

AN INTRODUCED COPEPOD IN SF ESTUARY: GENETIC DIVERSITY IN A
RECENT INVASION

By: Allegra Briggs, Dr. Sarah Cohen, and Dr. Wim Kimmerer

Marine Biology

Faculty Advisor: Dr. Wim Kimmerer

WHAT ARE THE LEARNING STYLES OF PRE-MEDICAL STUDENTS IN LOWER
AND UPPER DIVISION SCIENCE COURSEWORK?

By: Amanda del Rosario, Huy Ngo, and Dave Joun

Microbiology

Faculty Advisor: Dr. Jennifer Breckler

CONTROL OF LEPIDIUM LATIFOLIUM IN SAN FRANCISCO BAY TIDAL
WETLAND

By: Anya P. Burdick and Dr. Katharyn E. Boyers

Conservation Biology

Faculty Advisor: Dr. Katharyn E. Boyers

SIMULATING RAD52 REPAIR PROTEIN KINETICS IN RESPONSE TO DNA
DOUBLE STRANDED BREAKS

By: Ari Akerstein

Cell and Molecular Biology

Faculty Advisor: Dr. Javier Arsuaga

THE ACTIONS OF ECDYSIS TRIGGERING HORMONE IN INTERMOLT LARVAL
INSECTS

By: Arianna Tamvacakis

Physiology and Behavior Biology

Faculty Advisor: Dr. Megumi Fuse

THE ANTI-OXIDANT GLUTATHIONE IS SYNTHESIZED IN SACCHAROMYCES
CEREVISIAE IN RESPONSE TO SALINE STRESS

By: Daniel Bravo and Natasha Liu

Cell and Molecular Biology

Faculty Advisor: Dr. Robert Ramirez

SENSITIZATION OF DEFENSIVE RESPONSES INDUCED BY NOXIOUS STIMULI
IN THE HORNWORM, MANDUCA SEXTA

By: Emily Merchasin and Dr. Megumi Fuse

Physiology and Behavioral Biology

Faculty Advisor: Dr. Megumi Fuse

THE ACTIONS OF ECDYSIS TRIGGERING HORMONE ON THE VENTRAL
NERVE CORD DURING ECDYSIS IN THE TOBACCO HORNWORM, MANDUCA
SEXTA

By: Hani El Shawa and Dr. Megumi Fuse

Physiology and Behavioral Biology

Faculty Advisor: Dr. Megumi Fuse

CHARACTERIZATION OF 2-C-METHYL ADENOSINE AND 2-C-METHYL
CYTIDINE USING THE HCV SUBGENOMIC REPLICON

By: Hyunsoon Kang, Dr. Sophie Le Pogam, Sonal Rajyaguru, Sharon Jiang, and Dr. Nick
Cammack

Biomedical Laboratory Science

Faculty Advisor: Dr. Lily Chen and Dr. Isabel Najera (Roche)

INCIPIENT SPECIATION IN THE DIAMOND TURBOT (PLEURONICHTHYS
GUTTULATUS)

By: Jeff Schinske and Dr. Eric Routman

Ecology and Systematic Biology

Faculty Advisor: Dr. Eric Routman

PREDICTION OF PROTEIN-LIGAND INTERACTIONS USING COMPUTATIONAL
MODELS OF ACTIVE SITES

By: Joanna Lipinski

Physiology and Behavioral Biology and Computing for Life Sciences

Faculty Advisor: Dr. Rahul Singh and Dr. Jonathon Stillman

ATF3 REPRESSION OF INTERFERON BETA

By: Karendip Braich

Cell and Molecular Biology

Faculty Advisor: Dr. Steve Weinstein

INVESTIGATION OF PRES2 MUTATIONS AS EARLY CLINICAL MARKERS FOR
DEVELOPMENT OF SEVERE LIVER DISEASES IN CHRONIC HEPTATIS B
INFECTION

