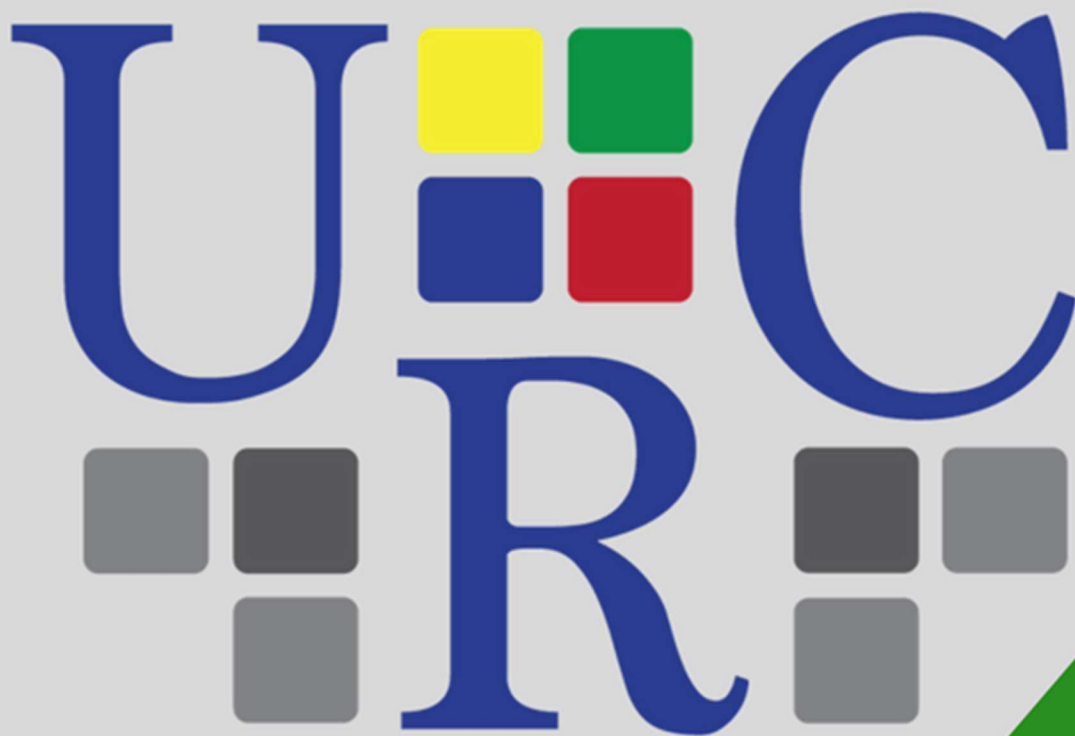


UC San Diego

31ST ANNUAL



UNDERGRADUATE
RESEARCH
CONFERENCE

SPONSORED BY:

STUDENT AFFAIRS
THE OFFICE OF RESEARCH AFFAIRS
ACADEMIC ENRICHMENT PROGRAMS

MAY 5, 2018

8AM - 4PM

THE FACULTY CLUB

URC.UCSD.EDU

2018 UCSD Undergraduate Library Research Prize

If your student presented at the URC and used any of the Library's resources (including online resources), he or she is eligible to be nominated for the Undergraduate Library Research Prize.

Prizes will be given to four winners:

Life Sciences/Physical Sciences: First prize: \$1,000, Second prize: \$500

Social Sciences/Arts/Humanities: First prize: \$1,000, Second prize: \$500

To be eligible for the prize, students must:

1. Participate in one of the following UC San Diego programs:
 - a. Faculty Mentor Program
 - b. Summer Research Program
 - c. Undergraduate Research Conference.
2. Receive a faculty nomination.
3. Submit supporting documentation by May 21, 2018.

For more information and to nominate a student:

<https://library.ucsd.edu/about/undergraduate-research-prize/index.html>

31ST ANNUAL UC SAN DIEGO
UNDERGRADUATE RESEARCH CONFERENCE (URC)

May 5TH, 2018

UC San Diego's Undergraduate Research Conference (URC) supports the engagement of undergraduate students in scholarly research. Academic Enrichment Programs (AEP), a division of Student Affairs, coordinates the URC with support from the Vice Chancellor of Student Affairs and the Office of Research Affairs. AEP has a primary goal of encouraging and supporting undergraduate students in the pursuit of academic advancement and success in their post-baccalaureate endeavors. The URC is a campus-wide recognition of undergraduate research in all fields and encourages increased opportunities for creativity and the intellectual recognition of undergraduate students. Participation in the URC is by nomination only; a faculty member must judge a student's work to be outstanding.

Nominated students who wish to participate are required to register for the conference. The conference is a student panel format, guided by a faculty moderator. Panels run concurrently during morning and afternoon sessions in the Faculty Club. Each panel consists of a maximum of eight presentations, and between five and eleven undergraduates. Some students have conducted research in collaboration, thus there are several group presentations. Individual presenters receive 15-minutes to discuss their research, and group presenters receive 20-minutes.

