21st Annual Student Project Showcase & Alumni Reception

Friday, May 3, 2019
2 p.m. - 6:30 p.m.
SF State University
Student Life Events Center (ANNEX I)
LIST OF 2019 WINNERS

Graduate Behavioral Science Division

FIRST PLACE — $400

Entry Number: 18 GB
TIME AND TREPIDATION: ARE ADOLESCENTS’ THOUGHTS AND FEELINGS ABOUT TIME RELATED TO THEIR ANXIETY?
By: Julia Moon
Social Psychology
Faculty Advisor: Dr. Zena R. Mello

SECOND PLACES — $300

Entry Number: 24 GB
LABCADEMY: AN INTERACTIVE LAB DISCUSSION PLATFORM
By: Alia Edington, Christen Kinney, Chimara Stancill, and Selena Hernandez
Cell & Molecular Biology
Faculty Advisor: Dr. Anagha Kulkarni

Entry Number: 21 GB
STUDENTS’ SENSE OF BELONGING IN INTRODUCTORY PHYSICS LABS: DOES GTA TRAINING MATTER?
By: Caitlin Kepple
Astronomy
Faculty Advisor: Dr. Kimberly Coble

THIRD PLACE — $300

Entry Number: 20 GB
HE WAS ELECTED AND NOW WE WILL CHANGE THE WORLD: A MIXED METHODS STUDY EXAMINING ADOLESCENTS’ REACTIONS TO THE ELECTION OF DONALD TRUMP
By: Lindsey Seril, Jennifer Wahleithner, Jack Chase, and Stephanie Kirkman
Social, Personality, and Affective Psychology
Faculty Advisor: Dr. Zena R. Mello
GROUP GL1

FIRST PLACE – $400
(KENSON VENTURES EXCELLENCE AWARDS)

Entry Number: 46 GL1
BETTER LIVING THROUGH HGT! EVIDENCE FOR METABOLIC OPTIMIZATION THROUGH HORIZONTAL GENE TRANSFER OF A FUSED GENE
By: Steven Sun
Cell & Molecular Biology
Faculty Advisor: Dr. Scott W. Roy

SECOND PLACE – $300

Entry Number: 39 GL1
DEVELOPMENT OF A SPLIT-GFP REPORTER TO VISUALIZE FILOPODIA-MEDIATED WNT1 SIGNALING ACTIVATION
By: Frederick R. Santana
Cell & Molecular Biology
Faculty Advisors: Dr. Laura W. Burrus and Lisa M. Galli

THIRD PLACE – $200

Entry Number: 47 GL1
FEATURES OF HISTONE H2A VARIANT HIS-35 INCORPORATION BEFORE AND AFTER FERTILIZATION
By: Wesley Huang
Cell & Molecular Biology
Faculty Advisor: Dr. Diana Chu

GROUP GL2

FIRST PLACE – $400

Entry Number: 52 GL2
GLOBAL PATTERNS OF VARIABILITY AMONG THERMOPHILIC AMMONIA-OXIDIZING ARCHAEA
By: Brittany A. Baker
Microbiology
Faculty Advisor: Dr. Jose R. de la Torre
SECOND PLACE — $300
Entry Number: 57 GL2
EUPRYMNA SCOLOPES-VIBRIO FISCHERI SYMBIOSIS: EFFECTS OF EXOGENOUS LIGHT ON SURVIVAL AND BEHAVIOR DEVELOPMENT
By: Vivien Enriquez
Physiology and Behavioral Biology
Faculty Advisors: Dr. Robyn Crook and Dr. Andy Zink

FOURTH PLACE — $100
Entry Number: 54 GL2
MICROGRAVITY EFFECTS ON THE NERVOUS SYSTEM IN DROSOPHILA MELANOGASTER
By: Jhony A. Zavaleta
Physiology and Behavioral Biology
Faculty Advisors: Dr. Megumi Fuse and Dr. Sharmila Bhattacharya (NASA Ames Research Center)

