

5 pm on Monday 4/20/09

Entry Number: 1 GL

THE ROLE OF INDIRECT HYDROPHOBIC INTERACTIONS IN SUBSTRATE RECOGNITION

By: Raniel Alcantara

Biology

Faculty Advisor: Dr. Teaster Baird, Jr.

Entry Number: 2 GL

INVESTIGATION OF LOW SALINE RESISTANCE IN SINORHIZOBIIUM MELILOTI

By: Charlene Navarrete

Cell and Molecular Biology

Faculty Advisor: Dr. Joseph Chen

Entry Number: 3 GL

THE EFFECTS OF WNT6 IN SOMITE PATTERNING

By: Eugenel Espiritu

Cell and Molecular Biology

Faculty Advisor: Dr. Laura Burrus

Entry Number: 4 GL

TOWARDS THE STUDY OF A PHYSICAL INTERACTION BETWEEN CDC24 AND THE CDS1 CHECKPOINT KINASE IN SCHIZOSACCHAROMYCES POMBE

By: Noel Cruz

Cell and Molecular Biology

Faculty Advisor: Dr. Sally G. Pasion

Entry Number: 5 GL

UNDERSTANDING THE ROLE OF SWRAA IN SPORULATION IN A SWARMING STRAIN OF *BACILLUS SUBTILIS*

By: Rebecca Garcia

Cell and Molecular Biology

Faculty Advisor: Dr. Leticia Marquez-Magaña

Entry Number: 6 GL

THE ROLE OF P53 IN APOPTOSIS OF GASTROINTESTINAL TISSUE STEM CELLS OF LATE GENERATION TERT $-/-$ MICE

By: Terry Reyes

Cell and Molecular Biology

Faculty Advisor: Dr. Sally G. Pasion

Entry Number: 7 GL

WNTLESS-DEPENDENT DISTRIBUTION AND ACTIVATION OF WNT1 AND WNT3A

By: Lydia Li

Cell and Molecular Biology

Faculty Advisor: Dr. Laura Burrus

Entry Number: 8 GL

PROTEIN 3D STRUCTURAL MATCHING USING RESIDUE CONTEXTS

By: Jay Kim

Marine Biology

Faculty Advisor: Dr. Rahul Singh

Entry Number: 9 GL

SPHINGOMYELIN IN MEMBRANE RAFTS REGULATES C2C12 MYOBLAST DIFFERENTIATION AND MYOTUBE FORMATION

By: Jung Lim and Yuko Okamoto

Cell and Molecular Biology

Faculty Advisor: Dr. Wilfred Denetclaw

Entry Number: 10 GL

THE ATF3 TRANSCRIPTION FACTOR INDUCIBLY BINDS TO THE IFN- β PROMOTER IN MACROPHAGES DURING SIMULATED MICROBIAL INFECTION

By: Marvin J. Sandoval

Cell and Molecular Biology

Faculty Advisor: Dr. Steve Weinstein

Entry Number: 11 GL

THE ROLE OF LEUCOKININ IMMUNOREACTIVITY IN THE TOBACCO HORNWORM, *MANDUCA SEXTA*, IN THE PROCESS ECDYSIS

By: Roth Ea

Cell and Molecular Biology

Faculty Advisor: Dr. Megumi Fuse

Entry Number: 12 GL

ECTODERM PLASMA MEMBRANE SPHINGOMYELIN REGULATES SOMITE MYOTOME FORMATION IN CHICK EMBRYOS

By: Tenzin Bhutia and Dr. Wilfred Denetclaw

Cell and Molecular Biology
Faculty Advisor: Dr. Wilfred Denetclaw

Entry Number: 13 GL
DESCRIBING ECDYSIS BEHAVIOR IN STICK INSECTS
By: Andrew Carriman
Physiology & Behavioral Biology
Faculty Advisor: Dr. Megumi Fuse

Entry Number: 14 GL
DUAL ROLES OF THE CONSERVED GLC7/PP1 PHOSPHATASES, GSP-3 AND
GSP-4, IN CHROMOSOME DYNAMICS AND SPERM ACTIVATION
By: Aiza Cathe A. Go, Bernadette Nera, and Mark Samson
Physiology & Cell and Molecular Biology
Faculty Advisor: Dr. Diana Chu