Both individuals and groups receive 5-minutes for questions and answers. After all presentations are complete, there is additional time for group discussion. When students are not on a panel, they may attend the panel of their choice as an audience member. The URC allows students to discuss their research with faculty, and with one another. Each student will receive a certificate to commemorate their experience.

The URC is possible because of support from the Vice Chancellor of Student Affairs, Drew Calandrella and Vice Chancellor of the Office of Research Affairs, Dr. Sandra Brown. Panels were created by AEP staff members Dr. Sophia Tsai, Dr. Kirsten Kung, Dr. Thomas Brown, and Jessica Davis, with additional support from the entire AEP staff, including Dr. David Artis, Veronica Bejar, Heather Murphy, and Adele Savage, as well as AEP student workers Florencia Lee, Ruben Guardado, and Jing Shi. AEP gives a special thanks to Ms. Kathie Landis at the Faculty Club, Estefania Lopez, and to our faculty moderators.

31ST Annual



Saturday, May 5TH, 2018

8:00 a.m.

Registration • Faculty Club Lobby
Breakfast • Courtyard

8:30 a.m.

Welcoming Remarks • Faculty Club Dining Room
Dr. David Artis, Dean of Undergraduate Research Advancement
Dr. Miroslav Krstic, Senior Associate Vice Chancellor for Research
Dr. Luz Chung, Continuing Lecturer, Department of Education Studies

9:00 a.m.

Morning Panels

11:45 a.m.

Lunch • Faculty Club Courtyard

1:00 p.m.

Afternoon Panels

3:45 p.m.

Closing Remarks • Faculty Club Dining Room
Dr. David Artis, Dean of Undergraduate Research Advancement
Dominique Turnbow, Library Research Prize
Presentation of Certificates
Group Photograph

4:00 p.m.

Conference End

2018 URC Panels

Panel #	Session	Panel Name
1	Morning	Pharmaceutical Drugs and Inhibitors
2	Morning	Physiology and Neuroscience
3	Morning	Genetic Mutation, Regulation, and Control
4	Morning	Cellular & Developmental Biology
5	Morning	Ecology, Behavior, and Evolution
6	Morning	Psychology, Sociocultural Influences, and Health
7	Morning	Communication, Creativity, Problem Solving, and Autism
8	Morning	Education, Schooling, and Culture
9	Morning	Language and Meaning
10	Morning	Community, Housing, and Justice
11	Morning	Race, Refugees, and Politics
12	Afternoon	Molecular Biology and Regulation
13	Afternoon	Biology and Nanotechnology
14	Afternoon	Psychiatry and Clinical Psychology
15	Afternoon	Learning and Memory
16	Afternoon	Computer Science, Statistics, and Materials Engineering
17	Afternoon	Physics
18	Afternoon	Nanoengineering and Biotechnology
19	Afternoon	Chemistry, Biochemistry, and Atmospheric Chemistry
20	Afternoon	History and Expression
21	Afternoon	Politics
22	Afternoon	Anthropology

****Locations posted on day of conference.***

Transfer Triton Day Panel

Moderator: Dr. David Artis

11:30am-12:15pm

Price Center Ballroom West A

Anthony Allen, Earl Warren College

Nominated by Dr. Alex Fraño, Physics

Analysis of Spectral Measurements of the Spin Dynamics in Magnetically Frustrated Materials

Frankie Martinez, Thurgood Marshall College

Nominated by Dr. Jennifer Haase, Scripps Institute of Oceanography

Using Seismic Data and GPS Data to Monitor Seismic Activity in Oklahoma and the Effects on Structural Integrity of Buildings

Panel # 1

Pharmaceutical Drugs and Inhibitors

Moderator: Dr. Christina Jamieson

Morning Session

Danielle Burner, Sixth College

Nominated by Dr. Christina Jamieson, Urology

Anti-androgen Drug Resistance in Three-Dimensional Cell Culture Models of Bone Metastatic Prostate Cancer

Yuya Fujita, John Muir College

Nominated by Dr. Maripat Corr, Rheumatology, Allergy and Immunology

Identification of Small-Molecule Immune Suppressive Compounds

Hye Jee Hahn, Revelle College

Nominated by Dr. Anjan Debnath, Skaggs School of Pharmacy

Identification of Inhibitors Targeting Mevalonate Pathway of Naegleria Fowleri for the Treatment of Primary Amoebic Meningoencephalitis

Ashni Vora, Sixth College

Nominated by Dr. Leslie Robertson Crews, Medicine

Effect of IRF4 Inhibition on the Cell Cycle

Carlos Wert Carvajal, Earl Warren College

Nominated by Dr. Jonathan Lin, Department of Pathology

Small Molecule in IRE1 Pathway in Vivo Model

Derek Wong, Earl Warren College

Nominated by Dr. Anthony O'Donoghue, Skaggs School of Pharmacy and Pharmaceutical Sciences