By: Kristen Andreatta

Biomedical Laboratory Science

Faculty Advisor: Dr. Joe Romeo

A FOOD WEB MODEL OF THE SF BAY ECOSYSTEM TO UNDERSTAND THE
IMPACT OF INVASIVE SPECIES

By: Martin Olson and Rachel Hertog

Marine Biology

Faculty Advisor: DR. PETER ROOPNARINE

DECREASING ACTIVATION TRANSCRIPTION FACTOR 3 PROTEIN LEVELS
INCREASES INTERFERON-BETA TRANSCRIPTION IN MURINE
MACROPHAGES

By: Mimi Ly

Cell and Molecular Biology

Faculty Advisor: Dr. Steve Weinstein

MICRORNA EXPRESSION PROFILING IN HUMAN BREAST CANCER CELL
LINES

By: Molly Klein-McDowell, Andrei Goga, Chris Benz, Paul Yaswen, Dr. Koei Chin and
Joe

W. Gray

Cell and Molecular Biology

Faculty Advisor: Dr. Leticia Marquez-Magana and Dr. Koei Chin (UCSF)

PRESIDIO NATIONAL PARK SPIDER BIODIVERSITY ASSESSMENT

By: Pedro Morgado, Misha Leong, and Theresa Shelton

Conservation Biology

Faculty Advisor: Dr. John Hafernik

BIVALVE MORPHOLOGY AND COMMUNITY STRUCTURE IN THE LATE
MIOCENE DOMINICAN REPUBLIC

By: Rachel Hertog and Dr. Peter D. Roopnarine

Ecology and Systematic Biology

Faculty Advisor: Dr. Peter D. Roopnarine

PROLIFERATIVE ROLES FOR PAX3 AND PAX7 IN THE DEVELOPING CHICK
SOMITE

By: Rachel Kadzik, Tiffany Barnes, and Lisa Galli

Cell and Molecular Biology

Faculty Advisor: Dr. Laura Burrus

DO YOU KNOW YOUR BRAIN? UNDERSTANDING NOVICES' VS. EXPERTS'
CONCEPTIONS ABOUT LEARNING AND MEMORY

By: Rebecca Fulop
Cell and Molecular Biology
Faculty Advisor: Dr. Kimberly Tanner

TRANSCRIPTIONAL REPRESSOR ATF3 BINDS TO THE IFN-B PROMOTER IN
MACROPHAGES

By: Roberto M. Barrozo
Cell and Molecular Biology
Faculty Advisor: Dr. Steve Weinstein

ANAEROBIC GROWTH BY BACTERIA ON TELLURIUM OXYANIONS

By: Shaun Baesman
Microbiology
Faculty Advisor: Dr. Ed Carpenter

FACTORS AFFECTING MICROHABITAT SELECTION BY THE TIGER BEETLES
CICINDELA HIRTICOLLIS AND C. OREGONA (COLEOPTERA: CICINDELIDAE).

By: Tara Cornelisse
Conservation Biology
Faculty Advisor: Dr. John Hafernik

PREDICTING CIS-ACTING ELEMENTS WITH BIOINFORMATIC METHODS

By: Tobias Sayre
Cell and Molecular Biology
Faculty Advisor: Dr. Zheng-Hui He

MYOTOME PRECURSOR CELL SPECIFICATION AND SOMITIC MYOTOME
FORMATION INHIBITED BY LIPID RAFT DISRUPTION IN CHICKEN EMBRYOS

By: Wendy Rosenthal
Cell and Molecular Biology
Faculty Advisor: Dr. Wilfred Denetclaw Jr.

ANALYSIS OF THE INTERACTIONS BETWEEN WNT-3A AND WNT-5A/5B
SIGNALING PATHWAYS DURING CHICK DEVELOPMENT

By: Yurixsa Martinez, Katie Sanders, and Marina Meyerzon
Cell and Molecular Biology
Faculty Advisor: Dr. Laura Burrus