Entry Number: 15 GL
SENSITIZATION IN *MANDUCA SEXTA*
By: Marissa McMackin and Emily Merchasin
Physiology and Behavior Biology
Faculty Advisor: Dr. Megumi Fuse

Entry Number: 16 GL
DETERMINATION OF THE NEUROTRANSMITTER THAT INHIBITS THE CNS
DURING ECDYSIS IN THE HORNWORM, *MANDUCA SEXTA*
By: Laura Mendoza and Sabina Bera
Physiology and Behavioral Biology
Faculty Advisor: Dr. Megumi Fuse

Entry Number: 17 GL
EXPANDING YOUR HORIZON PRE-POST SURVEY ANALYSIS
By: Chia Teoh
Cell and Molecular Biology
Faculty Advisor: Dr. Kimberly D. Tanner

Entry Number: 18 GL

By: Carol Umanzor
Cell and Molecular Biology and Biological Education
Faculty Advisor: Dr. Kimberly Tanner

Entry Number: 19 GL
MOLECULAR SYSTEMATICS OF PHACELIA (BORAGINACEAE).
By: Genevieve K. Walden
Ecology and Systematic Biology
Faculty Advisor: Dr. Robert Patterson

Entry Number: 20 GL
ARTHROPOD DIVERSITY ON THE CALIFORNIA ACADEMY OF SCIENCES'
GREEN ROOF
By: Jessica Van Den Berg and Christopher Quock
Ecology and Systematic Biology
Faculty Advisor: Dr. John Hafernik

Entry Number: 21 GL
DEALING WITH THE GENDER PARTICIPATION GAP IN SECONDARY SCIENCE
EDUCATION
By: Thomas Jenkinson and Priscilla Owren (Horace Mann Academic Middle School)
Ecology and Systematic Biology
Faculty Advisor: Dr. Kimberly D. Tanner

Entry Number: 22 GL
METABOLIC RESPONSES TO ENVIRONMENTAL SALINITY IN THE CLAM
CORBULA AMURENSIS
By: Adam Paganini and Dr. Jonathon Stillman
Marine Biology
Faculty Advisor: Dr. Jonathon Stillman and Dr. Wim Kimmerer

Entry Number: 23 GL

By: Andrea Cayenne
Marine Biology
Faculty Advisor: Dr. Jonathon Stillman

Entry Number: 24 GL
INVESTIGATING BAY AREA FILIPINOS' IDEAS TOWARD ENVIRONMENTAL
CONSERVATION IN A MUSEUM SETTING
By: Courtney Scott
Marine Biology
Faculty Advisor: Dr. Kimberly D. Tanner

Entry Number: 25 GL

MICROARRAY ANALYSIS OF HEAT STRESS IN SAMOAN CORALS

By: Tyler Waterson and Dr. Jonathon Stillman

Marine Biology

Faculty Advisor: Dr. Jonathon Stillman

Entry Number: 26 GL

EFFECT OF BINDING FATTY ACIDS ON THE GLYCATION OF HUMAN SERUM ALBUMIN

By: April Ranney and Emelia Padilla

Biochemistry

Faculty Advisor: Dr. Raymond Esquerra

Entry Number: 27 GL

ROLE OF CONFORMATIONAL CHANGES IN SOLUBLE GUANYLATE CYCLASE

By: Jasmin Kristianto, Kensuke Yamamoto, Stephanie Wood, and Makena Muchunku

Biochemistry

Faculty Advisor: Dr. Nancy Gerber

Entry Number: 28 GL

S-NITROSYLATION OF SOLUBLE GUANYLYL CYCLASE

By: Kensuke Yamamoto

Biochemistry

Faculty Advisor: Dr. Nancy Gerber

Entry Number: 29 GL

USING TIME-RESOLVED FLUORESCENCE TO LOOK AT PROTEIN CONFORMATION

By: Stephanie Wood

Biochemistry

Faculty Advisor: Dr. Nancy Gerber

Entry Number: 30 GL

PHOTOLYSIS OF SPERM WHALE CARBONMONOXYMYOGLOBIN.

