



STANFORD BIO-X

TRAVEL AWARD PROGRAM 2006-2019

Biodegradation of plastic waste by mealworms:
Preventing pollution and recovering resources

Anja Malawi Brandon
Criddle Lab, Stanford University
GCE-GSC 379

Stanford | ENGINEERING
Civil and Environmental Engineering

@AnjaM

Anja Malawi Brandon (Civil & Environmental Engineering) presenting at the 23rd Annual Green Chemistry & Engineering Conference / 9th International Conference on Green & Sustainable Chemistry

STANFORD BIO-X TRAVEL AWARD PROGRAM



Over a decade of supporting students...

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. Many also earn awards that could help them immensely in their future careers.

Beginning in 2006, Bio-X has been providing \$500 in travel subsidies to graduate students and postdoctoral fellows working in Bio-X affiliated labs, enabling them to give oral presentations of their work at an upcoming conference. To date, we have provided 633 travel subsidies to young Stanford researchers. The awardees come from many disciplines around campus; they represent 48 different departments and the research of the labs of 200 Stanford faculty members. The students have traveled to 103 foreign cities in 39 different countries, city-states, or commonwealths, and 37 different states in the United States.

We would also like to acknowledge Mr. Matthew Frank, whose generous donation to the program supported postdocs' travel to disseminate their exciting work.

ADDITIONAL AWARDS CONFERRED ON OUR TRAVEL AWARD RECIPIENTS 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>

Some highlights of our student travel awardees' work:

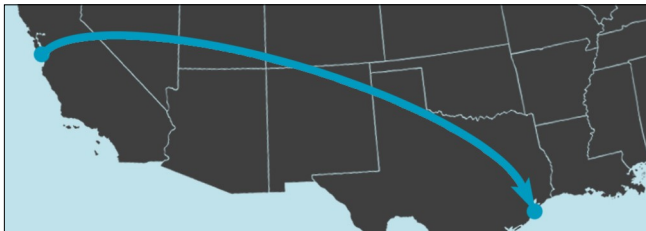


Jose Andrade Lopez, a PhD student in Biology under Dr. Chris Lowe (Biology), traveled to Tampa, Florida to present his talk, "Nervous system evolution: A molecular genetic characterization of neural cell types in *S. kowalevskii*," at The Society of Integrative and Comparative Biology Annual Meeting, where his abstract was selected among the top 7 within the Division of Neurobiology, Neuroethology, and Sensory Biology to participate in the best oral presentation student award.





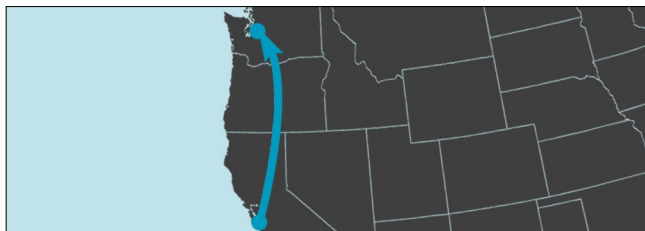
Eneko Axpe Iza, a postdoctoral student in Materials Science & Engineering under Dr. Eric Appel (Materials Science & Engineering), traveled to Galveston, Texas for the 2019 NASA Human Research Program Investigators' Workshop, where he was selected as a *top five finalist in the Science Fiction to Science Fact Award Competition*, a NASA ideas competition co-organized with TRISH, for his idea about developing an injectable hydrogel for the bone healing in astronauts. *His project was selected as a "Promising Proposal," and he was invited to submit a full proposal for a Focused Investigator Project (FIP)*, which is an award of \$100,000 for one year to further develop this promising idea. In addition, the poster he presented, entitled "A human mission to Mars: predicting bone mineral loss in astronauts" was awarded *Third Place for the NASA HRP Postdoctoral Fellow Award*.



Eneko Axpe Iza in Galveston, Texas for the 2019 NASA Human Research Program Investigators' Workshop



Johannes Birgmeier, a PhD student in Computer Science under Dr. Gill Bejerano (Developmental Biology, Computer Science, and Pediatrics - Genetics), traveled to Seattle, Washington to present his talk "ClinPhen extracts and prioritizes patient phenotypes directly from medical records to expedite genetic disease diagnosis" at the ACMG Annual Clinical Genetics Meeting 2019. Johannes had a *featured platform presentation, an honor for which only 4 out of approximately 1,000 submitted abstracts were selected in 2019*.

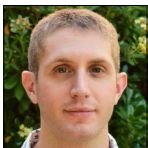




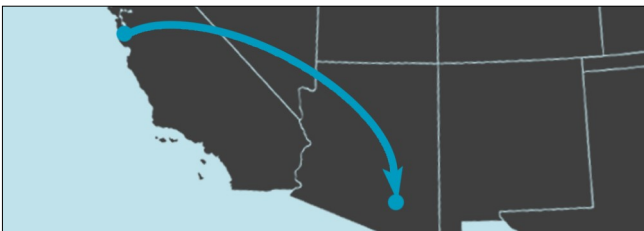
Laura Bogar, a PhD student in Biology under Dr. Kabir Peay (Biology), traveled to Louisville, Kentucky to give her talk, “Resource economics of ectomycorrhizal symbiosis vary with competitive context and nitrogen addition,” at the 2019 Ecological Society of America Annual Meeting. Based on the quality of her abstract, she was awarded *additional* travel support from the Plant Population Ecology Section of the ESA.



