

# Oral/Live Presentations

## Alumni Room

## Sentinel Room

2:00 pm

FEMINISTS RETHINK PORNOGRAPHY: LESSONS FROM THE FEMINISM AND PORNOGRAPHY RESEARCH CLUSTER AT UCSC  
**Natalie Purcell**, *Sociology*

REJECTING THE UGLY DUCKLING: HOW ANIMALS LEARN TO RECOGNIZE THEIR OFFSPRING  
**Dai Shizuka**, *Ecology & Evolution Biology*

2:10 pm

TRANSCRIPTION ELONGATION FACTOR SPT4/5 BINDS NASCENT RNA  
**Berra Yazar**, *Molecular, Cell & Developmental Biology*

THE MATTER OF INSPIRATION IN RENAISSANCE LYRIC  
**Michael Ursell**, *Literature*

2:20 pm

AN EXAMINATION OF HOW INTERACTIONS BETWEEN TWO INVASIVE PREDATORS IMPACT CONSERVATION STRATEGIES OF THE ENDANGERED BRIDLED NAILTAIL WALLABY  
**Yiwei Wang**, *Environmental Studies*

HYBRID 1D METAL OXIDE NANOSTRUCTURES FOR SUSTAINABLE ENERGY PRODUCTION  
**Abraham Wolcott**, *Chemistry*  
Co-presenter: Jin Zhang

2:30 pm

PREDICTING POTENTIAL IMPACTS OF FUTURE SEA LEVEL RISE ON BACK-ANCHORED BEACHES IN CALIFORNIA USING AIRBORNE LIDAR DATA  
**Lynne Harden**, *Earth & Planetary Sciences*

FOREST MANAGEMENT IN THE LOS ANGELES BASIN: THE CHALLENGE OF RESPONDING TO DROUGHT, BEETLES, AND FIRE  
**Brian Petersen**, *Environmental Studies*

2:40 pm

DECOLONIZING HUMAN RIGHTS  
**Sandra Alvarez**, *Politics*

HAPPY PHASE - A PHASING METHOD USING HAPLOTYPES  
**Ted Goldstein**, *Bioinformatics*

2:50 pm

NEW DIMENSIONS: COLLIDER PHYSICS WITH THE ATLAS DETECTOR  
**Peter Manning**, *Physics*  
Co-presenters: Andrea Bangert and Dan Damiani

THAT'S IMPOSSIBLE! PARENTS' MECHANISTIC EXPLANATION AND CHILDREN'S POSSIBILITY JUDGMENTS OF UNUSUAL EVENTS  
**Charlotte Nolan Reyes**, *Psychology*  
Co-presenter: Maureen Callanan

# Oral/Live Presentations

## Alumni Room

## Sentinel Room

3:00 pm

--Break--

BAYESIAN INFERENCE FOR GLOBAL SENSITIVITY ANALYSIS OF RADIATIVE TRANSFER MODELS  
**Marian Farah**, *Statistics & Applied Mathematics*

3:10 pm

THE EARTHS OF ALPHA CENTAURI  
**Javiera Guedes**, *Astronomy and Astrophysics*

INDIVIDUAL DIETARY SPECIALIZATION AMONG COOPERATIVE MAN-EATING LIONS  
**Justin Yeakel**, *Ecology & Evolution Biology*

3:20 pm

SORTING THE FACTS FROM THE MYTHS: THE IMPORTANCE OF MENTORING FOR WOMEN AND UNDERREPRESENTED STUDENTS IN THE SCIENCES

**Melissa Bayne**, *Psychology*  
Co-presenters: Carol Muller, Stacy Blake-Beard and Faye J. Crosby

THE DETECTION OF POISON OAK OIL USING FLUORESCENCE  
**Frank Rivera**, *Chemistry*

3:30 pm

DECIDUOUS VS. EVERGREEN: DOES FOREST-TYPE AFFECT CLIMATE?  
**Travis O'Brien**, *Earth & Planetary Sciences*

