



ENVIRONMENTAL SCIENCES SENIOR THESIS SYMPOSIUM

SUNDAY, APRIL 23RD, 2017. 9:00AM-4:30PM

Dennis Baldocchi, ES Program Director
Patina Mendez, ES Lecturer
Kurt Spreyer, ES Lecturer
Abigail Cochran & Dylan Chapple, GSIs

9:00-9:15. WELCOME [159 MULFORD]

MORNING SESSION 1. 9:15-10:45

PLANT & SOIL ECOLOGY

159 Mulford

Kana Yamamoto From the Soil Up: Decomposition to Greenhouse Gas Emissions along a Topographic Gradient in the Puerto Rican Rainforest

Alison Haddad Ground-making Research: Storing Atmospheric Carbon in Soil

Janice Kim Getting Back to the Roots: AMF colonization in Organically and Conventionally Grown Strawberry Rootstocks

Cynthia Martinez Leafing Out to Remediate: Bioaccumulation of Arsenic in *Pteris vittata* Over Time

Natalie Zhang Microbial Mediation of Iron and Sulfate Biogeochemistry in Subalpine Wetland Soils

ENERGY & TECHNOLOGY

101 Morgan

Jean Y. Ji Can Solar Save the World? Societal Benefits of UC Berkeley's Rooftop Solar System

Davita Pytowski Understanding the Duck Curve: Electric Usage by Residential Solar PV System Owners in California

Kevin Ong Adapting Energy Storage Technology for Renewable Energy Generation in California

Kelsey Morgan Behavioral Response to Self-Energy Audits by UC Berkeley Undergraduates

Yinqiao Wang Greenhouse Gas Emissions and Energy Efficiency of Waste Water Treatment Plants in Northern China

10:45-11:00. MORNING COFFEE BREAK [MORGAN PATIO & LOUNGE]

MORNING SESSION 2. 11:00-12:30

AQUATIC ECOLOGY & GEOMORPHOLOGY

100 GPB

Saba Saberi When Lakes go BLOOM: Modeling Freshwater Lake Primary Productivity Using MODIS-derived Surface Temperature Observations

Kelsey Foster A Delta without Wetlands: Assessing Habitat Loss in the Sacramento-San Joaquin Delta

Alvaro Zayas Groundwater Inundation: Interpolating Groundwater Surface Levels in Alameda County, CA

Blair Conklin El Niño and Beach Morphology in Point Reyes National Seashore

Irene Pak Ocean Acidification and the Benthos: Monitoring Shifts in Macroinvertebrate Community Structure in the Southern California Bight

RESTORATION & REMEDIATION

159 Mulford

Vincent Spadone Interactions of Biological Control Agents on the Invasive Water Hyacinth, *Eichhornia crassipes*

Alexander Goetz Friends or Foes? Facilitation and Competition between Two Restoration-Ready Plant Species

Reina Carissa Restoration Ecology in the Era of Novelty: Growth Rates of a Native Shrub at Mount Sutro

Ashley Killmon Bioswale Landscape Resilience in San Mateo County, California

Eva Malis Transitioning Transition Zones: Tracking Restoration Project Change in San Francisco Bay Wetlands

Allie Lalor Grazing Impacts on Biodiversity in Point Reyes National Seashore

CONSERVATION & ACTIVISM IN THE BAY AREA

101 Morgan

Anna Yip UC Berkeley Zero Waste: How and by When?

Russell Huang Why Do Some College Students Recycle? College-Specific and College-Independent Factors

Curt Shogo Komiyama To Soil or Not to Soil: Hydroponics as a Means of Urban Horticulture

Pramon Karnchanapimonkul Motivating Sustainability through Conspicuous Conservation and Social Norming at UC Berkeley

John Bursick "See You in Court": The Role of Litigation in Pursuing Environmental Justice in Richmond, CA

Ioana Seritan "She Loves the River": Women Environmental Activists for Bay Area Watersheds

12:30-1:30. LUNCH [MORGAN PATIO & LOUNGE]

