



Brandon Aguirre | E³S

Brandon is a PhD student in electrical engineering at the University of Texas at El Paso (UTEP). Brandon performs research on electronic devices. He studies semiconductor materials at the nano-scale level to improve the efficiency of solar cells. Brandon works with II-VI materials at UTEP and with III-V materials in collaboration with the Center for Energy Efficient Electronics Science (E³S) at UC Berkeley.



Dr. Sharnnia Artis [E³S Education and Outreach Director] is an industrial engineer and engineering education researcher. Sharnnia joined the Center in June 2011 with thirteen plus years of experience working with education and outreach programs in engineering. She oversees the center's online education, diversity programs to recruit and retain underrepresented students in science and engineering, and outreach programs to introduce pre-college students to exciting career opportunities in energy efficient electronics science.



Carol Lynn Alpert

Carol Lynn directs the Strategic Projects Group at the Museum of Science, Boston (MOS). She develops innovative education outreach partnerships with university-based research centers and provides researchers with coaching in science communication skills. Alpert was the public engagement director for the Harvard-MIT-UCSB-MOS Nanoscale Science and Engineering Center (2001-2012), founding co-PI of the NSF Nanoscale Informal Science Education Network (2005-2010), and PI of the NIH SEPA Boston-area Health Science Education Partnership (2001-2007). She is ISE director for the NSF Center for High-rate Nanomanufacturing (NEU, UML, UNH, 2004-2014) and MOS PI on QSTORM, an NSF collaborative research project investigating the use of quantum dots for super-resolution imaging *in vivo* (2010-2014).



Antonio Baptista | Director, CMOP

António Baptista is a faculty member in the Institute of Environmental Health at Oregon Health & Science University (OHSU). He became the Director of the Coastal Margin Observation and Prediction program (CMOP) in July 2006. Baptista holds Master's (1984) and Ph.D. (1987) degrees in civil engineering from the Massachusetts Institute of Technology and the degree of Specialist in Maritime Hydraulics (1986) from Laboratório Nacional de Engenharia Civil in Portugal. He serves on the Scientific and Technical Advisory Committee of NSF's Ocean Observatories Initiative (OOI) and on the Independent Science Board of the California Bay-Delta Authority. He is president-elect of the Northwest Association of Networked Ocean Observing Systems (NANOOS).



Rashid Bashir [EBICS: Emergent Behavior of Integrated Cellular Systems] is Co-Director of knowledge transfer for EBICS and the UIUC site Director. He is the Abel Bliss Professor and Head of the Bioengineering Department and was Director of the campus-wide Micro and Nanotechnology Laboratory (MNTL). His research interests include Bionanotechnology, BioMEMS, Lab on a chip, 3-D Biofabrication and Bioprinting, and interfacing biology and engineering from molecular to tissue scale, all applied to solve biomedical problems.



**Pamela Bligh-Glover | Executive Director for Planning & Education
Center for Layered Polymeric Systems - CLiPS**

Pamela Bligh Glover manages the education programs for the Center and also oversees CLiPS's operations. She came to CLiPS from CWRU School of Medicine where she was the Education Director and Program Manager for a Robert Wood Johnson Foundation Generalist Physician Initiative project. Previously she managed the education and faculty development programs for the Department of Family Medicine at CWRU School of Medicine. Her educational background is in evaluation and measurement.



Rene Boiteau | CMORE graduate student

Rene Boiteau is a marine chemist at MIT and the Woods Hole Oceanographic Institution. He is interested in the interactions between trace metals and microbial communities in the ocean. His goal is to understand how microbes access trace metals that are bound by strong organic ligands in regions where these metals are scarce.



**Tina Louise Brower-Thomas [Director Research and Education
Integration, Howard University]**

is a material chemist. Tina develops curriculum at Howard University that integrates concepts of nanoscience and technology into the core STEM curriculum. Her research includes molecular self-assembly, growth of materials and surface characterization. She is passionate about broadening the participation of underrepresented minorities in the sciences. Tina is volunteers with community organizations that focus on STEM education and literacy.



Bob Brown | Managing Director, CSol

Bob oversees all administrative, financial, and reporting aspects of the center and also staffs the center's executive committee and all advisory committees. He is a Virginia Tech graduate with a B.S. in Management and an MBA.