GRADUATE PHYSICAL SCIENCE DIVISIONS

GROUP GP1

FIRST PLACE — $400
Entry Number: 88 GP1
AUTOMATED TOPOLOGY OPTIMIZATION PLATFORM FOR DESIGNING HIGH-RISE STRUCTURES
By: Alec Maxwell
Structural/Earthquake Engineering
Faculty Advisor: Dr. Zhaoshuo Jiang

SECOND PLACE — $300
Entry Number: 80 GP1
APPLICATIONS OF DATA MINING TO STUDENT PERFORMANCE PREDICTION AND CURRICULUM DESIGN
By: Paul Previde
Computer Science
Faculty Advisor: Dr. Hui Yang
THIRD PLACE – $200
Entry Number: 77 GP1
GESTURE RECOGNITION WITH WIFI SENSING IN SMART HOMES
By: Krunal Shah
Computer Science
Faculty Advisors: Dr. Hao Yue and James Wong

GROUP GP2

FIRST PLACE – $400
Entry Number: 102 GP2
PATTERNED FABRICATION OF NANOWIRE ARRAYS FOR BIOIMAGING APPLICATIONS
By: Patrick DeLear
Astronomy
Faculty Advisor: Dr. Huizhong Xu

SECOND PLACE – $300
Entry Number: 104 GP2
AN ISOTROPIC PHOTONIC CRYSTAL DESIGN BASED ON “SELF-ORGANIZED” HYPER-UNIFORM DISORDERED PATTERN
By: Bowen Yu
Physics
Faculty Advisor: Dr. Weining Man

THIRD PLACE – $200
Entry Number: 99 GP2
UNDERSTANDING THE COMPLEXITY OF THE DOMAIN OF APPROXIMATION OF A RATIONAL TUPLE
By: Oliver Knitter
Mathematics
Faculty Advisor: Dr. Yitwah Cheung
Undergraduate Life Science Divisions

GROUP UL1

FIRST PLACE – $400
(Kenson Ventures Fong Excellence Award)

Entry Number: 120 UL1
THE ROLE OF FILOPODIA IN WNT CELL TO CELL COMMUNICATION
By: Rocio Cisneros
Biochemistry
Faculty Advisor: Dr. Laura W. Burrus

SECOND PLACE – $300

Entry Number: 128 UL1
SINGLE CELL ANALYSIS OF VACUOLAR SIZE AND pH USING CONFOCAL MICROSCOPY
By: Roberto Carlos Segura, Jamie Calma, and Jean Luke Campos
Cell & Molecular Biology
Faculty Advisor: Dr. Mark Chan

THIRD PLACE – $200

Entry Number: 115 UL1
ALTERNATE CATALYTIC SUBUNIT ASSEMBLIES OF WILD-TYPE AND ACTIVE-SITE CAVITY MUTANTS OF STYRENE MONOOXYGENASE
By: Benjamin Butler
Biochemistry
Faculty Advisor: Dr. George Gassner

GROUP UL2

FIRST PLACE – $400

Entry Number: 136 UL2
FRIENDS OR FOES - THE EFFECT OF PROBIOTIC MICROBIOTA ON GROUP B STREPTOCOCCUS (GBS)
By: Jan Mikhail Cajulao
Microbiology
Faculty Advisor: Dr. Lily Chen
SECOND PLACE – $300
Entry Number: 143 UL2
DRUG-INDUCED MEGALOBLASTIC ANEMIA IS ASSOCIATED WITH INHIBITORS OF HUMAN THIAMINE TRANSPORTER 1 (THTR-1)
By: Derrick Chatad
Physiology
Faculty Advisors: Dr. Kathleen Giacomini (UCSF) and Dr. Leticia Marquez-Magana

FOURTH PLACE – $100
Entry Number: 138 UL2
CHARACTERIZING PA3944 and PA3945 Gcn5-related N-acetyltransferases (GNATs) FROM PSEUDOMONAS AERUGINOSA IN VITRO
By: Charles Houseman
Microbiology
Faculty Advisor: Dr. Misty L. Kuhn