AFTERNOON SESSION 1. 1:30-2:45

FOREST TO FIELD: RESOURCE MANAGEMENT & MODELING	CLIMATE, HEALTH & FOOD SYSTEMS	HABITAT & BEHAVIOR
100 GPB	159 Mulford	101 Morgan
<p>Elliot Kuskulis Does it Make the Cut? Efficacy of Pruning to Mitigate Blister Rust Infection</p> <p>Melissa Ferriter Fire Science Meets Data Science: Mapping the Response of California Ecosystems to Wildfire</p> <p>Michelle Li Urban Forest Management Approaches in San Francisco Bay Area Cities</p> <p>Julie Nguyen Seeing the Forest Above the Trees: Mapping Fire Induced Vegetation Changes in Kings Canyon National Park</p> <p>Arthur Cen Seeing Our Future Resource Limits in Data: Estimating Country Level Biocapacity Using Machine Learning</p>	<p>Anthony Lim A Policy Projection Dilemma: Finding the Optimal Discount Rate for Global Carbon Emissions Scenarios</p> <p>Evan Keum Aerobic Composting Innovation: Barriers and Pathways to Adoption</p> <p>Anthony Fortney Suburban food for thought: Farmer's Market's and Consumer Behavior in Pleasant Hill, CA</p> <p>Kristie Hung Elevated Urban Temperature Burdens on Heat-related Cardiovascular Illness in California</p> <p>Lucy Myung Eun Shim Mitigating Urban Heat Island Effect with Reflective Roof Surfaces in San Francisco, CA</p>	<p>Chiara Galassetti The Native Bee Solution: Nesting Blocks for Supplemental Agricultural Pollination</p> <p>Morgan Morales Capture on Camera: Why Humans and Dogs are More Photogenic than Coyotes</p> <p>Miranda Thoenen Ant Invasion!!! Iridomyrmecin Effects on Native Ant Foraging Behavior</p> <p>Samantha Klein Impacts of the Hong Kong Trawling Ban on Chinese White Dolphin Feeding Behavior and Mortality</p> <p>Chandler Shaeffer Turning Up the Heat: Thermal Performance of Two Eel River Snail Species</p>

2:45-3:00. AFTERNOON COFFEE BREAK [MORGAN PATIO & LOUNGE]

AFTERNOON SESSION 2 . 3:00-4:30

ENVIRONMENTAL & PUBLIC HEALTH	DIMENSIONS OF WATER
159 Mulford	101 Morgan
<p>Mathilda Farrell Zika Discourse in American Media: Language and Framing of a Public Health Crisis</p> <p>Shannon Chang Developing a Low-cost Black Carbon Sensor Network in West Oakland</p> <p>Carter Free Keeling Pollution Accounting: Tracking Black Carbon Emissions from the San Francisco Bay Ferry</p> <p>Daniel Menza Refinery Pollution and Health: Linking Air Pollution and Emergency Department Visits in Contra Costa and Solano County, CA</p> <p>Yeajoo Lee Pesticide Exposure & Kidney Function: Osmolality and Creatinine levels in National Health And Nutritional Examination Survey Adults</p> <p>Kelly Nabaglo Effects of Air Pollution on Biomarkers of Obesity and Oxidative Stress in Children from the San Joaquin Valley, CA</p>	<p>Jungmin Lee Water Treatment Challenges: Potential Sources of Cambi-THP Anammox Activity Inhibition</p> <p>Betty Huang Mapping the Human Right to Water in China</p> <p>Vanessa Chi Determinants of Effective Water Conservation: A Case Study of the San Francisco Bay Hydrologic Region</p> <p>Yihong Ding The Application of Partial Nitrification Process: The Potential Inhibition of Free Ammonia and Cambi-THP Pretreated Centrate</p> <p>Cathy Ton Chlorination and Water Sanitation: Determining Trihalomethane Exposure in Water Utilities in the United States</p> <p>Ramanjot Kaur A Preventable Loss of Human Potential: Drinking Water Quality and Stunted Growth in Young Children in Pune, India</p>

4:30 - CLOSING COMMENTS

[IN SESSION]

OUR SINCERE THANKS TO the faculty, postdoctoral researchers, graduate students, staff, and community members who generously mentored students - your contributions clearly inspired and enriched the senior thesis experience. We also thank Ginnie Sadil for help organizing and assisting with this event. Special thanks to ES Director Dennis Baldocchi, ESPM Chair George Roderick, John Battles, Rebecca Sablo, the Department of Environmental Science, Policy & Management and UC Berkeley's College of Natural Resources.



DEPARTMENT of ENVIRONMENTAL SCIENCE, POLICY, AND MANAGEMENT