Nievita Bueno Watts | CMOP Director of Academic Programs

Nievita is a geologist and science educator. Nievita develops graduate programs at the center. She conducts research on broadening the participation of underrepresented minorities in the sciences and serves on the Board of Directors of the Geoscience Alliance, a national organization dedicated to building academic partnerships and pathways to increase the number of Native Americans with degrees in Earth and Environmental Sciences.



Melissa Burt [CMMAP Education and Diversity Manager] is an atmospheric scientist and science educator at Colorado State University. Melissa coordinates K-12 and Higher Education programs at CMMAP. She also focuses on broadening participation of underrepresented groups in the Atmospheric Sciences.



Barbara Cabezal Bruno | Education Director, C-MORE

Barb is a geologist, educator and faculty member at the University of Hawai'i School of Ocean and Earth Science and Technology. Since 2006, she has served as C-MORE's Education Director. In this role, she has led the development and implementation of a number of education initiatives including community outreach, K-12 curriculum enhancements, online activities, K-12 teacher professional development, an undergraduate research program, and a professional development training program for graduate students and post-docs.



Ann Close | Co-Managing Director, Center for Dark Energy Biosphere Investigations (C-DEBI)

Ann Close (C-DEBI Co-Managing Director) has a background in oceanography and a strong interest in science communication. While her official role is to help manage C-DEBI along with co-managing director Rosalynn Sylvan, she loves creating new programs, particularly unique education opportunities for undergraduate and graduate students.



Vincent Chan | EBICS

Vincent Chan is a bioengineer and research scientist at MIT. He develops bioartificial muscle on microfabricated devices to build biological machines, which are assemblies of biological and non-biological components that produce machine functionalities.



Lizanne DeStefano is the Fox Family Professor of Educational Psychology and the Director of the Illinois Science, Technology, Engineering, and Mathematics Educational Initiative (I-STEM) at the University of Illinois in Urbana-Champaign. Dr. DeStefano's research interests include the evaluation and sustainability of innovative STEM programs, multi-site initiatives, and programs serving special populations such as students with disabilities or those at risk for academic failure. She is co-PI and/or evaluator for several NSF Centers including EBICS, nanoCEMMs, Center for Sustainable Nanotechnology, XSEDE and Blue Waters.



Margarita L. Dubocovich I am Professor and Chair of the Department of Pharmacology and Toxicology and Senior Associate Dean of Inclusion and Cultural Enhancement at the School of Medicine and Biomedical Science (SMBS) in the University at Buffalo (UB). My laboratory research seeks to understand the mechanism of action of the molecule melatonin at the MT1 and MT2 G-protein coupled receptors and to discover and develop novel molecules to treat a variety of diseases and conditions including insomnia, circadian sleep disorders, depression, seasonal affective disorders, and cardiovascular disease.



Joan M. Frye is a senior staff advisor at the National Science Foundation, where she has managed competitions for numerous programs, including Experimental Physical Chemistry, Chemical Instrumentation, Major Research Instrumentation, Partnerships in International Research and Education and the Science and Technology Centers: Integrative Partnerships Programs. She received a PhD in Physical Chemistry from the University of Chicago and taught at Howard University for several years, where she was a tenured member of the faculty. From July 2012-July 2013, she was on detail as a senior policy analyst at the White House Office of Science & Technology Policy.



Drew Elizabeth Glaser | Emergent Behavior of Integrated Cellular System
Drew is a graduate student at the University of California, Merced. She studies how controlling the extracellular microenvironment affects the differentiation of embryonic stem cells into endothelial cells and smooth muscle cells. She hopes to build vascular-like networks with her cells. Drew has been a part of EBICS since 2011 and hopes to complete her doctorate in 2014.



Ian Glenn | CMMAP

I'm a M.S. student in my third year at the University of Utah in the Department of Atmospheric Sciences. Under the direction of Dr. Steven Krueger, I'm studying sub-cloud-scale variability using a high resolution simulation of oceanic convection. It may be possible to apply an understanding of cloud scale physical processes to improve cloud schemes and parameterizations for large scale global models. I'm ultimately motivated to apply cloud scale knowledge to improve climate models because of the great social good it could bring to agriculture and to climate change adaptation / mitigation.