Targeting the Naegleria Fowleri Proteasome for Treatment of Primary Amebic Meningoencephalitis

Panel # 2

Physiology and Neuroscience

Moderator: Dr. Alan Hargens

Morning Session

Stephanie Adachi, Thurgood Marshall College

Nominated by Dr. Sameer Shah, Orthopaedic Surgery

Decoupled Epineurial and Axonal Deformation in Mouse Median and Ulnar Nerves

Teva Bracha, John Muir College

Nominated by Dr. Gulcin Pekkurnaz, Division of Biological Sciences Section of Neurobiology

Metabolic Compartmentalization in the Context of Neuronal Architecture

Laura Cui, Revelle College

Nominated by Dr. Pamela Mellon, Reproductive Medicine

Circadian Regulation of Ovulation

Evan Grace, Eleanor Roosevelt College

Nominated by Dr. Alan Hargens, Orthopedic Surgery

Postexercise Intracranial Pressure

Saumya Gupta, Revelle College

Nominated by Dr. Rana Brinda, Psychiatry

NASA study

Adarsh Kadoor, Earl Warren College

Nominated by Dr. Sameer Shah, Orthopaedic Surgery and Bioengineering

Examining the Effects of Decompression and Stretch on Blood Perfusion in Rat Sciatic Nerve

Jonathan Kim, Thurgood Marshall College

Nominated by Dr. Alan R. Hargens, Orthopaedic Surgery

Increasing Reaction Forces with Sitting in Lower Body Negative Pressure

Marianne Thio, Revelle College

Nominated by Dr. Alice Zemljic-Harpf, Anesthesiology

Sex Differences in the Effect of High-Fat Diet in Mice

Panel # 3

Genetic Mutation, Regulation, and Control

Moderator: Dr. Tatum Simonson

Morning Session

Jaideep Chakladar, Revelle College

Nominated by Dr. Weg Ongkeko, Surgery

Comprehensive Genomic and Transcriptomic Analysis of Papillary Thyroid Carcinoma Reveals Common and Unique Mutations and Immune-Associated Gene Expression Dysregulations Among the Various Cancer Subtypes

Kevin Chau

Nominated by Dr. Lilia Lakoucheva, Psychiatry

Isoform Co-Expression Networks in the Developing Human Brain

Selena Chen, Revelle College

Nominated by Dr. Bryan K. Sun, Dermatology

Role of HOPX as a Regulator of Epidermal Stem Cell Differentiation

Bonnie Huang, John Muir College

Nominated by Dr. Radha Ayyagari, Ophthalmology

Genetic Analysis of Pedigrees with Inherited Retinal Degeneration through Whole Genome Sequencing

Shannon Laub, Earl Warren College

Nominated by Dr. Julian Schroeder, Plant Biology

Design and Analysis of a First FRET Nanosensor for Detecting Malate/malic Acid in Plants

Sarah Moore, Sixth College

Nominated by Dr. Chris Putnam, Medicine

Radg's Role in Suppressing the Sae2 Δ Sgs1 Δ Synthetic Lethality

Minh Phan, Sixth College

& Jiazhen Rong, Earl Warren College

Nominated by Dr. Shu Chien, Engineering

The Chromatin Interaction Among Linc341, LEENE and eNOS in Atherosclerosis

Ali Zamat, Revelle College

Nominated by Dr. Yingxiao Wang, Molecular Engineering

Building a Controllable Switch for Cell Function

Panel # 4

Cellular and Developmental Biology

Moderator: Dr. Stephanie Grainger

Morning Session

Rocio Barahona, Revelle College

Nominated by Dr. Karl Willert, Cell and Molecular Medicine

Loss of LRP6 Function in HEK293TF Cells via CRISPR-Cas9

Nirosh Mataraarachchi, Revelle College

Nominated by Dr. Gulcin Pekkurnaz, Division of Biological Sciences

Identification of Mitochondria O-GlcNAcome

Hannah Morris Little, Thurgood Marshall College

Nominated by Dr. Karl Willert, Cellular and Molecular Medicine

Non-Canonical Wnt Signaling Reporter Assays

Amanda Nguyen, John Muir College

Nominated by Dr. Jonathan Lin, Pathology

The Unfolded Protein Response Regulator, ATF6, Promotes Mesodermal Differentiation

Antoinette Ronquillo, Eleanor Roosevelt College

Nominated by Dr. Alice Zemljic-Harpf, Anesthesiology

The Effects of Caveolin 3 Over Expression in Type 2 Diabetic Mice

Katherine Nguyen, Revelle College

Nominated by Dr. Shu Chien, Bioengineering

Elongated Cell Shape Directs Mesenchymal Stem Cell Differentiation to Smooth Muscle Cell via miR-145