By: Benjamin Lintner and Ignacio Lopez

Chemistry

Faculty Advisor: Dr. Raymond Esquerra

Entry Number: 31 GL

THE EFFECT OF CALMODULIN AND CALCIUM BINDING ON THE REACTIVITY OF THE HEME ACTIVE SITE IN NNOS

By: Mike Minton, Pooncharas Tipgunlakant, Luiz Galdino, and Christopher M. Bernt
Chemistry
Faculty Advisor: Dr. Raymond Esquerra

Entry Number: 32 GL
SOLUTION STRUCTURE OF PROTEINS BY MD SIMULATION
By: Qiuting Hong
Chemistry
Faculty Advisor: Dr. Sergio Aragon

Entry Number: 33 GP
ORDERED TITANIUM DIOXIDE FILMS GROWN ON SELF-ASSEMBLED
MONOLAYERS
By: Shirin M. Usmani, Diana Mars, and Dr. Andrew S. Ichimura
Chemistry
Faculty Advisor: Dr. Andrew S. Ichimura

Entry Number: 34 GP
XMAS: EXPERIENTIAL VISUALIZATION, MINING, AND ANALYSIS OF TIME-
SERIES MICROARRAY EXPERIMENTS
By: Ben Dalziel
Computer Science
Faculty Advisor: Dr. Hui Yang and Dr. Rahul Singh

Entry Number: 35 GP
DIRECTIONAL MEAN SHIFT
By: Mehran Kafai and Yiyi Miao
Computer Science
Faculty Advisor: Dr. Kazunori Okada

Entry Number: 36 GP
WEB-BASED TOOLS FOR ENHANCING TEACHER PREPARATION PROGRAMS
By: Xinhang Shao and Ngoc Lam-Miller
Computer Science
Faculty Advisor: Dr. Kazunori Okada

Entry Number: 37 GP
ANALYSIS OF SRAM RELIABILITY UNDER VARIATIONS AND TRANSISTOR
AGING EFFECTS IN NANO-SCALE
By: Harwinder Singh
Electrical and Computer Engineering

Faculty Advisor: Dr. Hamid Mahmoodi

Entry Number: 38 GP

RAIL TRAFFIC CONTROL SIMULATOR FOR MAXIMIZING THROUGHPUT

By: Ko Narita

Electrical Engineering

Faculty Advisor: Dr. V.V. Krishnan

Entry Number: 39 GP

A DRY COMBUSTION METHOD TO DETERMINE NATURAL 13C AND 14C
ABUNDANCES IN MARINE DISSOLVED ORGANIC CARBON

By: Leah Johnson

Applied Geosciences

Faculty Advisor: Dr. Tomoko Komada

Entry Number: 40 GP

POST-MIDDLE-PLEISTOCENE TECTONIC DEVELOPMENT OF THE
CONFIDENCE HILLS, SOUTHERN DEATH VALLEY, CALIFORNIA

By: Joshua T. Goodman, Dr. S. John Caskey, Dr. Elmira Wan, Dr. David B. Wahl, and
Dr. Andrei M. Sarna-Wojcicki

Geology

Faculty Advisor: Dr. S. John Caskey

Entry Number: 41 GP

STUDENT CONCEPTIONS OF WEATHER PHENOMENA ACROSS MULTIPLE
COGNITIVE LEVELS

By: Elizabeth Polito

Geosciences

Faculty Advisor: Dr. John Monteverdi and Dr. Kimberly Tanner

Entry Number: 42 GP

A 3-D MAP OF THE BARTLETT SPRINGS FAULT, LAKE AND MENDOCINO
COUNTIES, CALIFORNIA

By: Johnathan Brown

Geosciences

Faculty Advisor: Dr. S. John Caskey

Entry Number: 43 GP

M2K: A SEARCH FOR PLANETS ORBITING LATE K AND EARLY M DWARF
STARS

By: Kelsey Clubb

Astronomy
Faculty Advisor: Dr. Debra Fischer

Entry Number: 44 GP
DECODING DARK MATTER: A DYNAMICAL CODE FOR THE JOINT ANALYSIS
OF CLUSTER OBSERVATIONS
By: Alison Mansheim
Physics
Faculty Advisor: Dr. Andisheh Mahdavi