Prasad Gogineni | Center for Remote Sensing of Ice Sheets

Dr. Gogineni is a Professor in the Electrical Engineering and Computer Science Department at the University of Kansas and the Director of NSF Science and Technology Center for Remote Sensing of Ice Sheets. He has been involved with radar sounding and imaging of ice sheets for more than 15 years and contributed to the first successful demonstration of SAR imaging of the ice bed through more than 3-km thick ice.



Rachel Golda | CMOP

Rachel is a Ph.D. student in Environmental Science and Engineering under Drs. Tawnya Peterson and Joseph Needoba at Oregon Health and Science University. She designs and implements custom chemostat culture systems to study the effect of ocean acidification on harmful algal bloom (HAB) dinoflagellates.



Erik D. Goodman | Director, BEACON Center for the Study of Evolution in Action

Goodman is Professor of Electrical & Computer Engineering, of Mechanical Engineering, and of Computer Science & Engineering, at Michigan State University. His research centers on application of lessons from biological evolution to solution of real-world problems arising in engineering and other disciplines, through evolutionary computation. As BEACON's Director, he not only leads research teams, but also fosters the creation of dozens of new research partnerships yearly, across disciplines and across institutions, and supports efforts in education, diversity, and outreach to community and industry.



Vanessa Green | Higher Education & Diversity, CMOP

Green serves as Director of Student Development and Diversity at CMOP. Having earned a M.S. in Higher Education Administration she has focused her career on broadening participation and increasing engagement, persistence and retention among first-generation and underrepresented students in high school, undergraduate and graduate programs. She served as a founding faculty member and Dean of Students at the King George School in Vermont and served as a member of the Board of Trustees at Marlboro College. She currently serves on the Education and Outreach Steering Committee for the Center for Dark Energy Biosphere Investigations (C-DEBI).



Gary L. Harris, P.E. received his doctorate, masters and BSEE degrees from Cornell University in Electrical Engineering-Electro-Physics in 1980, 1976 and 1975 respectively. Dr. Harris currently is Professor of Electrical Engineering and Director of the Howard Nanoscale Science and Engineering Facility at Howard University in the School of Engineering located in Washington, DC. Dr. Harris' research interests have focused mainly on the growth and characterization of electronic, optical, spintronics, and 2-D materials. Dr. Harris can also be heard on Sirius-XM channel 141 HUR Voices and his show is entitled, "NanoTalk".



Ellen C. Hildreth is Chair of the Computer Science department at Wellesley College, where she also serves on advisory committees for the Neuroscience and the Cognitive and Linguistic Sciences programs. She conducts research on human visual processing that combines computational modeling with human perceptual experiments. She works to coordinate the development of an undergraduate curriculum and courses to train students to pursue the interdisciplinary study of intelligence.



Kathryn Hollar (Education & Outreach Director, Harvard University) is a chemical engineer by training. In her role as the Director of Educational Outreach for the Harvard School of Engineering and Applied Sciences, she designs and implements programs to engage people of all ages and backgrounds in science and engineering. She is particularly interested in programs for non-traditional students such as military veterans.



Wyn Jennings | The National Science Foundation

I am a chemist by training and have been at NSF for 16 years. My experience at NSF has been as a Program Director in Graduate Education (manager of the IGERT program) and as a Program Director in the Informal Science Education program. For a short period, I was assigned to the Department of Homeland Security where I helped establish 5 Centers of Excellence around the country that dealt areas such as Food Security and Behavioral Characteristics of Terrorists.



Amy Johnson | Center for Coastal Margin Observation & Prediction (CMOP)

Amy Johnson joined the Center for Coastal Margin Observation & Prediction (CMOP) as managing director in 2008. Amy's background includes 12 years in human resources management for biotech, high-tech, and higher education organizations, and 7 years in graduate education administration, most recently as the Assistant Dean for Graduate Education at the OHSU School of Science & Engineering. She holds an MS in Management in Science and Technology and a BA in Psychology.



Cynthia Joseph | C-DEBI

Cynthia Joseph is Diversity Director for the Center for Dark Energy Biosphere Investigations (C-DEBI). With a focus on developing partnerships with local community colleges, Cynthia focuses on creating pathways for students to enter research-based careers. With many years of classroom experience, she is developing guiding steps for students pursuing science careers.