Jordan Setayesh, Revelle College

Nominated by Dr. Karl Willert, Molecular Medicine

Modeling Wnt-Fzd Signaling Specificity

Chia-Yu Tsai, Thurgood Marshall College

Nominated by Dr. Julian Schroeder, Plant Biology

Higher Order Mutant Generation of Novel Genes Involved in Biotic and Abiotic Stress Tolerance Signaling Through CRISPR/Cas9 Genomic Editing

Panel # 5

Ecology, Behavior, and Evolution

Moderator: Dr. Ivan Garcia-Bassets

Morning Session

India Dove, Eleanor Roosevelt College

Nominated by Dr. Brice Semmens, Scripps Institution of Oceanography

Evaluating the Recovery of a Nassau Grouper (*Epinephelus striatus*) Spawning Aggregation via Length-Frequency Analysis from Underwater Laser Caliper Video

Kevin Hsiung, Revelle College

Nominated by Dr. James Nieh, Ecology, Behavior and Evolution

The Effect of Artificial Stop Signal Playback on Honey Bee Waggle Dancing In the Colony

Joshua Ludicke, Eleanor Roosevelt College

Nominated by Dr. James Nieh, Ecology, Behavior and Evolution

Visual Learning of Optic Flow in Walking Honeybees

Paula Sternberg, Revelle College

Nominated by Dr. Octavio Aburto-Oropeza, Scripps Institute of Oceanography

Yellow Snapper Densities in the Gulf of California According to Site Geomorphology and Substrate Composition

Passent Youssef, Earl Warren College

Nominated by Dr. Ron Burton, Scripps Institute of Oceanography

Oxidative Stress is a Cause of Reduced Fitness in Copepod Hybrids

Mengqun Lyu, Thurgood Marshall College

Nominated by Dr. Cory Miller, Psychology

Vocal Turn-Taking and the Effects of Interruption in Common Marmosets

Panel # 6

Psychology, Sociocultural Influences, and Health

Moderator: Dr. Yuliana Noniyeva

Morning Session

Sophia Holmqvist, Eleanor Roosevelt College

Nominated by Dr. Amy Lansing, Psychiatry

Disinhibition and Motivations for Alcohol and Substance Use Among Incarcerated CSEC and Non-CSEC Girls

Susan Hong La, Revelle College

Nominated by Dr. Jamila K. Stockman, Medicine

"Their job is to make you okay, make you better": The Role of Peer Navigation in Women's HIV Care and Well-being

Leonel Perez, Thurgood Marshall College

Nominated by Dr. Gerardo Arellano, Equity, Diversity, and Inclusion

Mapping the Latinx Community

Sara Petersen, Sixth College

Nominated by Dr. Harry Simon Salazar, Communication

Collectivist Preservation Amongst an Individualistic Society

Samantha Stevens, John Muir College

Nominated by Dr. Gail Heyman, Psychology

Distrust and Decreased Empathy: Implications for Victim Blaming Tendencies and Political Beliefs

Panel # 7

Communication, Creativity, Problem Solving, and Autism

Moderator: Dr. Sarah Creel

Morning Session

Kaiqi Guo, Sixth College

Nominated by Dr. Timothy Richkard, Psychology

The Effect of Retrieval Practice on Analogical Transfer Problem Solving

Jessica Gutierrez,

Nominated by Dr. Lilia Lakoucheva, Psychiatry

Characterization of CRISPR Mouse Models of Autism

Yiqiao Wang, Sixth College

Nominated by Dr. David Barner, Psychology

The Role of Pragmatics in Explaining the Difference Between One and A

Daisy Morales, Eleanor Roosevelt College

with Bianca Wilson, Eleanor Roosevelt College

& Jocelyn Yang, Revelle College

Nominated by Dr. Jaimie Pineda, Cognitive Science

Autism & Creativity

Madeleine Yu, Sixth College

Nominated by Dr. Sarah Creel, Cognitive Science

Late Mandarin-English Bilinguals' Perception of Self-Produced Non-Native Speech Sounds

Panel # 8

Education, Schooling, and Culture

Moderator: Dr. Luz Chung

Morning Session

Helena Almassy, Earl Warren College

Nominated by Dr. Luz Chung, Education Studies

Conceptualizing a Tutoring Center within a Community College

James Boyd, Thurgood Marshall College

Nominated by Dr. Harry Simon Salazar, Communication

How Disciplinary Strategies And Niche Construction Theory Mediate The Zone of Proximal Development

