Travel Award Program 2006-2016

Researchers:
- Abhay Ramachandra (Pediatrics)
- Akshay Chaudhari (Bioengineering)
- Orly Liba (Electrical Engineering)
- Uchechukwuka Monu (Electrical Engineering)
- Qiyuan Tian (Electrical Engineering)
- Matthew Titchenal (Mechanical Engineering)
- Abhay Ramachandra (Pediatrics)
The Stanford Bio-X Travel Award Program was created in order to help promote the development of public speaking skills amongst our students, as well as to provide them with the invaluable opportunity to travel and network with like-minded peers and to learn about new ideas that could potentially and positively affect their research.

Beginning in 2006, Bio-X has been providing $500 in travel subsidies to graduate students working in Bio-X affiliated labs, enabling them to give oral presentations of their work at an upcoming conference. To date, we have provided over 420 travel subsidies to Stanford graduate students. These students come from many disciplines around campus; they represent 41 different departments and the research of the labs of 142 Stanford faculty members. The students have traveled to 73 foreign cities in 33 different countries, city-states, or commonwealths, and 32 different states in the United States.

We would also like to acknowledge Mr. Matthew Frank, whose generous donation this year supported students’ and postdocs’ travel to disseminate their exciting work.

**ADDITIONAL AWARDS CONFERRED ON OUR TRAVEL Awardees DUE TO THEIR PREsentations**

In addition to the Stanford Bio-X travel award, a number of our student awardees have received special accolades for their research and their presentations. The full list of awards, publications, and other accomplishments related to their oral presentations may be found online at: [https://biox.stanford.edu/research/travel-awards](https://biox.stanford.edu/research/travel-awards)

*Some highlights of our student travel awardees’ work:*

**Abhay Bangalore Ramachandra** traveled to National Harbor, Maryland for the 2016 Summer Biomechanics, Bioengineering and Biotransport Conference to present his talk, “Virtual evaluation of surgical revascularization techniques in coronary artery bypass surgery.” Abhay was a *finalist at the student paper competition*, garnering the *third place prize*.
Akshay Chaudhari traveled to Oulu, Finland for the 9th Annual International Workshop on Osteoarthritis Imaging to give his talk, “T2 relaxometry of short T2 tissues with high SNR efficiency.” Akshay won the Best Young Investigator award at this event.

Orly Liba traveled to New York, New York for the World Molecular Imaging Conference 2016 to give her talks, “Spectral analysis for molecular imaging with optical coherence tomography (OCT) in vivo” and “Characterizing nanoparticle microbiodistribution using adaptive darkfield hyperspectral microscopy.” Orly received two awards from the conference organizers: a Women in Molecular Imaging Scholar award and a Student Travel Stipend award.
Matthew Titchenal traveled to Colorado Springs, Colorado for the American Orthopaedic Society for Sports Medicine 2016 Annual Meeting to give his talk, “Early changes in the knee joint center of rotation during walking following anterior cruciate ligament reconstruction correlate with later changes in patient reported outcomes.” His paper was awarded the O’Donoghue Sports Injury Award, which is given to the best overall paper which deals with clinical based research or human in vivo research.

Uchechukwuka Monu traveled to the Republic of Singapore for the 24th Annual Meeting of the International Society for Magnetic Resonance in Medicine to present her talk, “A method to quantitatively compare bone and cartilage changes post knee injury: initial results,” which was awarded the Magna Cum Laude Merit Award, granted to the top 15% of submitted abstracts in the same category.

Qiyuan Tian traveled to the Republic of Singapore for the 24th Annual Meeting of the International Society for Magnetic Resonance in Medicine to present his talk, “Diffusion MRI tractography for improved MRI-guided focused ultrasound thalamotomy targeting for essential tremor.” Qiyuan received the Summa Cum Laude Merit Award (top 3% of submitted abstracts at the meeting).
Chen-Ming Chang traveled to Strasbourg, France for the 2016 IEEE Nuclear Science Symposium / Medical Imaging Conference. His talk, “Time-over-threshold for pulse shape discrimination in a time-of-flight/depth-of-interaction phoswich PET detector,” was awarded the best oral presentation.

Chen-Ming Chang traveled to Strasbourg, France for the 2016 IEEE Nuclear Science Symposium / Medical Imaging Conference

Stanford Bio-X granted 46 travel awards in 2016:

**ZOE ASSAF**  
Genetics  
Professor Dmitri Petrov  
“Mutational patterns in *Drosophila melanogaster*” (The Allied Genetics Conference 2016)

**ABHAY BANGALORE RAMACHANDRA**  
Institute for Computational & Mathematical Engineering  
Professor Alison Marsden  
“Virtual evaluation of surgical revascularization techniques in coronary artery bypass surgery” (2016 Summer Biomechanics, Bioengineering and Biotransport Conference)

**SALIL BHATE**  
Bioengineering  
Professors Garry Nolan and Stanley Qi  

**LILY BLAIR**  
Biology  
Professor Daniel Fisher  
“Within and between individual convergence in the human antibody repertoire in response to influenza vaccines and dengue infection” (Deep Sequencing in Infectious Diseases Workshop 2016)

Emily Hollenbeck in Kyoto, Japan for The XVIIth International Congress on Rheology
This conference offered the chance to hear talks from scientists whose work I’ve only read about, discuss topics with like-minded fans of epigenetics and metabolism, and network with potential post-doc advisors. In addition, by presenting my unpublished work, which is currently under revision, I was able to get constructive feedback as to how to how to bring my research to a published close.