Laura Bogar in Louisville, Kentucky for the 2019 Ecological Society of America Annual Meeting

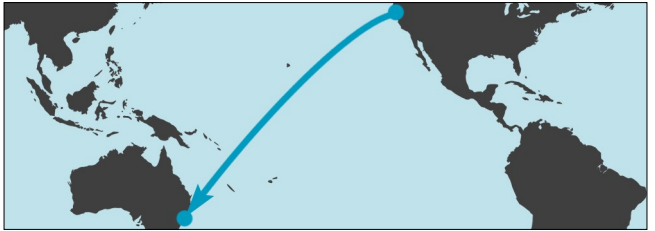


Michael D'Antonio, a PhD student in Geological Sciences under Dr. C Kevin Boyce (Geological Sciences), traveled to Tucson, Arizona to give his talk, “Arborescent lycopsis periderm production was limited,” at the Botanical Society of America 2019. He was awarded a *Bill Dahl Graduate Student Research Award* from the Botanical Society of America for his research.





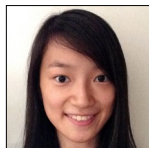
Eric Gonzalez, a PhD student in Mechanical Engineering under Dr. Sean Follmer, traveled to Sydney, Australia to give a talk, “Investigating the detection of bimanual haptic retargeting in virtual reality,” at the 25th Association for Computing Machinery Symposium on Virtual Reality Software and Technology, where he received the *Best Short Paper award*.



Lawrence Kim, a PhD student in Mechanical Engineering under Dr. Sean Follmer, traveled to Glasgow in the U.K. to give a talk, “SwarmHaptics: haptic display with swarm robots,” at the Association for Computing Machinery Conference on Human Factors in Computing Systems (CHI). He received the *Best Paper Honorable Mention Award* for his paper.



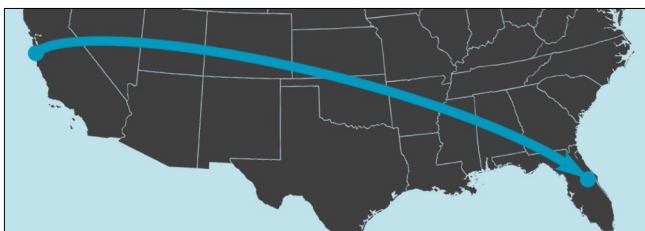
Lawrence Kim in Glasgow, U.K. for the Association for Computing Machinery Conference on Human Factors in Computing Systems (CHI)



Patricia Lan, a PhD student in Bioengineering under Dr. Gary Glover (Radiology), traveled to Quebec, Canada to give a talk, "Simultaneous fMRE and fMRI measures the viscoelastic and BOLD responses of the human brain to functional activation in the visual cortex," at the International Society for Magnetic Resonance in Medicine's 27th Annual Meeting. Her abstract was awarded *Magna Cum Laude*, an honor given to Trainee members whose abstracts score in the top 15% within a major subject review category. It was also selected for the *2nd place best student abstract award* in the ISMRM MR elastography study group, which consists of a certificate, ribbon, and cash prize.



David Mackanic, a PhD student in Chemical Engineering under Dr. Zhenan Bao (Chemical Engineering), traveled to Orlando, Florida to give a talk, "calable and facile preparation of dynamic single-ion-conducting networks (DSN) for lithium metal stabilization," at the 2019 American Institute of Chemical Engineers National Meeting. He received *1st Place, Excellence in Graduate Polymer Research*, after being judged by a panel of four professors.



David Mackanic with his advisor, Professor Zhenan Bao, Orlando, Florida for the American Institute of Chemical Engineers National Meeting 2019



Andre Mossige, a postdoctoral student in Chemical Engineering under Dr. Gerald Fuller (Chemical Engineering), traveled to Hong Kong to give a talk, “The hydrodynamic breadboard: clog-free cell sorting using hydrodynamic obstacles,” at the 2019 Physics and Chemistry of Microfluidics Gordon Research Seminar (GRS). He received a *travel award from the GRS to cover the conference fee.*



Sandra Schachat, a PhD student in Geological Sciences under Dr. Jonathan Payne (Geological Sciences) and Dr. C. Kevin Boyce (Geological Sciences), traveled to Campobasso, Italy to give a talk, “The relationship between wing pattern and venation, from Micropterigidae to Macroheterocera,” at the XXI European Congress of Lepidopterology. She won *first place for Best Student Presentation at the Ph.D. level.*



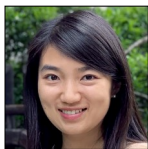
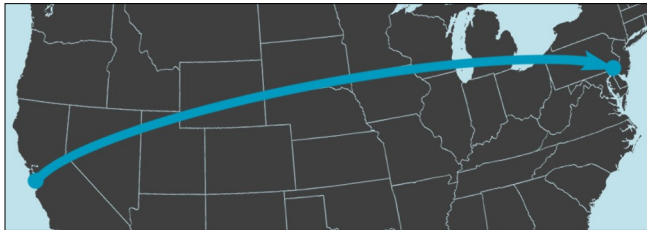
Sandra Schachat in Campobasso, Italy for the XXI European Congress of Lepidopterology



Johannes Birgmeier in Seattle, Washington for the American College of Medical Genetics and Genomics (ACMG) Annual Clinical Genetics Meeting 2019



Alice Stanton, a PhD student in Bioengineering under Dr. Fan Yang (Orthopaedic Surgery and Bioengineering), traveled to Philadelphia, Pennsylvania to give a talk, “Collagen I-mediated stem cell mechanotransduction depends on solvent type,” at the Biomedical Engineering Society Annual Meeting 2019. She was selected to receive a *BMES Career Development Award* at the event.