Entry Number: 45 GP
PROVING THE BERNOULLI-DEDEKIND SUM ANALOGUE OF
POMMERSHEIM'S THREE-TERM DEDEKIND SUM RELATION
By: Anastasia Chavez
Mathematics
Faculty Advisor: Dr. Matthias Beck

Entry Number: 46 GP
USING HOMOLOGY TO DETECT COPY NUMBER VARIATION ASSOCIATED
WITH BREAST CANCER RECURRENCE
By: Daniel DeWoskin
Mathematics
Faculty Advisor: Dr. Javier Arsuaga

Entry Number: 47 GP
A MODEL FOR SOCIAL NETWORKS
By: Elizabeth Gross
Mathematics
Faculty Advisor: Dr. Arek Goetz

Entry Number: 48 GP
EXIT STRATEGIES FOR STARTUP COMPANIES: A GAME THEORETIC
APPROACH
By: Jasdeep Gambhir
Mathematics
Faculty Advisor: Dr. Jean-Pierre Langlois

Entry Number: 49 GP
TANGLESOLVE: A TOPOLOGICAL TOOL USED IN THE ANALYSIS OF SITE-
SPECIFIC RECOMBINATION

By: Jennifer Lopez, Wenjing Zheng, and Dr. Mariel Vazquez
Mathematics
Faculty Advisor: Dr. Mariel Vazquez

Entry Number: 50 GP
COUNTING STANDARD AND SEMISTANDARD TREES
By: Jupei Hsiao
Mathematics
Faculty Advisor: Dr. Federico Ardila

Entry Number: 51 GP
TROPICAL ORIENTED MATROIDS
By: Kristen Freeman
Mathematics
Faculty Advisor: Dr. Federico Ardila

Entry Number: 52 GP
THE STUDY OF DNA PACKING ORGANIZATION OF P4 BACTERIOPHAGE
By: Mela Hardin
Mathematics
Faculty Advisor: Dr. Mariel Vazquez

Entry Number: 53 GP
AUTOMATED IMAGE-BASED PHENOTYPIC SCREENING FOR HIGH-
THROUGHPUT DRUG DISCOVERY
By: Michalis Pittas and Ido Heskia
Mathematics
Faculty Advisor: Dr. Rahul Singh

Entry Number: 54 GP
A SURVEY THE ENTROPY OF SELF-AVOIDING POLYGONS IN THE SIMPLE
CUBIC LATTICE
By: Zoe Talbot
Mathematics
Faculty Advisor: Dr. Yitwah Cheung, Dr. Rob Scharein, and Dr. Mariel Vazquez

Entry Number: 55 UL
STUDYING SPOOLING-LIKE CONFORMATIONS FOR DNA KNOTS IN WRITHE-
DIRECTED ORGANIZATION OF DNA IN PHAGE CAPSIDS OF
BACTERIOPHAGE P4
By: Ariff Moolla and Mela Hardin

Biology and Mathematics
Faculty Advisor: Dr. Sally G. Pasion and Dr. Javier Arsuaga

Entry Number: 56 UL
ANNOTATION OF SEVERAL DICISTRONIC GENES IN 12 DROSOPHILID SPECIES
By: Henry Hunter, Teresa Laird, Christina Staubus, Lala Motlhabi, and Dr. Christopher D. Smith
Cell and Molecular Biology
Faculty Advisor: Dr. Christopher D. Smith

Entry Number: 57 UL
CHICKEN EMBRYO DEVELOPMENT: REGIONAL AND TEMPORAL DEVELOPMENT OF SOMITES
By: Remy Binder and Meghan Lane
Cell and Molecular Biology
Faculty Advisor: Dr. Wilfred Denetclaw

Entry Number: 58 UL
ROLE OF WNT4 ON MYOGENESIS DURING EARLY EMBRYONIC DEVELOPMENT IN THE CHICK
By: Anthony Eritano
Cellular and Molecular Biology
Faculty Advisor: Dr. Laura W. Burrus