BALKAN SONG  
**Nada Miljkovic**, *Digital Arts & New Media*

## Media Presentations

## Chancellor's Room/Rotunda

LISTEN  
**Rupinder Dhillon**, *Digital Arts & New Media*

THE FEMINIST CRAFT CORNER: QUEER CRAFT AND GENDERED TECHNOLOGY  
**Miki Foster**, *Digital Arts & New Media*

LADY APPLICANT: THE LAZARUS  
**Christoph Girard**, *Digital Arts & New Media*

SYNAPTIC CROWD: VOX POP EXPERIMENTS  
**Joshua McVeigh-Schultz**, *Digital Arts & New Media*

THE R-SHIEF INITIATIVE  
**Laila Sakr**, *Digital Arts & New Media*

# Poster Presentations

Bhojwani Room

## Baskin School of Engineering

AUTOMATING MANAGEMENT OF A DISTRIBUTED ARCHIVAL STORAGE SYSTEM

**Ian Adams**, *Computer Science*

OUT-LEARNING ATTACKERS

**Ning Bao**, *Computer Science*

JOINT PROJECTIONS OF NORTH PACIFIC SEA SURFACE TEMPERATURE FROM DIFFERENT GLOBAL CLIMATE MODELS

**Francisco M Beltran**, *Statistics & Applied Mathematics*

MARINE METATRANSCRIPTOME COMMUNITY ANALYSIS

**Sam Boyarsky**, *Bioinformatics*

STATIC AND DYNAMIC PROPERTIES OF SUB-100 NM FE NANODOT ARRAYS

**Rebekah Brandt**, *Electrical Engineering*

DISCOVERY OF THE ELUSIVE PYROBACULUM RNASE P: AN UNEXPECTED FORM OF AN ANCIENT RNA

**Patricia Chan**, *Bioinformatics*

EXPLORING MULTISTREAMING IN THE UNIVERSE

**Eddy Chandra**, *Computer Science*

USING THE GRAPHICAL JUMP METHOD TO CHOOSE THE NUMBER OF NODES FOR A NEURAL NETWORK

**Jing Chang**, *Statistics & Applied Mathematics*

ASSESSING SELECTIVE INFLUENCE OF AMINO ACID PROPERTIES

**Saheli Datta**, *Statistics & Applied Mathematics*

SIMULATION STUDY OF GENOTYPE PHASING ALGORITHMS

**Dent Earl**, *Bioinformatics*

NONPARAMETRIC MIXTURE MODELING OF STOCK-RECRUITMENT RELATIONSHIPS

**Kassie Fronczyk**, *Statistics & Applied Mathematics*

A DISTRIBUTED SAMPLING STRATEGY FOR ROBOTIC SENSOR NETWORKS

**Rishi Graham**, *Statistics & Applied Mathematics*

LEVERAGING THE SEMANTIC WEB FOR RETRIEVAL

**Jessica Gronski**, *Computer Science*

COSMIC CALIBRATION - STATISTICAL MODELING FOR DARK ENERGY

**Tracy Holsclaw**, *Statistics & Applied Mathematics*

THERMAL-AWARE CLOCK TREE SYNTHESIS

**Xuchu Hu**, *Computer Engineering*

WEARABLE ULTRASONIC CLEAR PATH INDICATOR FOR THE BLIND

**Brant Jameson**, *Computer Engineering*

POTENTIAL SEQUENTIALITY OF ON-DISK DATA FOR DE-DUPLICATION

**Stephanie Jones**, *Computer Science*

RESEQUENCING HUMAN DNA ENRICHED FOR HAR NEIGHBORHOODS TO SEARCH FOR EVIDENCE OF NATURAL SELECTION

**Sol Katzman**, *Bioinformatics*

CORE STEMNESS MECHANISMS REVEALED THROUGH HOMOLOGY

**Martina Koeva**, *Bioinformatics*

SPADE: FACETED METADATA SEARCH FOR FILE SYSTEMS

**Jonathan Koren**, *Computer Science*

BAGET: BACTERIAL GENOME EXPLORATION TOOL

**Herbert Lee**, *Bioinformatics*

SPYGLASS: FAST, SCALABLE METADATA SEARCH FOR LARGE-SCALE STORAGE SYSTEMS

**Andrew Leung**, *Computer Science*

PERSONALIZED RECOMMENDER SYSTEM

**Yize Li**, *Computer Science*

# Poster Presentations

Bhojwani Room