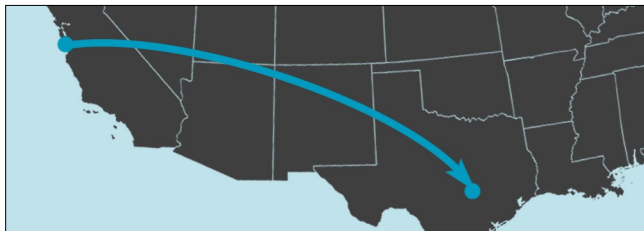


Li Tao, a PhD student in Electrical Engineering under Dr. Craig Levin (Radiology), traveled to Manchester in the United Kingdom to give a talk, “Study of the coincidence time resolution of new perovskite bulk crystals,” at the 2019 Institute of Electrical and Electronics Engineers (IEEE) Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC) and 26th International Symposium on Room-Temperature Semiconductor Detectors (RTSD). She was awarded *third place for the Christopher J. Thompson Best Student Paper* and also received a *conference Trainee Grant*.





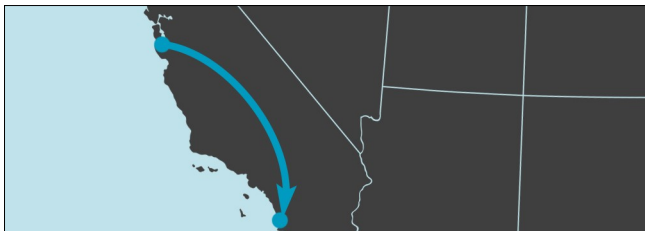
Oguz Tikenogullari, a PhD student in Mechanical Engineering under Dr. Ellen Kuhl (Mechanical Engineering) and Dr. Alison Marsden (Pediatrics – Cardiology and Bioengineering), traveled to Austin, Texas to give a talk, “Investigating the effects of viscous material properties in a pumping heart,” at the 15th U.S. National Congress on Computational Mechanics. He received a travel award from the organizing committee that included his registration and accommodations.



Oguz Tikenogullari in Austin, Texas for the 15th U.S. National Congress on Computational Mechanics

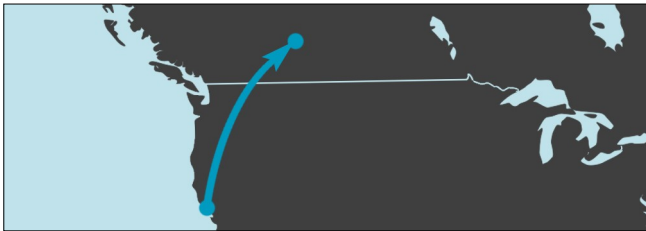


Helen Tran, a postdoctoral student in Chemical Engineering under Dr. Zhenan Bao (Chemical Engineering), traveled to San Diego, California to give a talk, “Molecularly engineering polymers for biodegradable and stretchable electronic,” at the American Chemical Society 2019. She was invited to participate as a *Division of Polymeric Materials: Science and Engineering (PMSE) Future Faculty Scholar*. These scholars are chosen by conference organizers and *ad hoc* members of the selection committee as talented postdocs who have made significant contributions to their respective fields within polymer materials science and engineering.





Scott Uhlich, a PhD student in Mechanical Engineering under Dr. Scott Delp (Bioengineering and Mechanical Engineering), traveled to Calgary, Canada to give a talk, “Personalization improves the efficacy of gait modifications at reducing the knee adduction moment in individuals with medial knee osteoarthritis,” at the 2019 International Society of Biomechanics Congress. His abstract was selected as a *David Winter Young Investigator Award Finalist*.

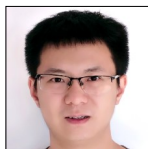


Scott Uhlich in Calgary, Canada for the 2019 International Society of Biomechanics Congress



Mark Wagner, a postdoctoral student in Biology under Dr. Liqun Luo (Biology), traveled to Toyama, Japan to give a talk, “Large-scale circuit dynamics in the cortex-cerebellum network,” at the 29th Annual Society for the Neural Control of Movement Meeting. He was one of a few postdocs chosen by the conference organizers to receive the NCM Award in recognition of his work.





He Wang, a PhD student in Electrical Engineering under Dr. Leonidas Guibas (Computer Science), traveled to Genoa, Italy to give a talk, “Learning a generative model for multi-step human-object interactions from video,” at Eurographics 2019. His work received the best paper honorable mention award.



Stanford Bio-X awarded 79 travel awards in 2019:

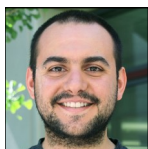


JOSÉ ANDRADE LÓPEZ, PHD CANDIDATE

Biology

Professor Chris Lowe (Biology)

“Nervous system evolution: A molecular genetic characterization of neural cell types in *S. kowalevskii*” (*The Society of Integrative and Comparative Biology Annual Meeting 2019*)



ANDRÉS ARANDA-DÍAZ, PHD CANDIDATE

Bioengineering

Professors KC Huang (Bioengineering and Microbiology & Immunology) and Justin Sonnenburg (Microbiology & Immunology)

“*In vitro* culturing of fecal microbial communities as a tool to study perturbations to the gut microbiota” (*American Society for Microbiology Microbe 2019*)



NILS AVERESCH, POSTDOCTORAL FELLOW

Civil & Environmental Engineering

Professor Craig Criddle (Civil & Environmental Engineering)

“Development of microbial production platforms for high-performance polymers for space and earth applications” (*Synthetic Biology Australasia 2019 Conference*)

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ENEKO AXPE IZA, POSTDOCTORAL FELLOW

Materials Science & Engineering

Professor Eric Appel (Materials Science & Engineering)

“Injectable hydrogel for bone healing in astronauts” (*2019 NASA Human Research Program Investigators’ Workshop*)

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The meeting was a wonderful exposure to many different areas of bioinformatics, and I especially enjoyed chatting with other PhD students and postdocs working on types of methods that I am interested in pursuing in the future. I had several conversations that also sparked potential future collaborations that I have followed up with after the meeting. Thank you again for supporting me with this award. I wouldn't have been able to attend without it!