Entry Number: 59 UL
FEEL THE DIFFERENCE: A STUDY OF THE BODY'S RESPONSE TO TACTILE STIMULI
By: Abraham Reynoso, Joe DeBattista, Ngo Nguyen, and Stephanie Cunningham
Physiology and Behavior Biology
Faculty Advisor: Anne Thilges

Entry Number: 60 UL
THE EFFECTS OF DISSONANT AND CONSONANT MUSIC ON HEART RATE, EEG BRAIN WAVE PATTERNS, AND GALVANIC SKIN RESPONSE
By: Kristina Millikan, Lisa Wise, and Inara Iskenderova
Physiology and Behavior Biology
Faculty Advisor: Anne Thilges

Entry Number: 61 UL

MEMBRANE RAFT DISRUPTION IN CHICKEN EMBRYO SKELETAL MUSCLE
CELL CULTURES

By: Dianna Baldwin

Zoology

Faculty Advisor: Dr. Wilfred Denetclaw

Entry Number: 62 UL

THE PRESIDIO BEE BIODIVERSITY SURVEY

By: Christopher Quock and Jessica Van Den Berg

Ecology and Systematic Biology

Faculty Advisor: Dr. John Hafernik

Entry Number: 63 UL

COMPARATIVE STUDY OF LDH STABILITY IN RESPONSE TO
PHYSIOLOGICAL STRESS ON TROPICAL AND TEMPERATE PORCELAIN
CRABS

By: Haydee Medina

Marine Biology

Faculty Advisor: Dr. Jonathon Stillman

Entry Number: 64 UL

ARE SEA STARS OF THE GENUS LEPTASTERIAS SEPERATED BY HABITAT IN
THE ROCKY INTERTIDAL OF NORTHERN CALIFORNIA? AN ANALYSIS
USING MITOCHONDRIAL DNA AND MORPHOLOGY

By: Richard Coleman, Alyssa Lai, and Ashley Smith

Marine Biology

Faculty Advisor: Dr. Sarah Cohen

Entry Number: 65 UL

MEMBRANE COMPOSITION AND GENE EXPRESSION DURING THERMAL
ACCLIMATION IN PORCELAIN CRABS

By: Daria Ronges

MarineBiology

Faculty Advisor: Dr. Jonathon Stillman

Entry Number: 66 UL

WORK IN PROGRESS

By: Paula Robinson

Physiology and Behavior Biology

Faculty Advisor: Dr. Jonathon Stillman

Entry Number: 67 UL
SUPER SCIENCE
By: Gaelen S. Smith and Alyssa Berry
Physiology and Zoology
Faculty Advisor: Dr. Kimberly Tanner

Entry Number: 68 UL
COMPUTATIONAL CHARACTERIZATION OF WATER ACCESSIBLE AREAS IN
HYDROPHOBIC AREAS IN DISTAL HEME POCKET MUTANTS IN MYOGLOBIN
By: Ben Rodriguez
Biochemistry
Faculty Advisor: Dr. Anton Guliaev

Entry Number: 69 UL
SYNTHESIS, CHARACTERIZATION, AND SUBCELLULAR LOCALIZATION OF
MITOCHONDRIA-BASED PORPHYRINIC PIGMENTS
By: Hnin Khin
Biochemistry
Faculty Advisor: Dr. Ursula Simonis and Dr. Meden Issac

Entry Number: 70 UL
INVESTIGATION OF PROTEIN INTERACTIONS THAT CONTROL THE NITRITE
REDUCTASE ACTIVITY OF HEME PROTEINS
By: Lea Lough
Biochemistry
Faculty Advisor: Dr. Raymond Esquerra

Entry Number: 71 UL
NADH AND METAL BINDING EQUILIBRIA OF PHENYLACETALDEHYDE
By: Levenlou Vender
Biochemistry
Faculty Advisor: Dr. George Gassner

Entry Number: 72 UL
REDUCTION OF SELENIUM OXYANIONS BY ZERO-VALENT IRON SURFACES
By: Marisa Miller
Biochemistry
Faculty Advisor: Dr. Bruce Manning

