21st Annual Research Symposium

Research Presentations
July 27, 8:45AM - 5:00 PM
July 28, 8:45AM - 5:00 PM
July 29, 8:45AM - 3:00 PM
6020 Humanities and Social Sciences Building

Poster Session
July 28, 5:00 – 6:30PM
Humanities and Social Sciences Courtyard
Wednesday, July 27, 2016

8:45AM  **Opening Remarks**  
Lina Kim, Director of the Research Mentorship Program

8:48AM  **Aneesh A. Nathani**  
Predicting Terrorist Attacks in Afghanistan using regression models in R

9:00AM  **Pranav Ahluwalia**  
Predicting Stock Prices Using an ARIMA Time Series Model

9:12AM  **Christopher D. Lane**  
Microsimulation Modeling of a Tsunami Evacuation in Isla Vista

9:24AM  **Saaketh R. Narayan**  
Visualization of Spatio-Temporal GPS Data for New York City Taxi Trips

9:36AM  **Ivory Su**  
Understanding the Gender-based Navigation Stereotype: Are Men Better Navigators than Women?

9:48AM  **Parth A. Baokar**  
Wayfinding in Complex Indoor Spaces Using External Aids

10:00AM  **Refreshment Break**

10:20AM  **Rahul S. Kataria**  
Identifying Typo-Squatted Domains using Natural Language Processing

10:32AM  **Kanak Garg**  
Measuring the Extent of Typo-Squatting in Practice

10:44AM  **Catherine Chi**  
A Platform for Real Time Audio Signal Processing in a Web Browser

10:56AM  **Tejas S. Thvar**  
Prediction of Critical Intracranial States through Medical Signal Processing

11:08AM  **Anuva Mittal**  
Using Regressional Analysis to Predict Future Intracranial Pressure Values

11:20AM  **Eric A. Chen**  
Statistical Properties of Dynamical Systems: Case Study of the Chirikov Standard Map

11:32AM  **Shiye Cao**  
Stock Market Analysis Through Text Mining

11:44AM  **Lunch Break**
Wednesday, July 27, 2016

1:00PM  Ian Ho  
The Construction and Experimental Demonstration of a Quarter-Scale Sub-Array Telescope

1:12PM  Whitaker W. Mercer  
Experimental Results of a Directed Energy System on Common Space Debris and Asteroids

1:24PM  Amal H. Mehta  
Developing Space Craft for the Stars: Simulating Temperature and Mechanical Stresses of a Wafer Craft Undergoing Interstellar Travel

1:36PM  Qian Zhou  
Using Circular Statistic to Analyze the Correlation between Wind Direction and PM2.5 Levels in Beijing

1:48PM  Joseph C. Rainbolt  
Predicting the Amount of Home Runs per Game with Sabermetrics

2:00PM  Alexander C. Koo  
Evaluation of History Textbook Controversies in Post-Imperial Japan

2:12PM  Ruhi Ramesh  
Syrian Civil War and the ISIS Crisis

2:24PM  Diane Jiang  
The South China Sea Conflict: Politics, Economics, and Strategies for Conflict Resolution

2:36PM  William B. Buchanan  
Flood Mythology and Political Change in China, 771-221 BCE

2:48PM  Refreshment Break

3:08PM  Kori K. Reine  
The UNRWA’s Potential Role in Permanently Solving the Palestinian Refugee Crisis

3:20PM  Jonathan Han  
Cation-π Interaction-Mediated Wet Adhesive Inspired by Proteins in Marine Organisms

3:32PM  Mahima S. Chillakanti  
Optimizing a Method of Using Marine-Inspired Monomers that Engage in Cation-Pi Interactions to Create Biomedical Adhesives

3:44PM  Stephanie K. Doan  
Mussel-Inspired Primer in Dental Restorative Material

3:56PM  Komal K. Ahluwalia  
Evaluation of the Efficacy of Catechol-Based Adhesives Derived from Mussels as Compared to Current Adhesives in Dental Composites
Wednesday, July 27, 2016

4:08PM  **Stanley Z. Lam**  
Utilizing EEG-informed fMRI to understand neural mechanisms underlying memory-based decision-making

4:20PM  **Kara J. Portier**  
Identification of Brain Activity During Memory and Perception Judgments Through fMRI

4:32PM  **Martin A. Hito**  
Identifying Unique EEG Signals in Memory Based Decision-Making through EEG Informed fMRI

4:44PM  **Natalie E. Hampton**  
The Influences of Gender, Age, and Socio-economic Status on Neural Mechanisms Underlying Decision-making Strategies for Memory and Perceptual Judgments: An fMRI Study

4:56PM  **Closing Remarks**  
Lina Kim, Director of the Research Mentorship Program
Thursday, July 28, 2016

8:45AM  Opening Remarks  
Lina Kim, Director of the Research Mentorship Program

8:48AM  Subbarao Garlapati  
Sympatric Speciation of Saccharomyces cerevisiae Undergoing Ingestion and Digestion by Drosophila melanogaster

9:00AM  Emily G. Pearlman  
Evolution of Saccharomyces cerevisiae Driven by Drosophila Melanogaster Digestion

9:12AM  Hannah M. Padilla  
Yeast Survivorship and Competitive Trade-offs in Yeast Communities with Insect Interaction

9:24AM  Katarina M. Gibson  
The Role of Fly Sex on Yeast Survivorship During Fruit Fly Digestion

9:36AM  Cindy M. Diaz  
Ratio Tracking and Ecological Dispersal of Flies

9:48AM  Refreshment Break

10:08AM  Jaime J. Hernandez  
Development of a Wireless System Using Micro-controllers