— Peyton Greenside on her 2019 travel experience

**ANDRES BARESCH, PHD CANDIDATE****Geological Sciences****Professor C. Kevin Boyce (Geological Sciences)**

"Competition for epidermal space in the evolution of leaves with high physiological rates"
(Botanical Society of America Botany Conference 2019)

**NICHOLAS BIANCO, PHD CANDIDATE****Mechanical Engineering****Professor Scott Delp (Bioengineering and Mechanical Engineering)**

"Musculoskeletal simulations reveal the metabolic benefits of assistive strategies that couple multiple degrees-of-freedom" *(2019 International Society of Biomechanics Congress)*

**JOHANNES BIRGMEIER, PHD CANDIDATE****Computer Science****Professor Gill Bejerano (Developmental Biology, Computer Science, and Pediatrics - Genetics)**

"ClinPhen extracts and prioritizes patient phenotypes directly from medical records to expedite genetic disease diagnosis" *(American College of Medical Genetics and Genomics (ACMG) Annual Clinical Genetics Meeting 2019)*

**MARIANNE BLACK, PHD CANDIDATE****Mechanical Engineering****Professors Brian Hargreaves (Radiology) and Marc Levenston (Mechanical Engineering)**

"Cluster analysis of T2 relaxation times in superficial and deep cartilage: detecting early changes in ACL-reconstructed knees" *(Orthopaedic Research Society Annual Meeting 2019)*

**LAURA BOGAR, PHD CANDIDATE****Biology****Professor Kabir Peay (Biology)**

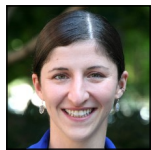
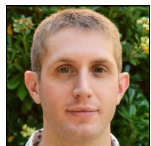
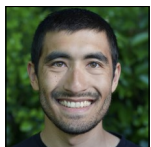
"Resource economics of ectomycorrhizal symbiosis vary with competitive context and nitrogen addition" *(2019 Ecological Society of America Annual Meeting)*

**MELISSA BOSWELL, PHD CANDIDATE****Bioengineering****Professor Scott Delp (Bioengineering and Mechanical Engineering)**

"An artificial neural network predicts knee loading using 3D marker trajectories of anatomical landmarks" *(2019 International Society of Biomechanics Congress)*



Amelie Schaefer in Austin, Texas for the 15th U.S. National Congress on Computational Mechanics

**ANJA MALAWI BRANDON, PHD CANDIDATE****Civil & Environmental Engineering and Environmental Engineering & Science
Professor Craig Criddle (Civil & Environmental Engineering)***"Enhanced biodegradation of plastic waste by mealworms (*Tenebrio molitor*): A step towards overcoming pollution and recovering resources" (23rd Annual Green Chemistry & Engineering Conference / 9th International Conference on Green & Sustainable Chemistry)***SUSAN BREWER, PHD CANDIDATE****Microbiology & Immunology****Professor Denise Monack (Microbiology & Immunology)***"Salmonella Typhi utilizes an RNA thermosensor to regulate virulence factors and evade innate immune responses" (Cold Spring Harbor Labs Microbial Pathogenesis and Host Response Meeting 2019)***HOLLIS CROWDER, PHD CANDIDATE****Mechanical Engineering****Professor Marc Levenston (Mechanical Engineering)***"Effects of ionic and non-ionic clinical CT contrast agents on swelling behavior of sheep meniscus fibrocartilage" (Orthopaedic Research Society Annual Meeting 2019)***MICHAEL D'ANTONIO, PHD CANDIDATE****Geological Sciences****Professor C. Kevin Boyce (Geological Sciences)***"Arborescent lycopsid periderm production was limited" (Botanical Society of America Botany Conference 2019)***CHRISTOPHER DEMBIA, PHD CANDIDATE****Mechanical Engineering****Professor Scott Delp (Bioengineering and Mechanical Engineering)***"Introducing OpenSim Moco: optimal control methods for musculoskeletal simulation" (2019 International Society of Biomechanics Congress)***SARAH DIVEL, PHD CANDIDATE****Electrical Engineering****Professor Norbert Pelc (Radiology)***"Image-domain insertion of spatially correlated, locally varying noise in CT images" (SPIE (International Society for Optics and Photonics) Medical Imaging 2019)*

Being able to attend this conference thanks to the Bio-X travel grant allowed me to network, discuss, and learn about nervous system and cell type evolution from people in the field. My abstract was selected among the top 7 within the Division of Neurobiology, Neuroethology, and Sensory Biology to participate in the best oral presentation student award. While at the conference, I was able to network with a diverse group of students and faculty that reenergized and motivated me to continue research in the field. I also learned about novel techniques in non-model systems that can help mold my own research in a new direction. Hearing feedback on my own work is already shaping the future direction of my dissertation including trying out new imaging techniques and transgenic constructs in my model system.