Entry Number: 73 UL

MECHANISM OF STYRENEOXYGENASE WITH SUBSTRATE ANALOGS AND INHIBITORS

By: Mie Win

Biochemistry

Faculty Advisor: Dr. George Gassner

Entry Number: 74 UL

NEW FIELD METHOD FOR DETERMINATION OF ARSENIC IN WATER USING ION EXCHANGE AND XRF

By: Rene L. Johnson and Peter E. Baker

Biochemistry

Faculty Advisor: Dr. Pete T. Palmer

Entry Number: 75 UL

DESIGN OF A REVERSIBLY ACTIVATED TRYPSIN VIA AN ENGINEERED METAL BINDING SITE

By: Anna Gubeladze

Biochemistry

Faculty Advisor: Dr. Teaster Baird, Jr.

Entry Number: 76 UL

EXPLORING THE REPRODUCIBILITY AND VALIDITY OF COMPARATIVE QUANTITATIVE POLYMERASE CHAIN REACTION

By: Laura Cooper and Yvonne Mak

Biochemistry

Faculty Advisor: Dr. Elizabeth Runquist

Entry Number: 77 UL

INTRODUCING NOVEL SUBSTRATE SELECTIVITY INTO TRYPSIN THROUGH REDESIGN

By: Sayeeda Najibi

Biochemistry & Cell and Molecular Biology

Faculty Advisor: Dr. Teaster Baird, Jr.

Entry Number: 78 UL

SYNTHESIS OF ZEOLITE MFI FILMS VIA HYDROXIDE AND FLUORIDE ROUTES

By: Chris Reaves

Chemistry

Faculty Advisor: Dr. Andrew S. Ichimura

Entry Number: 79 UL
THE EFFECTS OF NON-ENZYMATIC GLYCATION ON THE NITRITE
REDUCTASE ACTIVITY OF HEMOGLOBIN
By: Damon Robles, Yadiel K, and Kay Saw
Chemistry
Faculty Advisor: Dr. Raymond Esquerra

Entry Number: 80 UL
CHARACTERISTICS OF AN ALUMINUM (III) PHEOPHORBIDE-A SERINE
DERIVATIVE AS POTENTIAL USE IN PHOTODYNAMIC THERAPY
By: Diem Huynh
Chemistry
Faculty Advisor: Dr. Ursula Simonis

Entry Number: 81 UL
GROWTH STUDIES OF ORIENTED MFI ZEOLITE FILMS AS A FUNCTION OF
TIME
By: Dina Flamik
Chemistry
Faculty Advisor: Dr. Andrew S. Ichimura and Dr. Ursula Simonis

Entry Number: 82 UL
SYNTHESIS AND CHARACTERIZATION OF AMINO ACID SUBSTITUTED
PHEOPHORBIDES
By: Kara Cross
Chemistry
Faculty Advisor: Dr. Ursula Simonis

Entry Number: 83 UL
ANAEROBIC DEGRADATION OF ORGANIC CARBON IN AN INTERTIDAL
SEDIMENT: RELATIVE IMPORTANCE OF MAJOR ELECTRON ACCEPTORS
By: Mayu Kawaguchi and Jonathon A. Polly
Chemistry
Faculty Advisor: Dr. Tomoko Komada and Dr. Ursula Simonis

Entry Number: 84 UL
SYNTHESIS OF AN ARGININE SUBSTITUTED PHEOPHORBIDE-A AS EFFECTIVE
PHOTOSENSITIZERS FOR PHOTODYNAMIC THERAPY (PDT)
By: Soohwan Kim
Chemistry
Faculty Advisor: Dr. Ursula Simonis

Entry Number: 85 UL
SURFACE CHEMISTRY UNDER PHOTOLYSIS
By: Stéphanie Cherdo
Chemistry
Faculty Advisor: Dr. Andrew S. Ichimura

Entry Number: 86 UP
SELF-ASSEMBLED MONOLAYERS TO SUPPORT THE GROWTH OF
INORGANIC FILMS
By: Diana Mars and Shirin M. Usmani
Chemistry
Faculty Advisor: Dr. Andrew S. Ichimura

