, School of Cinematic Arts

“Entertainment Technology Innovation for Prevention, Assessment and Treatment of Head/Neck Injury in Youth Sports”

Isabelle Brocas, Department of Economics, Dornsife College of Letters, Arts and Sciences

Juan Carrillo, Department of Economics, Dornsife College of Letters, Arts and Sciences

Lian Jian, Annenberg School for Communication and Journalism

John Monterosso, Department of Psychology, Dornsife College of Letters, Arts and Sciences

“New Challenges for Economic Decision-making: Biology, Neuroscience and Economic Models”

Moh El-Naggar, Department of Physics and Astronomy, Dornsife College of Letters, Arts, and Sciences

Urbashi Mitra, Electrical Engineering Systems, Viterbi School of Engineering

“Electrical Signaling in Microbial Communities”

Jane Emerson, Department of Pathology, Keck School Medicine

Steven Nutt, Department of Materials Science, Viterbi School of Engineering

“Photopolymer Development for Density-driven Separation of Blood Components”

Eun Sok Kim, Electrical Engineering/Electrophysics, Viterbi School of Engineering

Mitchell Gross, Department of Medicine, Keck School of Medicine

“Integrated Micromechanical Platform for Spatially-Targeted Cancer Diagnosis and Therapeutics”

Patrick James, School of International Relations, Dornsife College of Letters, Arts, and Sciences

Jonathan Samet, Department of Preventive Medicine, Keck School of Medicine

“Public Health in Africa: The Religious Dimension”

Sean Curran, Department of Bio-Gerontology, Davis School of Gerontology

Matthew Pratt, Department of Chemistry, Dornsife College of Letters, Arts and Sciences
"Identification of O-GlcNAc Modified Proteins"

2010

"Biofluid Dynamics and Transport Phenomena: Experimentation and Mathematical Approaches to Retinal Detachment"

Satwindar Sadhal, Aerospace and Mechanical Engineering, Viterbi School of Engineering
David Hinton, Department of Pathology and Ophthalmology, Keck School of Medicine

"Center for Body Computing"

Leslie Saxon, Cardiovascular Medicine, Keck School of Medicine
Ashish Soni, Information Technology Program, Viterbi School of Engineering

"Dimensions in Biodiversity: From Natural to Urban"

Sergey Nuzhdin, Department of Molecular Biology, College of Letters, Arts and Sciences
Andrew Smith, Computational Biology, College of Letters, Arts and Sciences
Jim Haw, Environmental Studies, College of Letters, Arts and Sciences
Constantinos Sioutas, Civil Engineering, Viterbi School of Engineering

"Entertainment-Education to Reduce Obesity in At-Risk Minority Youth"

Jeremy Kagan, Production Division, School of Cinematic Arts
Donna Spruijt-Metz, Preventive Medicine, Keck School of Medicine

"Inside the Renaissance"

Peter Mancall, Department of History, College of Letters, Arts and Sciences
Adam Gilbert, Thornton School of Music
Diane Winston, Annenberg School for Communication and Journalism

"Preparation of Proposal to Relocate the National Solar Observatory to USC"

Edward Rhodes, Jr., Department of Physics and Astronomy, College of Letters, Arts and Sciences
Cyrus Shahabi, Computer Science, Viterbi School of Engineering

"PTEN and Maf-1: Defining a Novel Molecular Link between Obesity and Cancer"

Deborah L. Johnson, Department of Biochemistry and Molecular Biology, Keck School of Medicine
Bangyan Stiles, Pharmacology and Pharmaceutical Sciences, School of Pharmacy

"Smart Biomaterials for Efficient Attachment to Central Nervous System"

James Weiland, Department of Ophthalmology, Keck School of Medicine
Mark E. Thompson, Department of Chemistry, College of Letters, Arts and Sciences

"Towards Interactive Architecture"

Qingyun Ma, School of Architecture
Michael Arbib, Computer Science, Viterbi School of Engineering

2009

"Center for Dark Energy Biosphere Investigations"

Katrina Edwards, Department of Biological Sciences
Ellis Meng, Viterbi School of Engineering

"Center for Regional Climate Change"

Lowell Stott, Department of Earth Sciences
John Wilson, Department of Geography

"Center for Transpacific Studies"

Janet Hoskins, Department of Anthropology, College of Letters, Arts and Sciences
Viet Nguyen, Department of English, College of Letters, Arts and Sciences

"Cognitive Task-Analysis to Develop a Competency-Based Surgical Curriculum"

Craig Baker, Keck School of Medicine
Maura Sullivan, Rossier School of Education

"Development of Health Information Technology using HIV/AIDS Care Model"

Andrea Kovacs, Keck School of Medicine
Walter Wolf, School of Pharmacy

"Initiative on Community and Systems Resilience"

Robert Neches, Viterbi School of Engineering
Jeffrey Upperman, Children's Hospital Los Angeles