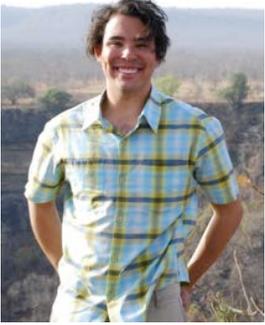
Roger Kamm | Emergent Behaviors of Integrated Cellular Systems

Roger Kamm is the Cecil and Ida Green Distinguished Professor of Mechanical and Biological Engineering at MIT. A primary objective of Kamm's research has been the application of fundamentals in fluid and solid mechanics to better understand essential biological and physiological phenomena. Studies currently focus on the molecular mechanisms of cellular force sensation, cell population dynamics, and the development of new microfluidic platforms for the study of cell-cell and cell-matrix interactions.



Alicia Knoedler | University of Oklahoma

Alicia is the director of the Center for Research Program Development and Enrichment and the Associate Vice President for Research at the University of Oklahoma. She works with faculty, postdocs, and graduate students to build their research programs as well as provides assistance in the development of research teams and partnerships, resources, proposals, broader impact activities, and other research needs. Alicia is the president of the National Organization of Research Development Professionals (NORDP) and is co-PI on Oklahoma's NSF EPSCoR Research Infrastructure Improvement Track-1 program.



Parker Kraus | Center For Multi-Scale Modeling of Atmospheric Processes

Parker works at the intersection of atmospheric science and ecology; developing models of biological processes for use in conjunction with general circulation models. His current research involves making estimates of wetland extent across the globe as they expand and contract in response to rainfall variations. These estimates facilitate accounting of wetland's carbon storage and methane emissions; and therefore assessment of the role wetlands play as a climate forcing.



Brent T. Ladd | Director of Education, Center for Science of Information

Brent directs the graduate student/postdoc events and programs, along with managing development of new curriculum for CSol. He oversees the creation and use of a new Learning HUB online platform for students and faculty to access course and module content in the Sol emerging field. In addition to educational program development and outreach, Brent's background includes ethology, ecological systems, and watershed management.



Estefania Llana Garcia / Graduate Student, CMOP

Estefania is a Ph.D. student in the joint laboratory of Drs. Peterson and Needoba. She holds a Bachelor's degree in Environmental Biology from the University of Oviedo (Spain) and a M.S in Biology from Portland State University. At CMOP, Estefania's research focuses on freshwater phytoplankton in the Columbia River; she studies the contribution of phytoplankton to pelagic primary production and investigates the effect of chemicals of emerging concern on phytoplankton growth and physiology. Estefania is also involved in science education and outreach activities at CMOP and at a local community college.



Louise S. Mead | BEACON Center for the Study of Evolution in Action

As an evolutionary biologist and Education Director at BEACON, I have the wonderful job of interacting with people across our consortium invested and interested in improving the public's understanding of evolution and the nature of science. My work includes everything from running teacher workshops and advising undergraduates and graduate students with evolution education research to teaching courses and doing outreach.



Lea Marlor | E³S Education and Outreach Program Manager

Lea is a materials engineer. Lea joined E³S in July 2013 after working for Purdue University's Women in Engineering Program for two years. She manages the center's diversity and outreach programs with the goal of recruiting underrepresented students in science and engineering to enter into the field of energy efficient electronics science. .



Leslie McClain | Education and Diversity Manager, Emergent Behavior of Integrated Cellular System

I am a cell biologist with a passion for science education. In EBICS, I coordinate graduate curriculum development, diversity recruiting, and community outreach.



Farnaz Niroui | E³S

Farnaz is a PhD student in the Department of Electrical Engineering and Computer Science at Massachusetts Institute of Technology. Her current research focuses on developing novel approaches to designing energy efficient transistors. .



Manu O. Platt | EBICS Diversity Director

Manu is an assistant professor of biomedical engineering at Georgia Institute of Technology and coordinates diversity and outreach programs including a high school full year academic research program called Project ENGAGE with 12 African-American high school students from the Atlanta Public School system. He is also a co-investigator and researcher as a part of the EBICS goal of building biological machines.



Tomaso A. Poggio

Tomaso A. Poggio, is the Eugene McDermott Professor in the BCS Department at MIT and a member of both CSAIL and the McGovern Institute. He is one of the most cited computational scientists with contributions ranging from biophysics to computational vision and learning theory. His recent work is opening a new phase in machine learning with a theory of unsupervised learning of invariant representations for supervised learning. The theory is relevant for the science and the technology of vision and speech.