Entry Number: 87 UP
THE PLIOCENE RESPONSE TO WARMER THAN MODERN SEA SURFACE
TEMPERATURES IN COASTAL UPWELLING REGIONS
By: Zi Zi Searles
Geology
Faculty Advisor: Dr. Petra Dekens

Entry Number: 88 UP
THE AVERAGE CROSSING NUMBER OF EQUILATERAL POLYGONS IN
CONFINEMENT
By: Benjamin Borgo, Dr. Rob Scharein, Dr. Yuanan Diao (University of North Carolina,
Charlotte), and Dr. Javier Arsuaga
Applied Mathematics
Faculty Advisor: Dr. Javier Arsuaga

Entry Number: 89 UP
MITOCHONDRIAL DNA STRUCTURE IN TRYPANOSOME
By: Chris Keown
Mathematics
Faculty Advisor: Dr. Javier Arsuaga

Entry Number: 90 UP
UNIMODALITY OF ORDER POLYNOMIALS
By: Christopher O'Neill
Mathematics
Faculty Advisor: Dr. Matthias Beck

Entry Number: 91 UP
CONSTRUCTION OF LATTICE KNOTS FROM THE GAUSS CODE
By: Nicholas Normandin
Mathematics
Faculty Advisor: Dr. Mariel Vazquez

Entry Number: 92 UP
HECKE OPERATORS ON PALINDROMIC POLYNOMIALS
By: Whitney Zeldow
Mathematics
Faculty Advisor: Dr. Matthias Beck

Entry Number: 93 UP
GUIDING AND ROUTING LIGHT ALONG DEFECT CHANNELS: FROM
IMPERFECTION TO PERFECTION.
By: Ratna Lama
Physics
Faculty Advisor: Dr. Zhigang Chen

Entry Number: 94 UP
FOUNDATION FOR A 20-STORY BUILDING
By: Adamross Lingad, Kimberly Sindac, Timothy Shu, Raul Verduzco
Civil Engineering
Faculty Advisor: Dr. Tim D'Orazio

Entry Number: 95 UP
TRUSS BRIDGE
By: Ahlong Shin, Noris Gomez, Vu Le, Charles Njoroge, and Mesfin Agegnehu
Civil Engineering
Faculty Advisor: Dr. Norman Owen

Entry Number: 96 UP
AIR TRAFFIC CONTROL TOWER
By: Ahmed Thleiji, WenPei Kuang, and Patrick Howell
Civil Engineering
Faculty Advisor: Multu Ozer

Entry Number: 97 UP
BROTHERHOOD WAY STORM WATER REMEDIATION
By: David Reber, Nick Birth, Adam Krakow, Mingming Yee, and Alvin Yim

Civil Engineering
Faculty Advisor: Dr. Elahe Enssani

Entry Number: 98 UP
TIMBER ARCH BRIDGE
By: Fabian Gomez, Greg Paulson, Lewis Hernandez, Jack Chen, Mikhail Ermakovich,
Yonata Andemariam, Miguel Escudero, and Jose Reynolds
Civil Engineering
Faculty Advisor: Mutlu Ozer

Entry Number: 99 UP
HIGH SPEED RAIL STATION
By: Robert Halliday, Colin Kemper, Lucas Zimmer, Marjess Tacoban, Shiraz Muzaffar,
and Sunia Malolo
Civil Engineering
Faculty Advisor: Dr. Wenshen Pong

Entry Number: 100 UP
NEW SFSU ENGINEERING HALL
By: Sean Jaime, James Go, Carrie King, and Tiffany Chin
Civil Engineering
Faculty Advisor: Dr. Wenshen Pong

Entry Number: 101 UP
GEOTECHNICAL ENGINEERING OF FOUNDATION DESIGNS
By: Travis Haft, Radoslaw Stamcher, Devon Crowe, and Stephen Jo
Civil Engineering
Faculty Advisor: Dr. Tim D'Orazio

Entry Number: 102 UP
SMART MAGNETIC CARD READER FOR THE SCIENCE BUILDING
By: Noppol Setobol, Akeem Abodunrin, and Ronnie Roraldo
Computer Engineering
Faculty Advisor: Dr. Hamid Shahnasser and Dr. Hao Jiang