— Nora Yucel on her 2016 travel experience

**CHEN-MING CHANG**
Applied Physics and Radiology
Professor Craig Levin

**AKSHAY CHAUDHARI**
Bioengineering
Professor Brian Hargreaves
“T2 relaxometry of short T2 tissues with high SNR efficiency” (9th Annual International Workshop on Osteoarthritis Imaging)

**FEIYU CHEN**
Electrical Engineering
Professors John Pauly and Shreyas Vasanawala
“Auto-calibrating wave-CS for motion-robust accelerated MRI” (ISMRM Workshop on Data Sampling & Image Reconstruction 2016)

**BOGDAN CONRAD**
Orthopaedic Surgery
Professor Fan Yang
“Microribbon-based hydrogels induced robust osteogenesis of mesenchymal stem cells and bone regeneration with enhanced mechanical strength” (2016 Orthopaedic Research Society Annual Meeting)
2015 Travel Awardees Matthew Bieniosek, Cesare Jenkins, Chen-Ming Chang, and Kristen Lurie

ALEX DIEZMANN
Chemistry
Professor W.E. Moerner
“Correcting nanoscale aberrations over the field of view in three-dimensional localization microscopy” (Picoquant’s 22nd International Workshop on Single Molecule Spectroscopy and Super-resolution Microscopy in the Life Sciences)

KAREN DUBBIN
Materials Science & Engineering
Professor Sarah Heilshorn
“Self-assembling bio-inks for 3D printing of cellular constructs” (2016 World Biomaterials Congress)

EMILY EBEL
Biology
Professor Dmitri Petrov
“Malaria parasites drive adaptation in mammalian genomes” (Society for Molecular Biology and Evolution Conference 2016)

MICHAEL FANTON
Mechanical Engineering
Professor David Camarillo
“Investigation of football head impacts through development of a dynamic model” (Biomedical Engineering Society 2016 Annual Meeting)

Vignesh Ganapathi-Subramanian in Berlin, Germany for the International Geometry Summit 2016)
VIGNESH GANAPATHI-SUBRAMANIAN  
Electrical Engineering  
Professor Leonidas Guibas  
“Stable region correspondences between non-isometric shapes” (International Geometry Summit 2016)

AARON GOODMAN  
Biology  
Professor Marcus Feldman  
“Stochastically varying environments promote evolution of modularity and hierarchy in simulated bacterial metabolic networks” (Society for Molecular Biology and Evolution Conference 2016)

EMILY HOLLENBECK  
Chemical Engineering  
Professors Gerald Fuller and Lynette Cegelski  
“Contribution of extracellular proteinaceous fibers to the adhesion of uropathogenic Escherichia coli to bladder cells” (The XVIIth International Congress on Rheology)

CESARE JENKINS  
Mechanical Engineering  
Professor Lei Xing  
“Automation of high dose rate brachytherapy quality assurance: development of a radioluminescent detection system for simultaneous detection of activity, timing, and positioning” (2016 American Association of Physics in Medicine Annual Meeting)

My interactions with scientists at the frontier of this interdisciplinary field will provide an excellent foundation for the future research directions in my PhD lab, as well as my own new directions as I embark on a postdoc position this fall.  
— Andrew Klein on his 2016 travel experience
Presenting at one of the Gordon Research Seminars, made possible by a Bio-X Travel Award, has been one of the most rewarding experiences of my graduate career. I was exposed to fantastic and creative science being conducted all across the world. This meeting gave me an opportunity to interact, ask questions, and receive mentorship from several of my scientific heroes face-to-face. With respect to my own research, I received invaluable feedback, and have come home to the lab invigorated, with a plethora of fresh ideas for new ways to approach both my data and the scientific questions posed by the field.

— Lucien Weiss on his 2016 travel experience

XIAOFAN JIN
Bioengineering
Professor Ingmar Riedel-Kruse
“Patterned biofilms for synthetic microbial consortia” (Biofilms 7)

ANDREW KLEIN
Chemical Engineering
Professor Elizabeth Sattely
“Indole antibiotic biosynthesis in edible plants: from genomes to bioactive molecules” (International Society for Molecular Plant-Microbe Interactions Congress 2016)

MAURICE LEE
Chemistry
Professor W.E. Moerner
“3D single-molecule super-resolution fluorescence microscopy with the corkscrew point spread function” (2016 Biophysical Society Annual Meeting)

SOAH LEE
Materials Science & Engineering
Professor Fan Yang
“Engineering aligned microribbon-based hydrogels to guide 3D muscle tissue regeneration” (2016 World Biomaterials Congress)
My presentation on transglutaminase activation was well-received, and it opened the door to several collaborations that will allow me and my lab to expand and strengthen our research program.