— Jose Miguel Andrade Lopez on his 2019 travel experience



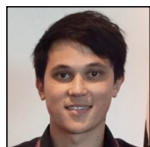
LAMEESE ELDESOUKY, POSTDOCTORAL FELLOW

Psychology

Professor James Gross (Psychology)

"An investigation of convergence between trait and state emotion regulation" (3rd World Conference on Personality)

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MICHAEL FANTON, PHD CANDIDATE

Mechanical Engineering

Professor David Camarillo (Bioengineering)

"Optimizing padding thickness in football helmets to minimize angular acceleration" (16th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering)

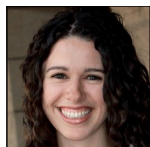


VIVIAN FEIG, PHD CANDIDATE

Materials Science & Engineering

Professor Zhenan Bao (Chemical Engineering)

"Electrochemical patterning of tissue-mimetic conductive hydrogels" (American Chemical Society Fall 2019 National Meeting & Exposition)



RINA FRIEDBERG, PHD CANDIDATE

Statistics

Professors Michael Baiocchi (Medicine - Stanford Prevention Research Center) and Susan Athey (Economics)

"Global health, conflicted data, and GPS - Analyzing a gender-based violence intervention in Nairobi, Kenya" (2019 Conference on Statistical Practice)



THEODORE GAO, PHD CANDIDATE

Materials Science & Engineering

Professor Zhenan Bao (Chemical Engineering)

"Improving inkjet-printed carbon nanotube transistors via flocculation" (NT19: International Conference on the Science and Application of Nanotubes and Low-Dimensional Materials 2019)

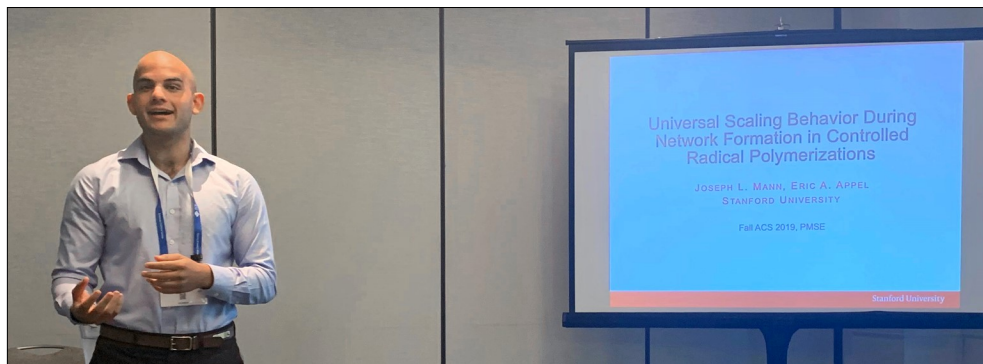


ERIC GONZALEZ, PHD CANDIDATE

Mechanical Engineering

Professor Sean Follmer (Mechanical Engineering)

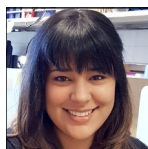
"Investigating the detection of bimanual haptic retargeting in virtual reality" (25th Association for Computing Machinery Symposium on Virtual Reality Software and Technology)



Joseph Mann in San Diego, California for the American Chemical Society Fall 2019 National Meeting



Theodore Gao in Wurzburg, Germany for NT19: The International Conference on the Science and Application of Nanotubes and Low-Dimensional Materials 2019



EVA GONZALEZ DIAZ, PHD CANDIDATE

Bioengineering

Professor Fan Yang (Orthopaedic Surgery and Bioengineering)

"A bioengineered 3D model of osteosarcoma using gelatin-based microribbon scaffolds" (*Orthopaedic Research Society Annual Meeting 2019*)



PEYTON GREENSIDE, POSTDOCTORAL FELLOW

Biomedical Informatics

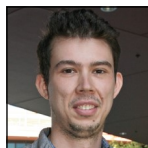
Current Advisors: Professors Hanlee Ji (Medicine - Oncology) and Emma Brunskill (Computer Science)

PhD Advisor: Professor Anshul Kundaje (Genetics and Computer Science)

"CrowdVariant: a crowdsourcing approach to classify copy number variants" (*Pacific Symposium of Biocomputing 2019*)

Supported by The Matthew Frank Family

The work presented was conducted during Peyton's PhD research.



ANDREW GROLL, POSTDOCTORAL FELLOW

Radiology

Professor Craig Levin (Radiology)

"Characterization of a large volume cadmium zinc telluride preclinical PET system" (*2019 Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC), and the International Symposium on Room Temperature Semiconductor Detectors (RTSD)*)

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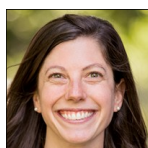


LATIFAH HAMZAH, PHD CANDIDATE

Environmental Engineering

Professor Stephen Luby (Medicine - Infectious Diseases)

"Ruminant fecal contamination introduced to drinking water after collection from shared sources in rural Kenya" (*University of North Carolina Water and Health: Where Science Meets Policy*)



RACHEL JACKSON, POSTDOCTORAL FELLOW

Bioengineering

Professor Scott Delp (Bioengineering and Mechanical Engineering)

"Alternative human-in-the-loop exoskeleton assistance strategies: heuristic-based exoskeleton control for co-adaptive locomotor assistance" (*2019 International Society of Biomechanics Congress*)

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Petar Petrov in Rennes, France for the Quantitative Bioimaging Conference 2019



MARKO JAKOVLJEVIC, POSTDOCTORAL FELLOW
Radiology

Professor Jeremy Dahl (Radiology - Pediatric Radiology)

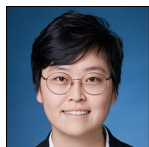
"Tracking blood flow changes in the brains of neonates using angular-coherence-based power doppler" (SPIE (International Society for Optics and Photonics) Medical Imaging 2019)
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LAWRENCE KIM, PHD CANDIDATE
Mechanical Engineering

Professor Sean Follmer (Mechanical Engineering)

"SwarmHaptics: haptic display with swarm robots" (Association for Computing Machinery Conference on Human Factors in Computing Systems (CHI))



SEUNG YEON KIM, PHD CANDIDATE
Chemical Engineering

Professor Elizabeth Sattely (Chemical Engineering)

"Promiscuity of dirigent proteins and their application for lignan analog synthesis" (American Institute of Chemical Engineers Annual Meeting 2019)