## Baskin School of Engineering

A BAYESIAN NONSTATIONARY GAUSSIAN  
PROCESS MODEL VIA A TREED PROCESS-  
CONVOLUTION APPROACH

**Waley Liang**, *Statistics & Applied Mathematics*

FAST THERMAL AWARE FLOORPLANNING

**Sheldon Logan**, *Computer Engineering*

NANOSTRUCTURED MATERIALS FOR ENERGY  
GENERATION AND HARVESTING

**Andrew Lohn**, *Electrical Engineering*

Co-presenter: Takehiro Onishi

SIGNALING PATHWAYS IMPACT ANALYSIS FOR  
HAEMATOPOIETIC STEM CELLS

**Jeffrey Long**, *Bioinformatics*

ENDANGERED SPECIES HOLD KEYS TO HUMAN  
EVOLUTION

**Craig Lowe**, *Bioinformatics*

HIGH THROUGHPUT MAPPING OF 2'-O-  
METHYLATION IN RNA

**Lauren Lui**, *Bioinformatics*

SEQDOC+ SOFTWARE FOR VALIDATING BLAST  
ALIGNMENTS BY DIRECT COMPARISON OF THE  
SOURCE DNA CHROMATOGRAMS

**Jonathan Magasin**, *Bioinformatics*

Co-presenter: Ngan Nguyen

HOLLOW-CORE WAVEGUIDE METROLOGY USING  
OPTICALLY INDUCED PARTICLE TRANSPORT

**Philip Measor**, *Electrical Engineering*

INTEGRATED LIQUID-CORE WAVEGUIDES FOR  
SURFACE-ENHANCED RAMAN SCATTERING  
DETECTION

**Philip Measor**, *Electrical Engineering*

ON SIMULATING PERFORMANCE EFFECTS OF  
DATA PLACEMENT STRATEGIES IN PARALLEL FILE  
SYSTEMS

**Esteban Molina-Estolano**, *Computer Science*

SECURE DATA DEDUPLICATION

**Alex Nelson**, *Computer Science*

THE TECWAVE PROJECT

**Jiazhong Nie**, *Computer Science*

EXTERNAL CAVITY DIODE LASER LOCKING

**Mark Oehlberg**, *Electrical Engineering*

PVOT PHOTOVOLTAIC TESTBED

**Daniel O'Leary**, *Electrical Engineering*

MECHANISMS FOR ACTION OF THE  
ULTRA CONSERVED ELEMENTS IN EMBRYONIC  
STEM CELL DIFFERENTIATION

**Courtney Onodera**, *Bioinformatics*

HARVESTING RENEWABLE ENERGY USING  
CASCADED CONCENTRATION CELLS

**Oxana Pantchenko**, *Electrical Engineering*

SECURITY AWARE INDEXING FOR LARGE FILE  
SYSTEMS

**Aleatha Parker-Wood**, *Computer Science*

INTEGRATED OPTO-ELECTRICAL SINGLE  
MOLECULE SENSOR

**Mikhail Rudenko**, *Electrical Engineering*

MICRO-RNAs IN HEMOPOIESIS

**Daniel Sam**, *Bioinformatics*

UCSC BIOINTEGRATOR: A MULTI-PLATFORM  
ANALYSIS PIPELINE

**Zack Sanborn**, *Bioinformatics*

Co-presenter: Stephen Benz

USING LOCAL REGRESSION KERNELS FOR  
STATISTICAL OBJECT DETECTION

**Hae Jong Seo**, *Electrical Engineering*

# Poster Presentations

Bhojwani Room

## Baskin School of Engineering

FIBER SERS PROBE TO DO MOLECULAR SENSING

**Chao Shi**, *Electrical Engineering*

Co-presenters: Xuan Yang and Zuki Tanaka

SPACE DEBRIS MITIGATION

**Michael Singer**, *Computer Science*

COMPUTATIONAL SUPPORT FOR PLAY TESTING GAME SKETCHES

**Adam M. Smith**, *Computer Science*

Co-presenter: Mark J. Nelson

ENHANCED RAMAN DETECTION

**Kazuki Tanaka**, *Electrical Engineering*

ANALYSIS OF LAYERING IN 2D AND 3D SALT FINGER SIMULATIONS

**Adrienne Traxler**, *Statistics & Applied Mathematics*

DO C/D BOX RNAs GUIDE mRNA RIBOSE METHYLATION IN EXTREMOPHILE ARCHAEA?