Alma Denise Casillas, Earl Warren College

Nominated by Dr. Luz Chung, Education

Perceptions of Spanish Heritage Speakers towards Mother Language

Irene Kwangaba, John Muir College

Nominated by Dr. Luz Chung, Education Studies

Social Integration for Students with Autism

Amy Lee, Thurgood Marshall College

Nominated by Dr. Christoforos Mamas, Education Studies

Tutoring Within a College-Going Culture

Jordan Packer, Thurgood Marshall College

Nominated by Dr. Kevin Lewis, Sociology

The Honors Distinction

Panel # 9

Language and Meaning

Moderator: Dr. John Haviland

Morning Session

Christina Fallone, Revelle College

Nominated by Dr. Eric Bakovic, Linguistics

Perceptual Dialectology in Kentucky

Austin German, John Muir College

Nominated by Dr. John Haviland, Anthropology

Spatial Coherence in an Emerging Sign Language

Klaus Kim, Earl Warren College

Nominated by Dr. Eric Baković, Linguistics

Whiskey: A Web Application to Visualize Phonological Features

Alice Zhang, Earl Warren College

Nominated by Dr. Harry Simon Salazar, Communication

Language Acquisition and the Virtual Third Space

Sherry Zheng, Earl Warren College

Nominated by Matt Nelson, Critical Writing + Expression Hub

Connecting with English Language Learners Through Shared Linguistic Backgrounds

Panel # 10

Community, Housing, and Justice

Moderator: Dr. Keith Pezzoli

Morning Session

Dmitriy Goncharuk, Sixth College

Nominated by Dr. Keith Pezzoli, Urban Studies and Planning

with Joyce Lee, Sixth College

& Vincent Page II, Eleanor Roosevelt College

Nominated by Dr. Mirle Rabinowitz-Bussell, Urban Studies and Planning

Alleys in Action! Healthy Placemaking Science Gateway

Juliet Norris, Eleanor Roosevelt College

Nominated by Dr. Matilde Cordoba Azcarate, Communication

City Heights and Gentrification

Emily Robleza, Eleanor Roosevelt College

Nominated by Dr. Hanna Garth, Anthropology

Shaping Our Understanding of Food Justice through Traditional Native Food Systems

Elizabeth Rosas, John Muir College

Nominated by Dr. Matilde Cordoba Azcarate, Communication

Urban Development and Dispossession in East Village, San Diego

Panel # 11

Race, Refugees, and Politics

Moderator: Dr. Saikat Chakraborty Thakur

Morning Session

Dellanira Alcauter, Thurgood Marshall College

Nominated by Dr. Yén Lê Espiritu, Ethnic Studies

Christianity and Curanderismo

Yaneth Escobosa, Earl Warren College

Nominated by Dr. Jeff Haydu, Sociology

Now That We Are Here: DACA Recipients' College Experiences

Sarah Goulart, Earl Warren College

Nominated by Dr. Jeff Haydu, Sociology

The Racial Transfer Gap

Lara Grossmith, Thurgood Marshall College

& Brian Vasquez, Sixth College

Nominated by Dr. Kwai Ng, Sociology

Interdisciplinary Collaboration and Medical Curricular Change: Humanistic and Social Scientific Knowledge in Medical Education

Lorraine Lopez, Revelle College

Nominated by Dr. Gerardo Arellano, Equity, Diversity and Inclusion

The Phenomenon and Rise of Anti-Immigrant Sentiment and White Nationalism

Yudian Lu, Thurgood Marshall College

Nominated by Dr. Julie Barry Cullen, Economics

Racial and Nationality Discrimination in the Premier League Football Player's Weekly Salary and Playing Time: A New Look

Josue Villareal, John Muir College

Nominated by Dr. Yén Lê Espiritu, Ethnic Studies

Rewitnessed Histories, Re-Remembered Identities: Stories of Persecution, Resistance, and Hope in Rohingya Refugee Art

Panel # 12

Molecular Biology and Regulation

Moderator: Dr. Leslie Crews

Afternoon Session

Xiaoke Bi, Revelle College

Nominated by Dr. Jonathan Lin, Pathology

Role of IRE1 and XBP1 in Regulating the Degradation of P23H Rhodopsin

Anthony Bui, John Muir College

Nominated by Dr. Maripat Corr, Medicine

Differential Regulation of Toll-like Receptors on an Animal Model of Rheumatoid Arthritis

Teresa Chou, Revelle College

Nominated by Dr. Pamela Mellon, Reproductive Medicine

The Affects of Androgens on Kisspeptin Transcription

Andrea Cázares Morales, CNYN-UNAM

Nominated by Dr. Eduardo Macagno, Biology

Evaluation of Toxicity of Nanomaterials with Biomedical Interest in Microalgae

Elijah Lawrence, Eleanor Roosevelt College

Nominated by Dr. Tatum Simonson, Medicine

Genetic Missense Variants at the EGLN1 Locus Associated with High-Altitude Adaptation in Tibetans are Rare in Andeans