UNDERGRADUATE INTERDISCIPLINARY DIVISION

FIRST PLACE – $400
Entry Number: 165 UI
DO FALSE POSITIVE RATES INCREASE WHEN POLICE WRONGFULLY ASSUME A SUSPECT’S ETHNIC BACKGROUND?
By: Carina Kalaydjian, Maria Flores, and Niquo Ceberio
Applied Mathematics
Faculty Advisor: Dr. Rori Rohlfs

SECOND PLACE – $300
Entry Number: 169 UI
DIFFERENCES IN ACCESS AND QUALITY OF LARC INFORMATION ACROSS US UNIVERSITIES
By: Diana Yu Yu, Risha Shah, Sabrina Gonzaga (Nursing), Fungai Gora (Creative Writing), and Byron Mills II (Economics)
Computer Science
Faculty Advisors: Dr. Anagha Kulkarni, Dr. Carrie Holschuh (Nursing), and Dr. Venoo Kakar (Economics), Dr. Sepideh Modrek (Economics), and Dr. Anastasia Smirnova (Linguistics)
THIRD PLACE — $200
Entry Number: 163 UI
ALONE TOGETHER: PARTNER SUPPORT AS A PREDICTOR OF LONELINESS IN ROMANTIC RELATIONSHIPS
By: Melanie Carniglia and Natalie Wong
Psychology
Faculty Advisors: Dr. Sarah Holley and Dr. David Gard

UNDERGRADUATE
Computer Science/Engineering Division

FIRST PLACE — $400
Entry Number: 175 UCS/E
INFERRING THE LANGUAGE OF ADDICTION
By: Zachary Prince and Deeptanshu Jha
Computer Science
Faculty Advisor: Dr. Rahul Singh

SECOND PLACES — $300
Entry Number: 172 UCS/E
PROJECT_M
By: Austin Tsang (CS) and Wanzin Yazar (Statistics)
Computer Science and Mathematics
Faculty Advisor: Dr. Isabel Hyo Jung Song

Entry Number: 180 UCS/E
SPIRIT - THE AUTOMATIC BARTENDER
By: Dylan Wright (CompE), Moses Martinez (CompE), and Kyle Henderson (EE)
Engineering
Faculty Advisor: Dr. Tom Holton
THIRD PLACE — $200
Entry Number: 171 UCS/E
CLARYTY
By: Andy Lai and Mitul Savani
Computer Science
Faculty Advisor: Dr. Minu Kumar (Marketing)

UNDERGRADUATE
ENGINEERING DIVISION

FIRST PLACE — $400
Entry Number: 203 UE
BIO-INSPIRED THREE DIMENSIONAL FALL DETECTION SYSTEM
By: Samuel Benzoni (CE), John Hanson (ME), Lungyuen Lau (Structural),
Batool Zaro (CE), Aishwarya Laturkar (CS), and Gayatri Pise (CS)
Engineering and Computer Science
Faculty Advisors: Dr. Zhaoshuo Jiang (SOE) and Dr. Hao Yue (CS)

SECOND PLACES — $300
Entry Number: 211 UE
MECHANICALLY ASSISTED ACCESSIBILITY SYSTEM
By: Dawn Bautista, Jenny Huynh, David Kang, Mike Poundstone, and Quinnland Sowells
Mechanical Engineering
Faculty Advisor: Dr. Manuchehr Shirmohamadi

Entry Number: 225 UE
SOLTERM PURIFIER
By: Zayn Mufti, Melissa Abed, Austin Lockhart, and Tiffany Bermudez
Mechanical Engineering
Faculty Advisor: Dr. Manuchehr Shirmohamadi
THIRD PLACES – $200

Entry Number: 221 UE
REVOLUTIONARY CNC
By: Noel Herron, Jonathon Hull, and Francis Lee
Mechanical Engineering
Faculty Advisor: Dr. Manuchehr Shirmohamadi

Entry Number: 216 UE
MECHANICAL RIPPLE FLOAT FOR LAYING CEMENT
By: Juan Valdez, Hernan Guzman, Luis Gonzalez, and Danh Le
Mechanical Engineering
Faculty Advisor: Dr. Ed Cheng