DEVELOPMENT OF NOVEL ANTI-MALARIAL COMPOUNDS THAT TARGET
THE P. FALCIPARUM HEAT SHOCK PROTEIN ENZYME

By: Chris Cornell

Chemistry

Faculty Advisor: Dr. Cliff Berkman

ALKALI-METAL DOPED, NANOSCALE ZEOLITE FILMS AS POTENTIAL
OPTOELECTRONIC SENSORS

By: Georgi Diankov and Dr. Andrew S. Ichimura

Chemistry

Faculty Advisor: Dr. Andrew S. Ichimura

SELENATE REDUCTION BY NANOMETER SCALE ZEROVALENT IRON
PARTICLES

By: Jovilynn Olegario

Chemistry

Faculty Advisor: Dr. Bruce A. Manning

SYNTHESIS OF NOVEL DI-SUBSTITUTED TETRAPHENYLPORPHYRINS AS
POTENTIAL AGENTS FOR PHOTODYNAMIC THERAPY OF CANCERS

By: Lenin Parrales, Meden Isaac, and Dr. Ursula simonis

Chemistry

Faculty Advisor: Meden Isacc

CONFORMATIONAL CHANGES OF NEURONAL NITRIC OXIDE SYNTHASE AS
A FUNCTION OF SUBSTRATE AND COFACTOR USING NANOSECOND TIME
RESOLVED ABSORPTION SPECTROSCOPY

By: Russ Jensen, Mike Minton, and Chris Bernt

Biochemistry

Faculty Advisor: Dr. Raymond Esquerra

ONLINE WEB PAGE ALBUM

By: Anupama Sharma

Computer Science

Faculty Advisor: Dr. Dragutin Petkovic

NOVEL BAYESIAN NETWORK EVALUATION ALGORITHM FOR
DISCOVERING GENE REGULATORY

By: Arturo Flores, Lala Motlhabi, Rocco Varela, and Elinor Velasquez

Computer Science

Faculty Advisor: Dr. Frank Bayliss, Dr. Hui Yang, Dr. Ilmi Yoon, and Mike Wong

MINING TEMPORAL PLACENTAL MICROARRAY DATA

By: Ben Dalziel

Computing for Life Sciences

Faculty Advisor: Dr. Hui Yang

GENOMEXPLORER: GENOMIC DATA VISUALIZATION

By: Emmanuel R. Yera

Computing for Life Sciences

Faculty Advisor: Dr. Stanislav V. Volik (UCSF) and Dr. Collin Collins (UCSF)

PROTEIN STRUCTURAL ANALYSIS: REALIZING AN AUTOMATIC MAPPING

By: Lin Han

Computing for Life Sciences

Faculty Advisor: Dr. Hui Yang

MACE: A SIMPLE ALGORITHM FOR LOSSLESS COMPRESSION OF
MICROARRAY IMAGES WITHOUT SPOT SEGMENTATION

By: Robert Bierman

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DENSITY-BASED CLUSTERING OF OPTICAL MOTION CAPTURE DATA

By: Scott Bishop

Computer Science

Faculty Advisor: Dr. Ilmi Yoon and Dr. Kate Hamel

PROFILING OF BIOINFORMATICS APPLICATIONS FOR RECONFIGURABLE
COMPUTING SYSTEMS

By: Akili Anderson

Electrical Engineering

Faculty Advisor: Dr. Ying Chen

NEW METHODS TO MULTICARRIER MODULATION

By: Donovan Cheuk

Electrical Engineering

Faculty Advisor: Dr. Todor Cooklev

PARAMETRIC STUDY ON THE INFLUENCES OF THE SOIL-FOUNDATION-
STRUCTURE-INTERACTION ANALYSIS ON A REINFORCED CONCRETE
BRIDGE BENT

By: Matt Lee

Civil Engineering

Faculty Advisor: Dr. Tim D'orazio

STRAIN SILICON OPTIMIZATION FOR LOGIC AND MEMORY IN NANO-
SCALECMOS.