GRANT KINSLER, PHD CANDIDATE
Biology

Professor Dmitri Petrov (Biology)

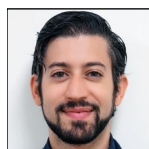
"Uncovering the fitness-relevant phenotypes of microbes adapting to novel environments" (Gordon Molecular Mechanisms in Evolution 2019)



LESLIE ANN KOYAMA, PHD CANDIDATE
Developmental Biology

Professor Lucy O'Brien (Molecular & Cellular Physiology)

"Bellmount: a novel, method for longitudinal, intravital imaging of abdominal organs in adult *Drosophila*" (Annual *Drosophila* Research Conference 2019)



AARON KUCYI, POSTDOCTORAL FELLOW
Neurology & Neurological Sciences

Professor Josef Parvizi (Neurology & Neurological Sciences)

"Human intracranial electrophysiology of the default, dorsal attention and salience networks" (Organization for Human Brain Mapping Annual Meeting 2019)
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I received great feedback from the audience. Groups from other universities are interested in collaborating with us after seeing our results. The conference united experts in neurodegenerative diseases from all over the globe, many of which were presenting unpublished data. I got to see first-hand where the field is heading to, what important questions remain [unanswered] and which new techniques can improve my own research. I was also inspired by the presence of patients because they are the reason why we do research. Overall, I come back enriched, refreshed and fueled with new ideas, some of which already are already being integrated to our current grants and fellowship applications.

— Danuta Phipps on her 2019 travel experience

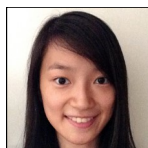


TYLER KUKLA, PHD CANDIDATE

Geological Sciences

Professor C. Page Chamberlain (Geological Sciences)

"Triple oxygen isotope signatures of eocene topographic development" (*Geochemical Society Goldschmidt Conference 2019*)

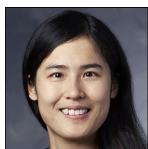


PATRICIA LAN, PHD CANDIDATE

Bioengineering

Professor Gary Glover (Radiology)

"Simultaneous fMRI and fMRI measures the viscoelastic and BOLD responses of the human brain to functional activation in the visual cortex" (*International Society for Magnetic Resonance in Medicine's 27th Annual Meeting*)



YUPING LI, PHD CANDIDATE

Biology

Professors Gavin Sherlock (Genetics) and Dmitri Petrov (Biology)

"Single nucleotide mapping of the locally accessible trait space in yeast reveals pareto fronts that constrain initial adaptation" (*2019 Gordon Research Conference and Gordon Research Seminar on Ecological and Evolutionary Genomics*)



CHRISTOPHER LINDSAY, PHD CANDIDATE

Materials Science & Engineering

Professor Sarah Heilshorn (Materials Science & Engineering)

"3D-bioprinted lattices for efficient expansion of neural stem cells" (*2019 International Conference on Biofabrication*)



ZHENGZHI LIU, POSTDOCTORAL FELLOW

Radiology

Professor Craig Levin (Radiology)

"Simultaneous dual isotope ToF-PET imaging" (*2019 Institute of Electrical and Electronics Engineers (IEEE) Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC) and 26th International Symposium on Room-Temperature Semiconductor Detectors (RTSD)*)
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Melissa Boswell in Calgary, Canada for the 2019 International Society of Biomechanics Congress

**DAVID MACKANIC, PHD CANDIDATE****Chemical Engineering****Professor Zhenan Bao (Chemical Engineering)**

"Scalable and facile preparation of dynamic single-ion-conducting networks (DSN) for lithium metal stabilization" (*American Institute of Chemical Engineers National Meeting 2019*)

**CHRISTOPHER MADL, POSTDOCTORAL FELLOW****Microbiology & Immunology****Professor Helen Blau (Microbiology & Immunology)**

"Matrix remodeling enhances the differentiation capacity of neural progenitor cells in 3D hydrogels" (*American Institute of Chemical Engineers National Meeting 2019*)

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**JOSEPH MANN, PHD CANDIDATE****Materials Science & Engineering****Professor Eric Appel (Materials Science & Engineering)**

"Universal scaling behaviour during network formation in living polymerizations" (*American Chemical Society Fall 2019 National Meeting*)

**ENDRE MOSSIGE, POSTDOCTORAL FELLOW****Chemical Engineering****Professor Gerald Fuller (Chemical Engineering)**

"The hydrodynamic breadboard: clog-free cell sorting using hydrodynamic obstacles" (*2019 Physics and Chemistry of Microfluidics Gordon Research Seminar*)

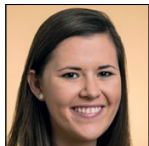
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**SURYA MURTY, PHD CANDIDATE****Bioengineering****Professor Sanjiv Sam Gambhir (Radiology)**

"18F-FHBG PET reporter gene imaging and ganciclovir-mediated ablation of B7H3 chimeric antigen receptor T-cells in solid tumors through HSV1-sr39tk" (*World Molecular Imaging Conference 2019*)

**JOHANNA O'DAY, PHD CANDIDATE****Bioengineering****Professor Scott Delp (Bioengineering and Mechanical Engineering)**

"Subthalamic deep brain stimulation at 60 Hz and 140 Hz improves gait features in people with Parkinson's disease" (*2019 International Society of Biomechanics Congress*)

**ADELAIDA PALLÀ, POSTDOCTORAL FELLOW****Microbiology & Immunology****Professor Helen Blau (Microbiology & Immunology)**

"Surmounting the aged niche to improve skeletal muscle regeneration" (*Antibody International Conference on Frailty and Sarcopenia 2019*)

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Overall, it was an incredible experience. The conference focused on computational biomechanics, and many of the leaders in the field of brain imaging and modeling were in attendance. I learned about the latest results in computational modeling of traumatic brain injury and had insightful conversations with other PhD students, postdocs, and professors. This was particularly useful as I am nearing graduating and beginning to think of the next steps in my career beyond my PhD. I got a lot of great advice from other researchers and connected with potential collaborators.