Zhijian Li, Sixth College

Nominated by Dr. Jens Lykke-Andersen, Division of Biological Sciences

Biological Importance of TOE1 Domains on snRNA Processing

Ishan Ranjan, Earl Warren College

Nominated by Dr. Weg Ongkeko, Surgery

In-Depth Analysis of Head and Neck Squamous Cell Carcinoma Immune Landscape Regulation by Alcohol and Tobacco

Jiayan Tan, Revelle College

Nominated by Dr. Susan Golden, Biological Science

Cyanobacterial Survival Key Genes

Panel # 13

Biology and Nanotechnology

Moderator: Dr. Eduardo Macagno

Afternoon Session

Marisela Perzabal Corona, UABC-Ensenada

Nominated by Dr. Eduardo Macagno, Biology

Effects of siRNA in Hirudo Medicinalis Central Nervous System Development

Bas Schaap, Earl Warren College

Nominated by Matthew Pendergraft, Atmospheric Chemistry

The Importance of Characterizing and Identifying Particles

John Flores, Revelle College

Nominated by Dr. Andrew C. Kummel, Chemistry and Biochemistry

Dynamic MRI Contrast Agent for HIFU

Kavin Tangtartharakul, Earl Warren College

Nominated by Dr. Kenneth Vitale, Medicine

Self-Generated LBNP Device

Felix Monge, John Muir College

Nominated by Dr. Olivia Graeve, Mechanical and Aerospace Engineering

A Solution Chemistry Process for the Synthesis of Calcium Hexaboride Powders of Unique Morphologies

Nicole Sicaeros Samaniego, UABC-Ensenada

Nominated by Dr. Eduardo Macagno, Biology

Gap Junction Formation and Electrical Synapses in Invertebrates During Early Development Stages

Josemarco Mendoza Ávila, CNyN-UNAM

& Luis Ricardo Rodríguez Marino, UNAM CNyN

Nominated by Dr. Eduardo Macagno, Biology

Citotoxicity Effect on Silver Nanoparticles in Mice Spleen and Aortic Cells

Panel # 14

Psychiatry and Clinical Psychology

Moderator: Dr. Kirsten Kung

Afternoon Session

Maria Bordyug, Revelle College

With Lauren Ring, Earl Warren College

& Jenny Ni Zhen, Eleanor Roosevelt College

Nominated by Dr. Fiza Singh, Psychiatry

Effects of Gamma Neurofeedback Training in Schizophrenia's Working Memory Performance

Vaidehi Gupta, Revelle College

Nominated by Dr. Nicholas Spitzer, Division of Biological Sciences

Neurotransmitter Switching in a PTSD Mouse Model

Rita Hedo, Eleanor Roosevelt College

Nominated by Dr. Xin Tu, Family Medicine and Public Health

Positive Psychological Traits on Life Satisfaction in Schizophrenic Patients and Healthy Control

Loren Lavadia, Eleanor Roosevelt College

Nominated by Dr. Jared Young, Psychiatry

Mice with Reduced DAT Levels Recreate Seasonal-Induced Switching between States in Bipolar Disorder and the Role of Acetylcholinesterase Inhibition in Bipolar Depression

Aasna Shah, Thurgood Marshall College

Nominated by Dr. Lisa Eyler, Psychiatry

Inflammation Associations with Childhood and Adult Adversity in Bipolar Patients

Xinze Yu, Sixth College

Nominated by Dr. Adam Aron, Psychology

An Investigation of Proactive Selective Response Suppression Using EEG Approaches

Panel # 15

Learning and Memory

Moderator: Dr. Andre Der-Avakian

Afternoon Session

Zeljana Babic, Sixth College

Nominated by Dr. Timothy Brady, Psychology

Relationships between Fluid Intelligence and Visual Working Memory

Max Bishop, Sixth College

& Cullin Taggard, Revelle College

Nominated by Dr. Timothy Rickard, Psychology

The Pretesting Effect Yields Transfer of Learning for U.S. History Facts

Amanda Calcetas, Sixth College

Nominated by Dr. Adena Schachner, Psychology

Selective Amplification of Diagnostic Features in Children's Visual Memory

Joseph Delly, Eleanor Roosevelt College

& Sean Wong, Thurgood Marshall College

Nominated by Dr. Ralph Greenspan, Department of Biology

The Role of Dopamine Receptors in Classical Learning

Kelvin Lam, Eleanor Roosevelt College

Nominated by Dr. Timothy Brady, Psychology

Is Object Memory Tied to Categorical Labels?