By: Rajani Kuchipudi

Computer Engineering

Faculty Advisor: Dr. Hamid Mahmoodi

COMPARISON OF UBC 1997 AND IBC 2006 USING STEEL BRACED FRAMES
AND STEEL MOMENT FRAMES

By: Tim Le

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Faculty Advisor: Dr. Wenshen Pong, and Dr. Norm Owen

CLOCK GATING AND NEGATIVE EDGE TRIGGERING FOR ENERGY
RECOVERY CLOCK

By: Vishwanadh Tirumalshetty

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Faculty Advisor: Dr. Hamid Mahmoodi

EXPLORING EARTH-LIKE EROSION MECHANISMS ON A FROZEN MOON

By: Beth Zygielbaum

Geology

Faculty Advisor: Dr. Leonard Sklar

FEEDBACKS BETWEEN BIOTIC AND ABIOTIC INFLUENCES ON TRAVERTINE
DEPOSITION, FOSSIL CREEK, ARIZONA

By: Brian Fuller

Geology

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QUANTIFYING BEACH RESPONSE TO EPISODIC LARGE WAVE EVENTS, AN
EMPIRICAL PREDICTIVE MODEL, OCEAN BEACH, SAN FRANCISCO, CA

By: Jeff Hansen
Geology
Faculty Advisor: Dr. Newell Garfield

PREDICTING THE GRAIN SIZE DISTRIBUTION SUPPLIED TO CHANNELS

By: Jill Marshall
Geology
Faculty Advisor: Dr. Leonard Sklar

AN OPTICAL CHARACTERIZATION OF SAN FRANCISCO BAY WATER

By: Johnathan Brown
Applied Geosciences and Oceanography
Faculty Advisor: Dr. Newell Garfield

LABORATORY SIMULATION OF GRAVEL AUGMENTATION DOWNSTREAM
OF DAMS: THE EFFECT OF HYDROGRAPHS ON SEDIMENT PULSE DYNAMICS

By: Robert Humphries
Applied Geosciences
Faculty Advisor: Dr. Leonard Sklar

EXPLORING EHRHART QUASIPOLYNOMIAL PERIODS OF 2-D RATIONAL
POLYTOPES

By: Anastasia Chavez and Chris O'Neill
Mathematics
Faculty Advisor: Dr. Matthias Beck

THE SEARCH FOR BROWN DWARF COMPANIONS AT WIDE SEPARATIONS

By: Adam Garland
Astronomy
Faculty Advisor: Dr. Chris McCarthy

ON THE FEASIBILITY OF DETECTING DETACHED WHITE DWARF/MAIN-
SEQUENCE BINARIES IN GLOBULAR CLUSTERS

By: Liliana I. Lopez and Dr. Adrienne Cool
Physics
Faculty Advisor: Dr. Adrienne Cool

UNUSUAL WHITE DWARFS IN THE GLOBULAR STAR CLUSTER NGC 6397:
SIGNS OF STELLAR COLLISIONS?

By: Rachel Strickler
Astronomy
Faculty Advisor: Dr. Adrienne Cool

ISOFORM SELECTIVE PI3-KINASE INHIBITORS IN BREAST CANCER CELL LINES

By: Antonio Luna
Cell and Molecular Biology
Faculty Advisor: Dr. Leticia Marquez-Magaña and Dr. David Stokoe (UCSF)

EXPLORING UNDERGRADUATE STUDENT CONCEPTIONS OF ENVIRONMENTAL SCIENCE: WHAT ROLE DOES BIOLOGICAL KNOWLEDGE PLAY IN ENVIRONMENTAL LITERACY?

By: Briana McCarthy
Ecology and Systematic Biology
Faculty Advisor: Dr. Kimberly Tanner

PHOSPHORAMIDATE DERIVATIVES OF HYDROXYSTERIODS AS INHIBITORS OF PROSTATE-SPECIFIC MEMBRANE ANTIGEN

By: Lisa Yong Wu, Jacinda Do, Marat Kazak, Helen Page, Yoko Toriyabe
Chemistry
Faculty Advisor: Dr. Marc O. Anderson and Dr. Clifford Berkman

WHAT ARE THE LEARNING STYLES OF PREMED COMPARED TO NON-PREMED STUDENTS?

By: Pamela Pablico and Huy Ngo
Chemistry and Kinesiology
Faculty Advisor: Dr. Jennifer Breckler

NETWORK MONITORING FOR SECURITY PURPOSES USING NETFLOW-BASED OPEN SOURCE SOFTWARE

By: Thet Oo
Electrical Engineering
Faculty Advisor: Dr. Hamid Shahnasser

THE METABOLIC SYNDROME: A PRECURSOR TO CARDIOVASCULAR DISEASE & DIABETES AND ADOLESCENTS - WHO'S AT RISK?