— Brad Palanski on his 2016 travel experience

**JACKSON LIANG**  
**Molecular & Cellular Physiology**  
**Professor Lucy O’Brien**  
“An intercellular E-cadherin-EGFR relay maintains organ size during renewal by coupling cell division and death” (*The Allied Genetics Conference 2016*)

**ORLY LIBA**  
**Structural Biology**  
**Professor Adam de la Zerda**  
“Spectral analysis for molecular imaging with optical coherence tomography (OCT) in vivo” and “Characterizing nanoparticle microbiodistribution using adaptive darkfield hyperspectral microscopy” (*World Molecular Imaging Conference 2016*)

**EDEN MALONEY**  
**Surgery**  
**Professor Olivia Martinez**  
“Integrative, multi-cohort analysis of Epstein-Barr Virus (EBV)-positive and negative tumor samples to identify gene-signatures associated with EBV oncogenesis” (*26th International Congress of The Transplantation Society*)

**TREVOR MARTIN**  
**Biology**  
**Professor Hunter Fraser**  

Karen Dubbin in Montréal, Canada for the 2016 World Biomaterials Congress
My talk was very well received, and I was able to network with a number of student and professor colleagues, receiving valuable feedback and insights into my research. I presented relatively new research, so this is a critical time to receive useful input from other scientists in the field. Additionally, the opportunity to present provided me with valuable experience in creating and practicing a professional talk. Thank you again to Bio-X for being so supportive!

— Zoe Assaf on her 2016 travel experience
I’d like to give my honest and sincere appreciation to Bio-X fellowship and travel grants, which supported me throughout my PhD years, and enabled me to learn and grow as a young researcher.

— Soah Lee on her 2016 travel experience
In addition to the talk, the conference also provided opportunities for me to network. I attended a networking event for PhD students and postdocs, where we got to talk to representatives from academia, government, and industry about career perspectives. It helped inform possible career paths and opened up some new options for me (e.g. working as a researcher at the VA).

— Lyndia Wu on her 2016 travel experience

**XINWEI SHI**  
Electrical Engineering  
Professor Brian Hargreaves  
“Accelerated imaging of metallic implants using model-based nonlinear reconstruction” (ISMRM Workshop on Data Sampling & Image Reconstruction 2016)

**PICHIA SHUNHAVANICH**  
Bioengineering  
Professor Norbert Pelc  
“Lossless compression of projection data from photon counting detectors ” (SPIE Medical Imaging 2016)

**NASA SINNOTT-ARMSTRONG**  
Genetics  
Professors Christina Curtis and Michael Snyder  
“Convergence of dispersed regulatory variants in cancer predisposition” (2016 Pan-Cancer Analysis of Whole Genomes Face-to-Face)

**ELLIOTT SORELLE**  
Structural Biology  
Professor Adam de la Zerda  
“Contrast-enhanced optical coherence tomography with picomolar sensitivity enables functional 3D imaging of deep tumor microvasculature and lymphatic drainage in live animal models” (World Molecular Imaging Congress 2016)

Noelle Rabiah in Kyoto, Japan for The XVIIth International Congress on Rheology
Kun-Hsing Yu in San Francisco for the American Medical Informatics Association 2016 Joint Summits on Translational Science

LI TAO
Electrical Engineering
Professor Craig Levin
“Investigation of electron multiplication effect in optical property modulation-based radiation detection method for PET” (2016 IEEE Nuclear Science Symposium/Medical Imaging Conference)

QIYUAN TIAN
Electrical Engineering
Professor Jennifer McNab
“Diffusion MRI tractography for improved MRI-guided focused ultrasound thalamotomy targeting for essential tremor” (24th Annual Meeting of the International Society for Magnetic Resonance in Medicine)

MATTHEW TITCHENAL
Mechanical Engineering
Professor Constance Chu
“Early changes in the knee joint center of rotation during walking following anterior cruciate ligament reconstruction correlate with later changes in patient reported outcomes” (American Orthopaedic Society for Sports Medicine 2016 Annual Meeting)

SANDEEP VENKATARAM
Biology
Professor Dmitri Petrov
“Fitness pleiotropy and the phenotypic basis of adaptation in experimentally evolving yeast” (The Allied Genetics Conference 2016)

LUCIEN WEISS
Chemistry
Professor W.E. Moerner
“Unraveling the hedgehog signaling pathway by single-molecule tracking” (Gordon Research Seminar 2016)

Although the scientific experience was important, the cultural experience of meeting researchers from around the world and visiting the city of Kyoto was equally as valuable. — Emily Hollenbeck on her 2016 travel experience
From 2006 to 2015, Stanford Bio-X gave 330 travel awards to Stanford graduate students from many disciplines across the university. They represent 40 different departments and 128 faculty members.

For the complete list of Stanford Bio-X travel awardees from 2006 to 2015, please visit: https://biox.stanford.edu/research/travel-awards
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