Annalise Miner, Eleanor Roosevelt College

Nominated by Dr. Timothy Brady, Psychology

Repetition Allows for Long-Term Memories That Are as Precise as the Best Working Memories

Panel # 16

Computer Science, Statistics, and Materials Engineering

Moderator: Dr. Arun Kumar

Afternoon Session

Alexander Bergman, Eleanor Roosevelt College

Nominated by Dr. Paul Siegel, Electrical and Computer Engineering

Encryption and Coding to Extend the Lifetime of Non-volatile Memories

Kyle Gillespie, John Muir College

Nominated by Dr. Michael Tolley, Mechanical and Aerospace Engineering

3d Printing Soft Capacitive Sensors

Side Li, Earl Warren College

Nominated by Dr. Arun Kumar, Electrical and Computer Engineering

A Case Study of Learning Over Joins with Python

Glen Isaac Maciel García, CNYN-UNAM

& Genaro Soto Valle Angulo, CNYN-UNAM

Nominated by Dr. Eduardo Macagno, Biology

Optimization of SiO₂ and TiO₂ Thin Film Deposition by Reactive Magnetron Sputtering

Kim Jasper Mui, John Muir College

Nominated by Dr. Arnold Mandell, Psychiatry

Schizophrenia Analysis: Relationship Between Lyapunov Exponent and Distribution

Samuel Parker, John Muir College

Nominated by Dr. Eric Bakovic, Linguistics

The Natural Class Finder

Panel # 17

Physics

Moderator: Dr. Richard Averitt

Afternoon

Mustafa Ali, Sixth College

Nominated by Dr. Richard Averitt, Department of Physics

Development of Mid-infrared Prism Spectrometer Using Pyroelectric Line Array Sensor and its Applications in Complex Materials

Angela Z Chen, John Muir College

Nominated by Dr. Massimiliano Di Ventra, Physics

Using Classical and Quantum Molecular Dynamics to find the Melt Line of High Pressure Iron

Tanvi Gandhi, Earl Warren College

Nominated by Dr. Jeremie Palacci, Physics

A-maze!

Axel Melchor Goana Carranza, CNyN-UNAM

Nominated by Dr. Eduardo Macagno, Biology

I-V Characterization of Noncentrosymmetric Materials with Bulk Photovoltaic Effect

Raghav Kansal, Thurgood Marshall College

Nominated by Dr. Julio Barreiro, Physics

Arbitrary Ultra-Cold Atomic Lattices Using Holographic Optical Tweezers

Josh Ruby, John Muir College

Nominated by Dr. Richard Averitt, Physics

Optical Pump Probe Study of the Filled Skutterudites $\text{PrOs}_4\text{Sb}_{12}$ and $\text{PrRu}_4\text{P}_{12}$

Yimiao Zhang, Earl Warren College

Nominated by Dr. Dusan Keres, Astrophysics

Effects of Pop III to PopII Transition on the Lowest Metallicity Stars in Dwarf Galaxies

Panel # 18

Nanoengineering and Biotechnology

Moderator: Dr. David Werho

Afternoon Session

Samuel Edmunds, Sixth College

Nominated by Dr. Darren Lipomi, NanoEngineering

Optics-Free, Non-Contact Measurements of Fluids and Bubbles in Microchannels using Metallic Nanoislands on Graphene

Ghanim Hableel, John Muir College

Nominated by Dr. Jesse Jokerst, NanoEngineering

A Multi-Purpose Silica Nanoparticle for Ultrasound-Guided Cardiac Stem Cell Therapy

Emmanuel Gaona Carranza, CNyN-UNAM

Nominated by Dr. John Haviland, Anthropology

Biocompatibility Evaluation of Nanohydroxyapatite Doped with Europium

Nicholas Lewis, Sixth College

Nominated by Dr. Jan Talbot, Engineering

Chronic Lymphocytic Leukemia Fluid Based Early Diagnostic Assay

Itzel Rubio Elizalde, CNyN-UNAM

Nominated by Dr. Eduardo Macagno, Biology

Development and Characterization of Multifunctional Aloe Vera Wound Dressings

Madeleine Russell, Revelle College

Nominated by Dr. Darren Lipomi, Nanoengineering

Intrinsically Stretchable and Conductive Block Copolymer for Wearable Organic Electronics

Etienne Israel Palos, CNyN-UNAM

Nominated by Dr. Eduardo Macagno, Biology

Tight-Binding Study of Rhenium Carbonitride: An Extended Hückel Approach

Armando Urbina, Earl Warren College

Nominated by Dr. Darren Lipomi, Nanoengineering

Wearable Sensor Comprised of Polymer-Nanomaterial Composites for Monitoring Sleep Apnea

Panel # 19

Chemistry, Biochemistry, and Atmospheric Chemistry

Moderator: Dr. Robina Shaheen

Afternoon Session

Xi Chen, Thurgood Marshall College

Nominated by Dr. Guy Bertrand, Chemistry and Biochemistry

Primary Amino-Borane Derivatives as Powerful Reagents for Aldimine Synthesis

Alejandro Nogueroń Arámbaru, CNyN-UNAM

Nominated by Dr. Eduardo Macagno, Biology

Electrostatic Deposition on Selected Ferroelectric Domains

Rubí Zarmiento García, CNyN-UNAM

Nominated by Dr. Eduardo Macagno, Biology

Computational Simulations of the Functionalization of Silicane with Benzaldehyde

Connie Li, Thurgood Marshall College,

Kaleb Barber, Thurgood Marshall College,

& **Donald Rez**, Revelle College

Nominated by Dr. Robina Shaheen, Chemistry and Biochemistry

Isotopes of Interest in Sulfate Aerosols

Youjeong Na, Sixth College

Nominated by Dr. Stanley J. Opella, Chemistry and Biochemistry

Preparation of Neurotensin Receptor 1 in Phospholipid Bilayers for Solid-State NMR Spectroscopy