— Michael Fanton on his 2019 travel experience



Tanaya Shree in Lugano, Switzerland for the 15th International Conference on Malignant Lymphomas

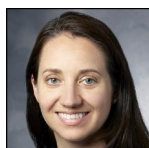


PETAR PETROV, PHD CANDIDATE

Chemistry

Professor W. E. Moerner (Chemistry)

"A tilted light sheet for single-molecule super-resolution imaging in thick cells" (*Quantitative Biolmaging Conference 2019*)



DARCI PHILLIPS, POSTDOCTORAL FELLOW

Microbiology & Immunology and Dermatology

Professor Garry Nolan (Microbiology & Immunology)

"Multiparameter tissue imaging reveals the cutaneous T cell lymphoma microenvironment in response to immunotherapy" (*Society of Investigative Dermatology 2019*)

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DANUTA PHIPPS, POSTDOCTORAL FELLOW

Pathology

Professor Birgitt Schuele (Pathology)

"Downregulation of alpha-synuclein via CRISPR interference in patient-derived stem cell model of Parkinson's Disease" (*Alzheimer's & Parkinson's Diseases Congress - AD/PD™ Lisbon, 2019*)

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ASHWIN RAMACHANDRAN, PHD CANDIDATE

Aeronautics & Astronautics

Professor Juan G. Santiago (Mechanical Engineering)

"Rapid and multiplexed enrichment of specific DNA sequences using isotachophoresis" (*72nd Annual Meeting of the American Physical Society's Division of Fluid Dynamics*)



EVAN ROSENMAN, PHD CANDIDATE

Statistics

Professors Art Owen (Statistics) and Michael Baiocchi (Medicine - Stanford Prevention Research Center)

"Propensity score methods for merging observational and experimental datasets" (*2019 Joint Statistical Meetings - American Statistical Association*)



Erin Sanders with her advisor, Professor Lucy O'Brien, in Lausanne, Switzerland for the European *Drosophila* Research Conference 2019



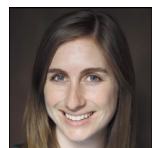
XAVIER ROVIRA-CLAVE, POSTDOCTORAL FELLOW

Microbiology & Immunology

Professor Garry Nolan (Microbiology & Immunology)

"Mapping the spatial architecture of acute myeloid leukemia in the bone marrow microenvironment by multiplexed ion beam imaging" (*Society for Immunotherapy of Cancer 34th Annual Meeting (SITC 2019)*)

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ERIN SANDERS, PHD CANDIDATE

Developmental Biology

Professor Lucy O'Brien (Molecular & Cellular Physiology)

"Real-time kinetics of Notch mediated fate decisions during organ renewal" (*European Drosophila Research Conference 2019*)



SANDRA SCHACHAT, PHD CANDIDATE

Geological Sciences

Professors Jonathan Payne (Geological Sciences) and C. Kevin Boyce (Geological Sciences)

"The relationship between wing pattern and venation, from Micropterigidae to Macroheterocera" (*XXI European Congress of Lepidopterology*)



AMELIE SCHAEFER, PHD CANDIDATE

Mechanical Engineering

Professor Ellen Kuhl (Mechanical Engineering)

"Computational modeling of the biochemical and biomechanical degeneration in Alzheimer's Disease" (*15th U.S. National Congress on Computational Mechanics*)



NICOLE SCHIAVONE, PHD CANDIDATE

Mechanical Engineering

Professor Alison Marsden (Pediatrics - Cardiology and Bioengineering)

"Assessment of cardiac output effects on bioprosthetic pulmonary valve behavior using magnetic resonance velocimetry" (*72nd Annual Meeting of the American Physical Society's Division of Fluid Dynamics*)



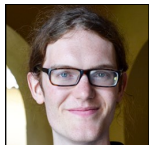
TANAYA SHREE, POSTDOCTORAL FELLOW

Medicine - Oncology

Professor Ronald Levy (Medicine - Oncology)

"Impaired immune health in survivors of diffuse large B-cell lymphoma (DLBCL): a large population-based study" (15th International Conference on Malignant Lymphomas)

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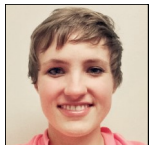


NASA SINNOTT-ARMSTRONG, PHD CANDIDATE

Genetics

Professor Jonathan Pritchard (Genetics and Biology)

"Genetics of 38 serum and urine laboratory tests in the UK Biobank" (Institute for Molecular Medicine Finland Jamboree 2019)



ALICE STANTON, PHD CANDIDATE

Bioengineering

Professor Fan Yang (Orthopaedic Surgery and Bioengineering)

"Collagen I-mediated stem cell mechanotransduction depends on solvent type" (Biomedical Engineering Society Annual Meeting 2019)



LAKSHMAN SUNDARAM, PHD CANDIDATE

Computer Science

Professors Anshul Kundaje (Genetics and Computer Science) and William

Greenleaf (Genetics)

"Unsupervised deep learning for interpretation of human genetic variation" (American Society of Human Genetics 2019 Annual Meeting)

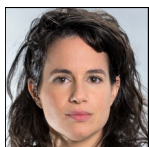


MINHYUK SUNG, PHD CANDIDATE

Computer Science

Professor Leonidas Guibas (Computer Science)

"Structure-aware learning for 3D data" (Special Interest Group on Computer Graphics and Interactive Techniques (SIGGRAPH) 2019)