**Andrew Uzilov**, *Bioinformatics*

IDENTIFYING AND EXPANDING A CANCER INVASION GENE NETWORK

**Charles Vaske**, *Bioinformatics*

WHAT IS THE MAXIMUM NUMBER OF FUNCTIONALLY DISTINCT HEMATOPOIETIC PROGENITOR CELL TYPES IN MICE?

**Elinor Velasquez**, *Bioinformatics*

REDUCING POWER CONSUMPTION BY INCORPORATING FLASH MEMORY INTO RAID STORAGE ARRAYS

**Rosie Wach**, *Computer Science*

CASE-BASED REASONING FOR BUILD ORDER IN REAL-TIME STRATEGY GAMES

**Ben Weber**, *Computer Science*

INEXPENSIVE, LOW-POWER RELIABILITY FOR ARCHIVAL SYSTEMS

**Avani Wildani**, *Computer Science*

DRUG TARGET PREDICTION IN YEAST

**Alexander Williams**, *Bioinformatics*

POTENCY PREDICTION PIPELINE: AUTOMATED ANALYSIS OF HIGH-THROUGHPUT SCREENING SOFT-AGAR ASSAY

**Marcos Woehrmann**, *Bioinformatics*

USER-CENTRIC MULTI-CRITERIA INFORMATION RETRIEVAL

**Shawn Wolfe**, *Computer Science*

FAULT-TOLERANT SYNTHESIS USING NON-UNIFORM REDUNDANCY

**Keven Woo**, *Computer Engineering*

QUANTUM COHERENCE ON CHIP

**Bin Wu**, *Electrical Engineering*

THE EFFECT OF COST UNCERTAINTY AND COLLUSION IN A UPGRADE DECISION GAME

**Shuang Wu**, *Electrical Engineering*

QUERY DIFFICULTY PREDICTION FOR CONTEXTUAL IMAGE RETRIEVAL

**Xing Xing**, *Computer Science*

SIDETRACK: GENERALIZING DYNAMIC ATOMICITY ANALYSIS

**Jaeheon Yi**, *Computer Science*

Co-presenter: Caitlin Sadowski

FACETED FEEDBACK IN ADAPTIVE INFORMATION FILTERING

**Lanbo Zhang**, *Computer Science*

# Poster Presentations

Bhojwani Room

## Division of Arts

CULTURE CUSTOM INDENTITY

**Antoine Abou Jaoude**, *Digital Arts & New Media*

KEYWORD PROCESSING ENVIRONMENT

**G. Craig Hobbs**, *Digital Arts & New Media*

EVERYDATUM

**Nick Lally**, *Digital Arts & New Media*

Co-presenter: Nik Hanselmann

RHIZOMATIC ASSEMBLAGE OF THE MACHINIC ORGANISM "LINE OF LEONARDO FLIGHT"