Joshua Richardson, Revelle College

Nominated by Dr. Joshua S. Figueroa, Chemistry and Biochemistry

Synthetic Progress Towards Completely Substituted Aryl-Isocyanide Cobalt-Chalcogen Clusters

Cynthia Wong, Thurgood Marshall College

Nominated by Dr. Vicki H. Grassian, Chemistry and Biochemistry

The Role of Iron in Inorganic and Organic Sulfur Oxidation

Panel # 20

History and Expression

Moderator: Dr. Alain Cohen

Afternoon Session

Joshua Beneventi, Thurgood Marshall College

Nominated by Dr. Steven Parish, Anthropology

Dissolution and Transcendence: The Relationship Between Music and Altered States of Consciousness

Daria Bond, John Muir College

Nominated by Dr. Amelia Glaser, Literature

Baba Yaga the Stony Leg

Madeleine Colbert, Thurgood Marshall College

Nominated by Dr. Sarah Creel, Cognitive Science

The Revenant: Inner Monsters and Post-Modernity in the Spiral Flask

David Dawson, Eleanor Roosevelt College

Nominated by Dr. Rebecca Jo Plant, History

Inviolable Motherhood: The Far-Right and the Battle Against the Constriction of Women During the Second World War

Nathaniel Imel, Thurgood Marshall College

Nominated by Dr. Alain J.-J. Cohen, Literature

A Most Wanted Man By Anton Corbijn: Politics of Imprisonment

Vicky Mak, Eleanor Roosevelt College

Nominated by Dr. Alain J.-J. Cohen, Literature

"Inception": a Dream within a Dream through Freudian Lenses

Zhouqun (Robin) Xu, Earl Warren College

Nominated by Dr. Jonathon Paden, Visual Arts

Somatic Sensing

Panel # 21

Politics

Moderator: Yile Zhang

Afternoon Session

Ekam Brar, John Muir College

Nominated by Dr. Yile Zhang, Political Science

The Singh Sabha Movement as Colonial Resistance

Albert Chiu, Thurgood Marshall College

Nominated by Dr. Scott Desposato, Political Science

The Advancement of LGBT Rights and Its Effect on Attitudes in Latin America

Keerit Kohli, Revelle College

Nominated by Dr. Julie Barry Cullen, Economics

Effects of the 2008 Presidential Election on Instances of Domestic Violence

Erica Navarro, Revelle College

Nominated by Dr. John Haviland, Anthropology

Immigration Inadmissibility Questions: From Obama to Trump

Pravin Wilkins, Earl Warren College

Nominated by Dr. Scott Desposato, Political Science

Social Identity and Perceptions of Terrorism in the United States

Panel # 22

Anthropology

Moderator: Dr. Katerina Semendeferi

Afternoon Session

Cesar Arcasi-Matta, John Muir College

Nominated by Dr. Amy Non, Anthropology

Aspects of the Social Environment and its Association with Hair Cortisol and Metabolic Health in Children

Deion Cuevas, Revelle College

Nominated by Dr. Katerina Semendeferi, Anthropology

Parvalbumin-Positive Interneurons in the Striatum in Williams Syndrome

Barbara Cullingford, Earl Warren College

Nominated by Dr. Pascal Gagneux, Anthropology

Analysis of the Potential Interplay of Assisted Reproductive Therapies in Human Reproduction

Ashley Eastman, Sixth College

Nominated by Dr. Paul S. Goldstein, Anthropology

Pre-Columbian Ceramic Distribution of Tiwanaku Households: A Spatial Analysis of Omo Site M16

Demi Greiner, Sixth College

Nominated by Dr. Katerina Semendeferi, Anthropology

Parvalbumin-Positive Interneurons of the Basolateral Amygdala in Williams Syndrome: A Postmortem Histological Study

Amy Hostetler, John Muir College

Nominated by Dr. Shirley Strum, Anthropology

Does the Use of Referential Models Limit Our Understanding of Human Evolution?

Inaqui Loza, Revelle College

Nominated by Dr. Paul Goldstein, Anthropology

Determining the Presence of Caravan Routes in the Tiwanaku Region

Sarah Roebel, Earl Warren College

Nominated by Dr. Paul Goldstein, Anthropology

Implications of Tiwanaku and Tumilaca Cemetery Viewsheds

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