By: Debbie Lee
Mathematics
Faculty Advisor: Dr. Mohammad Kafai

5TH WHEEL

By: Nikola Kravik, Jesse Lee, Harpreet Singh, and Oluwatoberu Thomas

Mechanical Engineering

Faculty Advisor: Dr. A.S. Ed Cheng

IDENTIFYING AN APPROPRIATE BLOOD SUGAR ASSAY FOR MANDUCA SEXTA

By: Allison Dias and Rocio Diaz

Physiology and Behavioral Biology

Faculty Advisor: Dr. Megumi Fuse

SALINITY TOLERANCE IN INVASIVE ASCIDIANS

By: Amelia Rodelo

Ecology and Systematic Biology

Faculty Advisor: Dr. Sarah Cohen

MBC DISRUPTION OF LIPID RAFTS REVERSIBLY INHIBITS BREAST MUSCLE CELL CULTURE DIFFERENTIATION VIA NITRIC OXIDE SIGNALING

By: Izhar Bath, Sannah Ladiwalla, Jared M. Greenberg, and Dr. Wilfred Denetclaw Jr.

Cell and Molecular Biology

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NITRIC OXIDE REGULATION OF MYOTOME DEVELOPMENT BY LIPID RAFT CONSTITUENT NITRIC OXIDE SYNTHASE IN CHICKEN EMBRYO

By: Karen Berry and Natasha Chandiramani

Cell and Molecular Biology

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EXPLAINING PATTERNS OF COMMUNITY TURNOVER IN SIERRAN BUMBLEBEE METACOMMUNITIES WITH PROJECTION MATRIX MODELING

By: Lorna Watt, Brendan Colloran, Dr. Gretchen LeBuhn

Ecology and Systematic Biology

Faculty Advisor: Dr. Gretchen LeBuhn

EMBRYONIC CELLS DEPLETED OF MATERNAL BETA CATENIN REMAIN COMPETENT TO DIFFERENTIATE INTO DORSAL MESODERMAL DERIVATIVES

By: Michael Sanchez, Franchie H. Chu, Bonnie Afonin, and Dr. Carmen Domingo

Cell and Molecular Biology

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CHANGES IN DIURETIC HORMONE IMMUNOREACTIVITY IN TRANSVERSE NERVES OF THE TOBACCO HORNWORM, MANDUCA SEXTA, SUGGEST A ROLE DURING ECDYSIS

By: Myra Grace A. dela Pena

Cell and Molecular Biology

Faculty Advisor: Dr. Megumi Fuse

NITRIC OXIDE DYNAMIC MOVEMENT IN EPITHELIAL AND MUSCLE TISSUE CELLS IN CHICKEN EMBRYO BY TIME-LAPSE ANALYSIS

By: Seung Jong Lee

Cell and Molecular Biology

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IDENTIFICATION AND CHARACTERIZATION OF SCHIZOSACCHAROMYCES POMBE TELOMERASE RNA GENE