"Nanosecond Pulsed Power Science and Technology Center"

Martin Gunderson, Viterbi School of Engineering
Darnell Cole, Rossier School of Education

"National Center for RMSI at USC"

Massoud Pedram, Viterbi School of Engineering
Simon Wilkie, College of Letters, Arts and Sciences

"Regulatory T Cells as Predictors of Biophosphonate Related Osteonecrosis of the Jaw"

Ahn Le, School of Dentistry
Augustin Garcia, Keck School of Medicine

"Target Driven Drug Development for Colon Cancer"

Robert Ladner, Keck School of Medicine
Stan Louie, School of Pharmacy

2008

"Air Pollution and Brain Aging: Mechanisms and Intervention"

Tuck Finch, Gerontology
Costas Sioutas, Viterbi School of Engineering

"Application of Nanotechnology to Vesicoureteral Reflux Research"

Andy Chang, Keck School of Medicine
Travis Williams, College of Letters, Arts and Sciences

“Bioinformatics Information Research Network”
Carl Kesselman, Information Sciences Institute

"Center for Deep Energy Biosphere Investigations"
Katrina Edwards, College of Letters, Arts and Sciences
Ellis Meng, Viterbi School of Engineering

“Center for the Study of Immigrant Integration”
Dowell Myers, School of Policy, Planning and Development
Manuel Pastor, College of Letters, Arts and Sciences

“Collaborative Research Program on the Space Sciences Center and Space Engineering Research Center”
Joseph Kunc, Viterbi School of Engineering
Darrell Judge, College of Letters, Arts and Sciences

“Computerized Pediatric Acute Critical Event Training and Simulation”
Solomon Behar, CHLA
Jeffrey Upperman, Keck School of Medicine
Robert Neches, Viterbi School of Engineering

"Electronics and Nano-Energetics Integration"
Priya Vashishta, College of Letters, Arts and Sciences
Rajiv Kalia, Viterbi School of Engineering

"Integrated Approaches toward Predictive Personalized Medicine"
Jasmine Zhou, College of Letters, Arts and Sciences
Heinz-Josef Lenz, Keck School of Medicine

"Interdisciplinary Program on Microbiology"
Steven Goodman, School of Dentistry
Steven Finkel, College of Letters, Arts and Sciences

“Microfluidic Synthesis of TiO₂ Nanocrystals”
Richard Brutchey, College of Letters, Arts and Sciences
Noah Malmstad, Viterbi School of Engineering

“Regenerating Urban Neighborhoods”
Juliet Musso, School of Policy, Planning and Development
Jefferey Sellers, College of Letters, Arts and Sciences

"Toward a University Research Center on Megacities"
Jean-Pierre Bardet, Viterbi School of Engineering
Adam Rose, School of Policy, Planning, and Development

"Urban-Scale Computer-Aided Sustainable Design"
Karen Kensek, School of Architecture
Cyrus Shahabi, Viterbi School of Engineering

"USC Interdisciplinary Program for Molecular Research"
Nicos Petasis, College of Letters, Arts and Sciences

Nouri Neamati, School of Pharmacy

"Vehicle Pollution and Children's Health in Southern California"

Rob McConnell, Keck School of Medicine

John Wilson, College of Letters, Arts and Sciences

Jennifer Wolch, College of Letters, Arts and Sciences

"Virtual Climate Change Institute Workshop"

Lowell Stott, College of Letters, Arts and Sciences

Ana Chervenak, Information Sciences Institute

"Virtual Practice for Removable Partial Denture Design"

Timothy Saunders, School of Dentistry

Paul Debevec, Institute for Creative Technologies

"Wrigley Institute and Cinematic Arts Science/Art Conference"

Tony Michaels, College of Letters, Arts and Sciences

Kathy Smith, School of Cinematic Arts

2007

"Biology and Therapy of Pediatric Brain Tumors"

Robert Seeger, Department of Oncology

Anat Erdreich-Epstein, Department of Pediatrics

Antonio Ortega, Department of Electrical Engineering

"Cardiovascular Research Core at USC"

Tzung Hsiai, Department of Biomedical Engineering

Fengzhu Sun, Department of Biological Sciences

Kelvin Davies, School of Gerontology

Mark Barr, Department of Surgery

"Center for Quantum Information Science and Technology"

Daniel Lidar, College of Letters, Arts and Sciences

Stephan Haas, College of Letters, Arts and Sciences

Todd Brun, Department of Electrical Engineering

"Center for Sound at USC"

Tomlinson Holman, School of Cinematic Arts

Joanna Demers, Thornton School of Music

"Computation of Loads on the Musculoskeletal System of Humans and Animals Using 3-D Modeling"

Henryk Flashner, Department of Aerospace and Mechanical Engineering

Jill McNitt-Gray, Department of Kinesiology

Xiaoming Wang, Department of Biological Sciences

Reyes Enciso, School of Dentistry

"Cultivating Interdisciplinary Technology Innovation: Collaboratory for Technology and Culture at USC"