Rajendram V Rajnarayanan | Director of Community Engagement

Rajendram is a pharmacologist and educator from the University at Buffalo, NY. In addition to conducting drug discovery research at UB, he is the associate director of campus-wide professional development initiatives including the CLIMB, IMSD and iSEED programs which are dedicated to maximize access to Bio-STEM careers to students from underrepresented groups. His specific role in the center is to attract a diverse community of scholars to enter internships and/or careers in science and to establish pipeline programs across campuses.



David Randall [Center for Multiscale Modeling of Atmospheric Processes]

David Randall is a Professor of Atmospheric Science with interests in climate modeling and science education. For over twenty years he has led a large university-based research team focused on the role of clouds in climate and mathematical methods for climate modeling.



Krissy Remple | CMOP Graduate Student

Krissy is a student in Brad Tebo's lab. Krissy is conducting research for her master's thesis that is focused on the contribution of estuarine turbidity maximum (ETM) events to the biogeochemistry of the Columbia River Estuary.



Mojgan Rostaminia | CMOP

Mojgan is doing a PhD degree in Environmental Science and Engineering in the Estuary and Ocean Sciences (EOS) track and is affiliated with the Center for Coastal Margin Observation and Prediction (CMOP). She received her bachelor's degree in Solid State Physics and her master's degree in Marine and Ocean Science/Sea Physics from Iran. She is working on the climate change and anthropogenic impacts on the Columbia River Estuary. Her research advisor is Dr. Antonio Baptista.



Narayan Sampath (EBICS – MIT/Georgia Institute of Technology/University of Illinois, Urbana-Champaign) is the Center Manager at EBICS and is responsible for all administrative and fiscal operations of the Center spread across 11 institutions, 30 faculty and 50 graduate students.



Stephanie Schroeder | Center for Dark Energy Biosphere Investigations (C-DEBI)

Stephanie Schroeder is the Education Director for C-DEBI. She leads the development and implementation of mentoring and professional development programs for K-12 teachers, undergraduate students, graduate students and postdoctoral researchers associated with C-DEBI.



Lakeita D. Servance [Educational Outreach Manager] is part of the EBICS staff at the Georgia Institute of Technology. Lakeita oversees Project ENGAGE (Engaging New Generations At Georgia Tech through Engineering), a program geared towards introducing underrepresented populations of high school students to STEM fields and research at Georgia Tech, in addition to spearheading other K-12 outreach initiatives. She has astute knowledge in working with socioeconomically disadvantaged populations and is dedicated to meeting the needs and challenges of children in Georgia.



Amy Smith | C-DEBI

I study geomicrobiology of the deep ocean crust, with an emphasis on how microbial communities are distributed with respect to mineralogy. My current project involves assembling genomes of dominant novel microorganisms and determining how microbe-mineral interactions affect ocean chemistry and productivity.



Wendy F. Smythe | Graduate Student, CMOP

Wendy F. Smythe is a Ph.D. candidate in Dr. Brad Tebo's lab. She is a member of the Haida Nation from Hydaburg Alaska. She is a geomicrobiologist/oceanographer with a research focuses on manganese oxidizing microorganisms from extreme marine and terrestrial environments. She also works to increase participation of Alaska Native students in STEM fields, by working in her tribal community in Southeast Alaska.



Wojciech Szpankowski | Director, CSol

Wojciech is the Saul Rosen Professor of Computer Science at Purdue University. His recent research work is devoted to the probabilistic analysis of algorithms on words, analytic information theory, and designing efficient multimedia data compression schemes based on approximate pattern matching. He serves on the editorial boards of Theoretical Computer Science, Discrete Mathematics and Theoretical Computer Science, and book series Advances in the Theory of Computation and Computational Mathematics.



Christine Task | Center for the Science of Information

Christine is a PhD candidate in Computer Science at Purdue University. Her research focuses on privacy-preserving social network analysis; she develops data analysis techniques which provide provable privacy protection for individuals within the data set. Currently, Christine is a visiting scholar at Howard University, where she assists with the Center's undergraduate researchers and outreach programs.



Michael Thompson is the Education and Outreach Coordinator at the NSF Science and Technology Center for Coastal Margin and Observation. He has a M.S. in Biochemistry and a PhD in Chemistry and focuses on Chemistry and Engineering Education along with culturally relevant STEM experiences. He has been instrumental in the establishment of the EPICS High-School program, development and implementation of professional development workshops, STEM learning communities, and service-learning experiences for high-school and undergraduate students.