10:20AM  Yuxin (Cynthia) Lan  
Material and Design Concerns in Developing a Multichannel Vibrotactile Vest

10:32AM  Kshithija Mulam  
Virtual Reality Environments for 3D Touch: A God-Object-Based Approach to Representing Vibrotactile Geometries in Virtual Space

10:44AM  Andy Jin  
Fine-Scale Modelling of Child Undernutrition in Kenya Using Spatial Statistics

11:00AM  Morning Session Break
RMP RESEARCH SYMPOSIUM PROGRAM

Thursday, July 28, 2016

2:00PM  Edgardo Guerrero
Examining the Effects of Soil Texture on Microbes Consuming Carbon

2:12PM  Shulammite E. Lim
Neural correlates of visual search in natural scenes: frequency domain analysis

2:24PM  Angela Yoo
Neural correlates of visual search in natural scenes: time domain analysis

2:36PM  Gabriela Silva Hernandez
Classifying Archaeal Adaptations to Energy Limitation in Saline Sediments

2:48PM  Kai A. Faulkner
Novel Groups of Salton Sea Archaea

3:00PM  Olivia W. Siemens
Classifying Microbial Communities in Oil-Contaminated Marine Snow

3:12PM  Phoebe Seltzer
Novel Microbial Assemblages in the Santa Barbara Marine Oxygen Minimum Zone

3:24PM  Refreshment Break

3:44PM  Tammy Pham
Propaganda of our Italy: The Collected Papers of Ruth Williams Ricci

3:56PM  Amrinder S. Rai
Make America Free Again: An Analysis of Freedom in Relation to Contemporary Issues Surrounding the LGBTQ and Reproductive Rights Movements

4:08PM  Naome Sajnani
Society’s Perception of Immigrants

4:20PM  Amanda Gersoff
The Global Discussion Behind Zika Virus

4:32PM  Sahar A. Khashayar
Analyzing the Causes, Processes, and Outcomes of Government Responses to Global Health Crises

4:44PM  Kevin O. Dominguez
When Immigration Confronts Attitude: The United States’ Demographics and Attitudes Towards Immigrants and Immigrants’ Rights

5:00PM  RMP Poster Session
Humanities and Social Sciences Courtyard
RMP RESEARCH SYMPOSIUM PROGRAM

Friday, July 29, 2016

8:45AM  Opening Remarks
Lina Kim, Director of the Research Mentorship Program

8:48AM  Jason Y. Kong
An Untapped Resource for Policy and Enforcement in Intergovernmental Organizations: Ocean Waste
Environmental NGOs

9:00AM  Kyle H. Leung
Dueling Discourses in Social Media: Bioethics

9:12AM  Evelyn Chang
Characterization of Teen SNS Usage in Entertainment Media

9:24AM  Daniel O. Delgado Cornejo
The Identification of Vulnerabilities from Compiler Optimization

9:36AM  Neha Srivathsa
Gene Expression Patterns during Directed Differentiation of Induced Pluripotent Stem Cells into Retinal
Pigmented Epithelium

9:48AM  Lindsey A. Dudley
Gene Expression During Novel 14 Day Protocol to Differentiate iPSC into RPE for the Treatment of Age-
related Macular Degeneration

10:00AM Refreshment Break

10:20AM  Dikla Taylor-Sheinman
The Role of Opsins in Drosophila melanogaster Bitter Taste Sensation

10:32AM  Sophia L. Dahmani
The Role of Opsins in the Gustatory System of Drosophila Melanogaster

10:44AM  Alexandra M. Haslund-Gourley
Adipose Stem Cells Encapsulated in Polyethylene Glycol Gel Foster Anti-tumor Microenvironment via
Up Regulation of Tumor Necrosis Factor-Alpha and Down Regulation of Vascular Endothelial Growth
Factor

10:56AM  Amy Zhong
From Fat to Brain: Neuronal Differentiation of Adipose Stem Cells

11:08AM  Flora S. Hamilton
Testing a Better Algorithm to Detect Micro-Earthquakes Induced by Hydraulic Fracturing

11:20AM  Richard Huang
Terrestrial Light Detection and Ranging (LiDAR) Analysis of Coastal Erosion and Behavior of Sea Cliffs

11:32AM  Joanna C. Zukin
Identification of a Receptor for a Novel Form of Contact-Dependent Growth Inhibition in Escherichia
coli

11:44AM  Grady C. Day
Determining the mechanism of contact-dependent growth inhibition in Escherichia coli: the potential
role of post-translational modification in receptor recognition
RMP RESEARCH SYMPOSIUM PROGRAM

Friday, July 29, 2016

11:56AM  Lunch Break
          On Your Own

1:12PM  Harshayu Girase
         Application of Stylometry to Identify Misrepresentation of Online Financial Analysis

1:24PM  Selena Huang
         Quantifying the Empirical Impacts of Sybil Devices

1:36PM  Sameer R. Varma
         A Mathematical Model for Mechanosensitivity of TAZ/WWTR1

1:48PM  Ankush Swarnakar
         A Predictive Model of Yes-Associated Protein Mechanosensitivity

2:00PM  Shivali Baveja
         Modeling Gene Interaction Networks for GABAergic Neuron Subtype Differentiation in Mouse Embryonic Stem Cells

2:12PM  Gautam V. Prabhu
         Modeling Gene Interaction Networks for Glutamatergic Neuron Differentiation in Mouse Embryonic Stem Cells

2:24PM  Eunice Yang
         Activity of Electrogenic Pathways during Neuronal Differentiation in Homo Sapiens

2:36PM  Anhyo Jeong
         Fly Dispersal and YeastVectoring

2:48PM  Closing Remarks
         Lina Kim, Director of the Research Mentorship Program