Anne Balsamo, School of Cinematic Arts

Doug Thomas, Annenberg School of Communication

Milind Tambe, Viterbi School of Engineering

“Emotion, Decisionmaking, and the Brain”
Antoine Bechara, College of Letters, Arts and Sciences
Ann Crigler, College of Letters, Arts and Sciences
Joseph Priester, Marshall School of Business
Thomas Lyon, Gould School of Law
Sheila Murphy, Annenberg School of Communication

"Exercise-Induced Neuroplasticity in Individuals with Parkinsons"
Beth Fisher, School of Dentistry
Michael Arbib, Viterbi School of Engineering
Richard Leahy, Viterbi School of Engineering

"Generating Sustained Funding for Interdisciplinary Research via the Southern California Population Research Center”
Lynne Casper, College of Letters, Arts and Sciences
Eileen Crimmins, School of Gerontology

“Global Analysis of TGF-Beta Signaling-Mediated Cell Cycle Regulators during Palatogenesis”
Yang Chai, School of Dentistry
Joseph Hacia, Keck School of Medicine

“Gospel Music History Archive”
Todd Grappone, USC Libraries
Ronald McCurdy, Thornton School of Music

"Interdisciplinary Technology Center for Child-Centric Societal Applications"
Shri Narayanan, Department of Electrical Engineering
Robert Rueda, School of Education
Gayla Margolin, Department of Psychology
Jo Ann Farver, Department of Psychology

“Interdisciplinary USC Program in Microbiology”
Steven Goodman, School of Dentistry,
Katrina Edwards, Department of Biological Sciences
Steven Finkel, Department of Molecular Biology

“Investigating How Genes Interact with Child Abuse and Neglect to Influence Mental Health”
Penelope Trickett, School of Social Work
Carol Prescott, Department of Psychology

“Late Emergence of Circadian Heart Rhythm in Indonesian Infants”
Toke Hoppenbrouwers, Department of Pediatrics
Michael Khoo, Department of Biomedical Engineering

"Pilot Study: Angiotensin (1-7) Mediated Recovery from Radiation Exposure"
Dolph Ellefson, Keck School of Medicine
Stan Louie, School of Pharmacy
Kathy Rodgers, Keck School of Medicine
Gere diZerega, Keck School of Medicine

"A Prospective Study of Aging and Schizophrenia-Spectrum Disorders"

Sarnoff Mednick, Department of Psychology
George Simpson, Department of Psychiatry

"Role of DNA Repair Proteins in Age-Dependent DNA Damage and Cancer"

Valter Longo, School of Gerontology
Michael Lieber, Department of Biochemistry
Lucio Comai, Department of Molecular Microbiology

"USC Center for the Study and Treatment of Bone Related Disorders"

Charles McKenna, Department of Chemistry
Parish Sedghizadeh, School of Dentistry
Stan Louie, School of Pharmacy

"USC Games Institute"

Gerard Medioni, Department of Computer Science
Scott Fisher, School of Cinematic Arts

"USC Institute for the Digital Arts and Humanities"

Phil Ethington, College of Letters, Arts and Sciences
Tara McPherson, School of Cinematic Arts

"USC Maternal, Child and Adolescent International Family Centers"

Andrea Kovacs, Department of Pediatrics
Kathleen Johnson, School of Pharmacy
Roseann Mulligan, School of Dentistry

"Use of Ultrasound for Image-Guided Surgery"

Jesse Yen, Department of Biomedical Engineering
Brent Liu, Department of Radiology
Shirin Towfigh, Department of Surgery

2006

"Application of Nanotechnology to Direct the Growth of Engineered Bladder and Kidney Tissue from Stem Cells"

Stephen Cronin, Department of Electrical Engineering-Electrophysics, Viterbi School of Engineering
Chester Koh, Department of Urology, Children's Hospital Los Angeles/Keck School of Medicine

"Imaging Protein Tyrosine Phosphorylation In Vivo"

Amy Barrios, Department of Chemistry, College of Letters, Arts and Sciences
Nunzio Bottini, Department of Orthopaedics, Keck School of Medicine

"The Influence of Fixed and Changing Environmental Stimuli on Walking and Freezing Behavior in Persons with Parkinson's Disease"

George Salem, Department of Biokinesiology & Physical Therapy, School of Dentistry
Giselle Petzinger, Department of Neurology, Keck School of Medicine

"User-Centric Patient/Clinician Distribution Platform with Tele-Rehabilitation Application Case Study"

Roger Zimmermann, Integrated Media Systems Center, Viterbi School of Engineering

Margaret McLaughlin, Annenberg School of Communication
Shri Narayanan, Departments of Electrical Engineering, Linguistics and Computer Science
Carolee Winstein, Department of Biokinesiology & Physical Therapy, School of Dentistry