ANAT TALMON, POSTDOCTORAL FELLOW

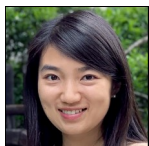
Psychology

Professor James Gross (Psychology)

"'Neglected moms' - from childhood emotional neglect to adjustment to motherhood"

(Child maltreatment and well-being (CMW II): Challenges across borders, research and practices)

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LI TAO, PHD CANDIDATE

Electrical Engineering

Professor Craig Levin (Radiology)

"Study of the coincidence time resolution of new perovskite bulk crystals" (2019 Institute of Electrical and Electronics Engineers (IEEE) Nuclear Science Symposium (NSS) and Medical Imaging Conference (MIC) and 26th International Symposium on Room-Temperature Semiconductor Detectors (RTSD))



ANDY TAY, POSTDOCTORAL FELLOW

Management Science & Engineering

Professor Nicholas Melosh (Materials Science & Engineering)

"Magnetic biomedicine" (International Forum of Excellent Young Talents in Engineering Science of Peking University 2019)

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ARSENI TELICHKO, POSTDOCTORAL FELLOW

Radiology

Professor Jeremy Dahl (Radiology - Pediatric Radiology)

“Axially-segmented cylindrical array for intravascular shear wave imaging” (*SPIE (International Society for Optics and Photonics) Medical Imaging 2019*)

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OGUZ TIKENOGULLARI, PHD CANDIDATE

Mechanical Engineering

Professors Ellen Kuhl (Mechanical Engineering) and Alison Marsden (Pediatrics - Cardiology and Bioengineering)

“Investigating the effects of viscous material properties in a pumping heart” (*15th U.S. National Congress on Computational Mechanics*)



HELEN TRAN, POSTDOCTORAL FELLOW

Chemical Engineering

Professor Zhenan Bao (Chemical Engineering)

“Molecularly engineering polymers for biodegradable and stretchable electronic” (*American Chemical Society 2019*)

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SCOTT UHLRICH, PHD CANDIDATE

Mechanical Engineering

Professor Scott Delp (Bioengineering and Mechanical Engineering)

“Personalization improves the efficacy of gait modifications at reducing the knee adduction moment in individuals with medial knee osteoarthritis” (*2019 International Society of Biomechanics Congress*)



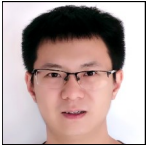
MARK WAGNER, POSTDOCTORAL FELLOW

Biology

Professor Liqun Luo (Biology)

“Large-scale circuit dynamics in the cortex-cerebellum network” (*29th Annual Society for the Neural Control of Movement Meeting*)

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HE WANG, PHD CANDIDATE

Electrical Engineering

Professor Leonidas Guibas (Computer Science)

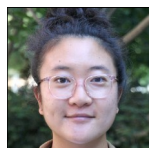
“Learning a generative model for multi-step human-object interactions from video” (*Eurographics 2019*)



Leslie Ann Koyama in Dallas, Texas for the Annual Drosophila Research Conference 2019

Attending this meeting allowed me to get up-to-date information on scientific work and cutting-edge technology in the field of orthopedic research, and I was also afforded the opportunity to share my own findings in a public format, where I received constructive criticism and suggestions for future directions. Together, the knowledge gained from others' work and the feedback on my own work has given me a better-defined trajectory for my PhD thesis while at the same time expanding my knowledge of additional pathways of investigation. This sort of experience is absolutely crucial in the pursuit of graduate work, and I'm thankful for the funding Bio-X awarded to aid me in attending.

— Hollis Crowder on her 2019 travel experience



LUCY WANG, PHD CANDIDATE

Mechanical Engineering

Professor Ellen Kuhl (Mechanical Engineering)

"Microstructural heterogeneity influences on the flexural rigidity of the axon" (16th International Symposium on Computer Methods in Biomechanics and Biomedical Engineering)



LAUREN WATKINS, PHD CANDIDATE

Bioengineering

Professor Marc Levenston (Mechanical Engineering)

"Sodium PET-MRI detects regions of abnormal bone response to acute exercise" (2019 International Workshop on Osteoarthritis Imaging)

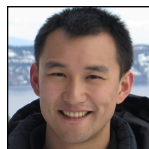


YUAN XUE, PHD CANDIDATE

Bioengineering

Professor Stephen Quake (Bioengineering and Applied Physics)

"Building a single-cell co-transcriptomic atlas of the Toxoplasma interactome" (Cell Press Symposia - Single Cells: Technology to Biology)

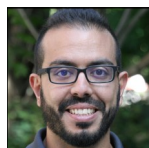


ANTHONY YU, PHD CANDIDATE

Materials Science & Engineering

Professor Eric Appel (Materials Science & Engineering)

"Enabling long-term antibody delivery with polymer-nanoparticle supramolecular hydrogels" (2019 Materials Research Society (MRS) Spring Meeting)



AIMEN ZLITNI, POSTDOCTORAL FELLOW

Radiology

Professor Sanjiv Sam Gambhir (Radiology)

"Photoacoustic and fluorescent molecular imaging of bacterial infections: development, pre-clinical evaluation and means for clinical translation" (World Molecular Imaging Congress (WMIC2019))

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2006-2018

From 2006 to 2018, Stanford Bio-X gave 554 travel awards to young Stanford researchers from many disciplines across the university. They represent 48 different departments and 175 faculty members.

For the complete list of Stanford Bio-X travel awardees from 2006 to 2018, please visit:
<https://biox.stanford.edu/research/travel-awards>



Chris Dembia in Calgary, Canada for the 2019 International Society of Biomechanics Congress



<http://biox.stanford.edu>
To learn more, please email us at:
contact-biox@stanford.edu