By: Teresa F. Reyes and Dr. Sally G. Pasion

Cell and Molecular Biology

Faculty Advisor: Dr. Sally G. Pasion

TRUNCATED APOA-1 LIPOPROTEIN RESULTS IN DISAPPEARANCE OF 7.8NM DISC

By: Yessica Martinez, Mike Oda , Giorgio Cavigliolo, and Ethan Geiei

Cell and Molecular Biology

Faculty Advisor: Dr. Leticia Marquez-Magaña

ALLOSTERIC ACTIVATION OF SOLUBLE GUANYLATE CYCLASE BY 3-(5- α -HYDROXYMETHYL-2- α -FURYL)-1-BENZYL-INDAZOLE

By: Alberto Luis, Jasmin Kristianto, Sharon Woo, and Yu His

Chemistry

Faculty Advisor: Dr. Nancy C. Gerber

SYNTHESIS TOWARDS A NEW DIAGNOSTIC AGENT FOR PROSTATE CANCER

By: Brian Blank

Chemistry

Faculty Advisor: Dr. Cliff Berkman

BIOCHEMICAL APPROACHES USED TO STUDY THE EXTENDED
SELECTIVITY OF TRYPSIN

By: Hanine Rafidi, Timothy Acker, Brandon Williams, and Candace Wong

Biochemistry

Faculty Advisor: Dr. Teaster Baird

MOLECULAR DYNAMICS SIMULATION FOR THE LABORATORY

By: Heath Kornblum and Dr. Marc Andersen

Biochemistry

Faculty Advisor: Dr. Marc Andersen and Dr. Cliff Berkman

NOVEL APPROACH FOR THE INDEPENDENT SYNTHESIS OF
2[3H]OXAZOLINONES

By: Helen Lee and Mohamad Azimi

Biochemistry

Faculty Advisor: Dr. Ihsan Erden

SEPARATION OF SPIROGRAPHIS AND ISO-SPIROGRAPHIS PORPHYRIN
DIMETHYL ESTER ISOMERS VIA NORMAL PHASE HPLC

By: John Sczepaniak

Chemistry

Faculty Advisor: Dr. Ursula Simonis and Meden Isaac

PROGRESS TOWARD THE DEVELOPMENT OF RADICOL ANALOGS TO
INHIBIT P. FALCIPARUM HEAT SHOCK PROTEIN ENZYME

By: Judy Szeto, Chris Cornell, Dr. Marc Anderson, and Dr. Cliff Berkman

Biochemistry

Faculty Advisor: Dr. Cliff Berkman

EFFECT OF NONENZYMATIC GLYCATION AND AGE FORMATION ON THE
SECONDARY AND TERTIARY STRUCTURE OF HUMAN SERUM ALBUMIN

By: Khin Sandi Shine, Khin Oo, Mike Minton, and Kay Saw

Biochemistry

Faculty Advisor: Dr. Raymond Esquerra

PHOSPHORAMIDATE INHIBITOR OF PROSTATE SPECIFIC MEMBRANCE
ANTIGEN

By: May Lin

Biochemistry

Faculty Advisor: Dr. Cliff Berkman

EFFECT OF NONENZYMATIC GLYCATION ON THE AUTO-OXIDATION
KINETICS OF ADULT HUMAN HEMOGLOBIN

By: Richelle Raagas and Damon Robles

Biochemistry

Faculty Advisor: Dr. Raymond Esquerra

INVESTIGATING THE CONTRIBUTION OF THE S1' POCKET OF TRYPSIN TO
SUBSTRATE RECOGNITION

By: Timothy Acker

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GUITAR SYNTHESIZER USING KARPLUS-STRONG PLUCKED STRING
SYNTHESIS

By: Eric Gregory

Computer Science

Faculty Advisor: Dr. William Hsu

VISION-BASED DETECTION OF VISUALLY DISSIMILAR OBJECTS

By: Taeil Goh and Ryan West

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Faculty Advisor: Dr. Kaz Okada

LINKING OF CHROMOSOMES DURING INTERPHASE

By: Trevor Blackstone

Computer Science

Faculty Advisor: Dr. Javier Arsuaga

SFSU HUMAN POWERED VEHICLE

By: Alex Polonsky, Jorge Corona, Daniella Dragon, Kevin Morgan, Anthony
Truong, Yousef Golsorkhi, Jay Coquilla, and Jose Coto

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CLASS D AUDIO AMPLIFIER

By: Anton Suryana, Karen Chan, Michael Solivan, and Ricardo Marangco

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DIGITAL IC DESIGN FLOW

By: Babak A. Sar Ashki

Computer Engineering

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DESIGN OF COMPETITIVE GO-KART FRAME