Entry Number: 103 UP
REAL-TIME IMPACT LOGGER & ANALYSIS
By: Christina Phan, Teo Limbo, and Eli Lyons
Electrical Engineering
Faculty Advisor: Dr. Tom Holton

Entry Number: 104 UP
SONIC STICK
By: Danny Azar and Ho Yin Chan
Electrical Engineering
Faculty Advisor:

Entry Number: 105 UP
LOW POWER WIRELESS MEDICAL MONITORING SYSTEM
By: Di Lan, William Yu, and Dennison Lorenzana
Electrical Engineering
Faculty Advisor: Dr. Hao Jiang and Dr. Tom Holton

Entry Number: 106 UP
DESIGN PROJECT FOR DIGITAL IC DESIGN COURSES IN 90NM CMOS
TECHNOLOGY
By: Eli Lyons
Electrical Engineering
Faculty Advisor: Dr. Hamid Mahmoodi

Entry Number: 107 UP
SOLAR TRACKER
By: Eugene Russiyanov, Jed Hewitt, and Kate Tun
Electrical Engineering
Faculty Advisor: Dr. Hao Jiang and Dr. Hamid Shannaser

Entry Number: 108 UP
ACCEL-O-MOUSE (CODENAME YODA)
By: Mathew Brady, Victor Mannuel, and Lalesh Sharma
Electrical Engineering
Faculty Advisor: Dr. Hao Jiang

Entry Number: 109 UP
WIRELESS POWER TRANSFER
By: Mojan Norouzi, David Munguia, Akhil Malik, and Zeeshan Ali
Electrical Engineering
Faculty Advisor: Dr. Hao Jiang

Entry Number: 110 UP
SOLAR POWERED BATTERY CHARGER
By: Scott Siordia, Yves Fotso, James Carolino, and Kris Quismorio

Electrical Engineering
Faculty Advisor: Dr. Hao Jiang

Entry Number: 111 UP
INVERTED PENDULUM ROBOT
By: Tim Wang and Curtis Hilger
Electrical Engineering
Faculty Advisor: George Anwar

Entry Number: 112 UP
AUTONOMOUS MICROMOUSE
By: Hailu Keremo, Harrit Bains, and Loon Phang
Electrical Engineering
Faculty Advisor: Dr. Hao Jiang

Entry Number: 113 UP
BEER BOT: AUTOMATIC BEER POURING MACHINE
By: Jonathan Hughes, Marvic Verzano, and Colin Muschette
Electrical and Mechanical Engineering
Faculty Advisor: Dr. Tom Holton

Entry Number: 114 UP
CNG LAWNMOWER
By: Christopher Fernandez, Paul Stelter, and Yeygeuiy Shkelev
Mechanical Engineering
Faculty Advisor: Dr. Kwok-Siong Teh

Entry Number: 115 UP
RAPID SYNTHESIS OF HIGH-ASPECT RATIO ZINC OXIDE NANOWIRES BY A
CATALYST-FREE, LOW-POWER INDUCTIVE HEATING PROCESS
By: Joachim Pedersen
Mechanical Engineering
Faculty Advisor: Dr. Kwok-Siong Teh

Entry Number: 116 UP
HUMAN POWERED VEHICLE
By: Michael Diep, Ahmed Hassani, and Kevin Ng
Mechanical Engineering
Faculty Advisor: Dr. Kwok-Siong Teh

Entry Number: 117 UP
THE ELECTRIC MOTORCYCLE PROJECT
By: Oliver Burke and David Shirling
Mechanical Engineering
Faculty Advisor: Dr. Kwok-Siong Teh and Dr. A. S. Ed Cheng

Entry Number: 118 UP
JET ENGINE
By: Patrick Moore, Nicholas Ng, and Nick Certo
Mechanical Engineering
Faculty Advisor: Dr. Kwok-Siong Teh and Dr. A. S. Ed Cheng

Entry Number: 119 UP
PROGRESSIVE METAL STAMPING DIE
By: Richard Moore
Mechanical Engineering
Faculty Advisor: Dr. Kwok-Siong Teh