**Chris(Topher) Maraffi**, *Digital Arts & New Media*

## Division of Humanities

EFFORT REDUCTION IN INTOXICATED SPEECH

**Abby Kaplan**, *Linguistics*

GENDERED LANGUAGE IN TERRITORIAL NEW MEXICO'S PENITENTIARY PARDONS, 1907-1910

**Sabrina Sanchez**, *History*

ARABIC VERBS AND THE INFLUENCE OF PROSODY ON WORD FORMATION

**Matthew Tucker**, *Linguistics*

THE PERCEPTION AND PRODUCTION OF CONSONANT CLUSTERS IN KOREAN

**Paul Willis**, *Linguistics*

## Division of Physical & Biological Sciences

SEARCH FOR GEV-TEV EMISSION FROM GRB080319B USING THE MILAGRO OBSERVATORY

**Taylor Aune**, *Physics*

NEW DIMENSIONS: COLLIDER PHYSICS WITH THE ATLAS DETECTOR

**Andrea Bangert**, *Physics*

Co-presenters: Daniel Damiani and Peter Manning

CARTAN, NASH, AND THE (FRIENDLY) MONSTER: TAMING TAYLOR SERIES SPACES AND PROBING SINGULARITIES OF SPACE CURVES

**Alex Castro**, *Mathematics*

BRIGHT BLUE/GREEN DOPED QUANTUM DOTS FOR ELECTROLUMINESCENT LIGHTING

**Carley Corrado**, *Chemistry*

DYANAMICAL SYSTEMS, LARVAL TRANSPORT, AND THE CALIFORNIA CURRENT SYSTEM

**Cheryl Harrison**, *Earth & Planetary Sciences*

PHOTOLUMINESCENCE RESPONSE OF TWO DIFFERENT LIGAND CAPPED CDTE QUANTUM DOTS TO KCL IN AQUEOUS SOLUTION

**Jennifer Hensel**, *Chemistry*

CALIBRATING ISOTOPIC METHODS TO STUDY SHARK ECOLOGY

**Sora Kim**, *Earth & Planetary Sciences*

TOWARDS THE FUNCTION OF HAR1: A NOVEL RNA GENE

**Monica Lares**, *Chemistry*

# Poster Presentations

Bhojwani Room

## Division of Physical & Biological Sciences

CHROMIUM TRANSFORMATION PATHWAYS IN METAL-REDUCING BACTERIA

**Jeanie Ramos**, *Microbiology & Environmental Toxicology*

MICROBIAL RESPIRATION PATHWAYS CONTROLLING THE FATE AND TRANSPORT OF ARSENIC

**Carolina Reyes**, *Microbiology & Environmental Toxicology*

POLYMER TEMPLATED POROUS TiO<sub>2</sub> IMPREGNATED WITH GD(CO<sub>3</sub>)<sub>3</sub>NH<sub>3</sub>H<sub>2</sub>O NANOCRYSTALS AND ITS PHOTOCATALYTIC EFFICIENCY FOR WATER PURIFICATION

**David Rogow**, *Chemistry*

VPSS, A HYBRID SENSOR KINASE, ACTIVATES BIOFILM FORMATION IN VIBRIO CHOLERAE

**Nicholas Shikuma**, *Microbiology & Environmental Toxicology*

QUANTUM DOT SENSORS BASED ON PRO-FLUORESCENT NITROXIDES

**Chittreeya Tansakul**, *Chemistry*

THE AGOUTI SIGNALING PROTEIN (ASIP)

**Darren Thompson**, *Chemistry*

DEVELOPMENT OF A NOVEL ROUTE TOWARD ENANTIOPURE  $\beta$ -LACTAMS FROM AN  $\alpha$ -AMINO ACID IMIDAZOLIDINE

**Yvette M. Vaske**, *Chemistry*

A RAPID REDOX POLYMERIZATION METHOD FOR MULTIWELL HYDROGEL SENSOR ARRAYS

**Boaz Vilozny**, *Chemistry*

PHYSIOLOGY AND MOLECULAR GENETICS OF MICROBIAL ARSENIC METABOLISM

**Kamrun Zagar**, *Microbiology & Environmental Toxicology*

## Division of Social Sciences

CHILDREN'S CONTRIBUTION TO FAMILY WORK AND PARTICIPATION IN CHILD-FOCUSED ACTIVITIES

**Lucia Alcalá**, *Psychology*

FROM RESEARCH TO THE CLASSROOM: IMPLEMENTING AN ASSESSMENT OF SCIENTIFIC REASONING

**Edward Geaney**, *Education*

OUR FUTURE SELVES: THE IMPACT OF ROLE MODELS ON ACADEMIC IDENTITY FORMATION

**Beth Jaworski**, *Psychology*

Co-presenters: Jamie Franco-Zamudio, Bridget Zwimpfer and Alexandria McMahan

TEACHER ATTRITION IN CONTEXT

**Alisun Thompson**, *Education*