Zhiying Wang | Center for Science of Information (CSol)

Zhiying Wang is a postdoctoral research fellow working with Prof. Oligica Milenkovic (UIUC), Prof. Tsachy Weissman (Stanford) and Prof. Nancy Lynch (MIT). Her research interests include information theory, theoretical and applied aspects of coding for storage devices, as well as efficient storage and processing of large amounts of data.



Mark Daniel Ward | Associate Director for the Center for Science of Information

Mark Daniel Ward is an Associate Professor of Statistics at Purdue University. His research interests include probabilistic, combinatorial, and analytical techniques for the analysis of algorithms and data structures. Since 2008, he has been the Undergraduate Chair in Statistics at Purdue, and the Associate Director for Actuarial Science. Dr. Ward is an Associate Director of the Center for Science of Information. He is a lifetime member of the Institute of Mathematical Statistics, and a lifetime member of the Society for Advancement of Chicanos and Native Americans in Science (SACNAS).



Sheree Watson | Graduate Student, CMOP

Sheree is a graduate student in the lab of Tawyna Peterson and Joe Needoba at Oregon Health & Science University's Institute of Environmental Health. Sheree is working on cycling of Phosphorus in the Columbia River Estuary. She did her undergraduate work at Montana State University and her M.S. at the University of Oregon's, Oregon Institute of Marine Biology.



Robert M Westervelt | Director

Westervelt's group images the motion of electrons through nanostructures using custom-built liquid-He cooled scanning probe microscopes. For biomedicine, his group has developed programmable Integrated Circuit / Microfluidic chips to manipulate biological cells and liquid droplets. Westervelt previously served as Director of an NSEC *Science of Nanoscale Systems and their Device Applications*.



Danielle J. Whittaker | BEACON Center for the Study of Evolution in Action

Danielle is the Managing Director of the BEACON Center for the Study of Evolution in Action. She conducts field and laboratory research on chemical communication in songbirds, focusing on the use of chemical signals for mate choice in dark-eyed juncos.



Dr. John C. Wingfield | Assistant Director for Biological Sciences at the National Science Foundation

John is a distinguished scientist and active researcher with a strong record of scholarly scientific publication and leadership experience. His research has covered a wide spectrum of biology from molecular and organismal to environmental and ecological scales with focuses on neural pathways for environmental signals affecting seasonality in birds and their mechanisms of coping with environmental stress. His research also interfaces with how animals deal with global climate change, endocrine disruption and conservation biology.



Sarah B. Woodruff | Director, Discovery Center and Ohio's Evaluation & Assessment Center for Mathematics and Science Education

Sarah provides leadership in research design, data analysis, instrument development, and all aspects of evaluation and assessment at Ohio's E & A Center for large-scale, externally funded education programs and projects across the nation. Dr. Woodruff has a broad understanding of education, having served as a P-12 teacher and an administrator and as an Assistant Director and Program Administrator with the Ohio Department of Education. Her primary research interests include gender and equity issues in science education, science teacher preparation and licensing policy, and teacher professional development related to inquiry teaching and learning.



Eli Yablonovitch | Director, NSF Center for Energy Efficient Electronics Science (E3S)

Eli Yablonovitch received his Ph.d. degree in Applied Physics from Harvard University in 1972. He worked for two years at Bell Telephone Laboratories, and then became a professor of Applied Physics at Harvard. In 1979 he joined Exxon to do research on photovoltaic solar energy. Then in 1984, he joined Bell Communications Research, where he was a Distinguished Member of Staff, and also Director of Solid-State Physics Research. In 1992 he joined the University of California, Los Angeles, where he was the Northrop-Grumman Chair Professor of Electrical Engineering. Then in 2007 he became Professor of Electrical Engineering and Computer Sciences at UC Berkeley, where he holds the James & Katherine Lau Chair in Engineering.



Jonathan P. Zehr | Center for Microbial Oceanography: Research and Education (C-MORE)

Dr. Zehr is a Professor of Ocean Sciences at the University of California, Santa Cruz. Research is focused on nitrogen cycling by aquatic microorganisms, with a major focus in oceanic nitrogen fixation.