By: Blake Boyer, Waylan Choy, Sean Estill, and Adrian Hairrell

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SMALL-SCALE WIND TURBINE

By: David Kang, Shadow Moyer, Mark Ritchie, and Matt Suidan

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STIRLING ENGINE

By: Donald Best III and Steven Gong

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AUTOMATIC VIOLIN TUNER

By: Edward Mazmanian, Luis Eguizabal, and Juan Carlos Alfaro

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CONTINUOUSLY VARYING TRANSMISSION (CVT) PROTOTYPE

By: Eric Placido, Edward Dizon, Joseph Flores, and Willis Wong

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FUEL GUARD

By: Gaunt Murdock, James Bottomley, Donald Best III, Estuardo Ramirez, and Conmin Cheng

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Faculty Advisor: Dr. A.S. Ed Cheng

ANIMAL: THE MIDI CONTROLLED PNEUMATIC DRUMMER

By: Gong Ye Chen, Anthony Freggiaro, Sang Chul Lee, and Alex Rivera

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STEEL BRIDGE TEAM

By: Guy Halperin, Quint Herrmann, Haislip Hayes, Adrian Gotauco, Jeff Quock, Jeremy McGee, David Hungerford, Wendy Zambrano, and Azin Zarei
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Faculty Advisor: Dr. Norman Owen

SFSU-LAKE MERCED WOOD BRIDGE

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EDINBORG

By: Lamont Lucas
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Faculty Advisor: Dr. Tom Holton

R.E.A.C.H. BIOBOT

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VIC: VOICE INPUT CAR

By: Paul Bonilla, Michael Cheung, and Maria Silva
Electrical Engineering
Faculty Advisor: Dr. Tom Holton

LAKE MERCED WATER TREATMENT FACILITY DESIGN

By: Raul Borromeo, Stacey Lee, Jason Tubon, Jasper Recidoro
Civil Engineering
Faculty Advisor: Dr. Elahe Ensanni

MINI-MILLING MACHINE

By: Rodolfo Bustos, Henry Jones, Jimmy Xia, Randy Yoshimura, and Greg Zuber

Mechanical Engineering

Faculty Advisor: Dr. Dipendra Sinha

THE POWER SHOE

By: Said Abdelwafi, Prabhjot Kaur, and Aldo Bacuzzi

Electrical Engineering

Faculty Advisor: Dr. Hamid Shahnasser and Dr. Hamid Mahmoodi

MICROMOUSE

By: Sampson Ho, Chi Lin, and Chi kin Ho

Electrical Engineering

Faculty Advisor: Dr. Hamid Shahnasser

GPS/INU GUIDED AUTONOMOUS VEHICLE

By: Steve Jain and Mikhail Levitskiy

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Faculty Advisor: Dr. Ying Chen and Dr. Hamid Mahmoodi

FLASH CANNON

By: Steven Gong and Donald Best III

Mechanical Engineering

Faculty Advisor: Michael Strange

HIGH RISE FOUNDATION DESIGN

By: Warfa Aden, Christopher McAllister, and Awni Taha

Civil Engineering

Faculty Advisor: Dr. Timothy D'Orazio

ESTIMATING BEDROCK INCISION RATES USING COSMOGENIC RADIONUCLIDES ON STRATH TERRACE GRAVELS ALONG BULLFROG CREEK, UTAH

By: Jonathan Perkins

Geology

Faculty Advisor: Dr. Leonard Sklar

THE ROLE OF SEQUENCES OF CHANNEL-SPANNING POTHOLES IN THE
TRANSIENT EVOLUTION OF A WEAKLY DISSECTED BEDROCK
LANDSCAPE, HENRY MOUNTAINS, UTAH

By: Skye Corbett

Geology

Faculty Advisor: Dr. Leonard Sklar

MOVEMENT OF LATTICE KNOTS AND DNA

By: Andrew Herrmann and Nicholas Normandin

Statistics

Faculty Advisor: Dr. Mariel Vasquez

AVERAGE WRITHE OF POLYGONS IN THE SIMPLE CUBIC LATTICE

By: Juliet Portillo

Mathematics

Faculty Advisor: Dr. Mariel Vasquez

GUIDING LIGHT: IN PERIODIC STRUCTURES

By: Daniel Shuldman and Simon Huang

Physics

Faculty Advisor: Dr. Zhigang Chen

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