

Tenth Annual Research Mentorship Symposium

Tuesday, July 27th

- 9:30 *Welcome*
Robert Mann, Associate Director of Summer Sessions
Dr. M. Polne-Fuller, Research Mentorship Program Director
- 9:45 *Sequence Selective Targeting of Long Stretches of the DNA Minor Groove by a Bis-benzimidazole*
Presenter: Cameron Rogers
Mentor: Heather Hertema, Chemistry and Biochemistry
- 10:00 *Calculus on Manifolds*
Presenter: Brian T. Buce
Mentors: Dr. Martin Scharlemann and Dr. Charles Ryavec, Mathematics
- 10:15 *The Effects of Diet and Temperature on Growth in the Herbivorous Fish Opaleye: the Latitudinal Diversity Gradient in Herbivorous Fishes*
Presenter: Jesse Vasquez
Mentor: Dr. Michael Behrens, Ecology Evolution and Marine Biology
- 10:30 *An Investigation into the Harmonic Spectrum of Common Classical Instruments*
Presenter: Tim Nelson
Mentor: David Romblom, Media Art & Technology
- 10:45 BREAK
- 11:00 *Characterizing the Similarities between the Anaerobic Biofilms formed by Pseudomonas Aeruginosa and its Quorum Sensing Mutants*
Presenter: Nastassja El-sayed
Mentor: Yiping Cao and Daniel Brooks, Bren School of Environmental Management
- 11:15 *The Affects of Spatial Ability and Interactivity on Cross Sectional Drawing Task Performance*
Presenter: Hunter Zupnick
Mentor: Dr. Madeline Keehner, Psychology
- 11:30 *The Effects of Exotic Black Rat Parasites on Native Species*
Presenters: Karen Paulson and Adryana De La Rosa
Mentor: Kathrine Smith, Ecology Evolution and Marine Biology

Noon-1:15 Lunch Break (*Lunch on your own*)

- 1:15 Afternoon Welcome: Dr. M. Polne-Fuller
- 1:25 *Analysis of Bioreactivity in the Ocean by using Dissolved Organic Carbon (DOC)*
Presenter: Min Kyu Kim
Mentor: Stuart Goldberg, Ecology Evolution and Marine Biology
- 1:40 *Using Electrospray and REMPI techniques to determine Enkephalin Gas conformations*
Presenter: Kraig Young
Mentors: Bridgit Crews and Dr. Mattanjah S. de Vries, Chemistry and Biochemistry
- 1:55 *Estimating Predator Density of Juvenile Red Abalone (Genus Haliotis)*
Presenters: John Paul Zermeno and Adam Chadroff
Mentor: Clara Svedlund, Ecology Evolution and Marine Biology
- 2:15 *Comparing the Effects of Different Components of a Telescope by the Signal Received*
Presenters: Rosalia Garcia and Curtis Hickmott
Mentors: Nathan Stebor and Josh Marvil, Physics and Astrophysics
- 2:30 *Carbohydrate Analysis using a Dionex-BioLC High Performance Liquid Chromtography with Pulsed Amperometric Detection*
Presenter: Kail Hakeem Washington
Mentor: Stuart Goldberg, Ecology Evolution and Marine Biology
- 2:45 Closing Remarks: Dr. M. Polne-Fuller

Wednesday, July 28th

- 9:30 Welcome: Dr. M. Polne-Fuller
- 9:45 *Experimental Results on Linear Hybrid Systems*
Presenter: Mitchell B. Forman
Mentor: Ricardo Sanfelice, Electrical and Computer Engineering
- 10:00 *The Effect of Strength on Punitive Sentiment in the Extended Form Bargaining Game*
Presenter: Shelby Kovant
Mentor: Max Krasnow, Psychology
- 10:15 *The Effect of Research Quality on Female Advantage in Spatial Navigation*
Presenter: Serena Goldstein
Mentor: Max Krasnow, Psychology

- 10:30 *Analyzing the Evolution of Two and Three Dimensional Visualization in Computer Animation*
Presenters: Anita Verma and Genny Moo
Mentor: Aldo Figueroa, Media Art and Technology

10:50 BREAK

- 11:00 *Multi-Media Fluid Mechanics*
Presenter: Ali Smith
Mentor: Dr. George M. Homsy and Li Yang, Mechanical Engineering
- 11:15 *Is The Runway An Effective Tool To Measure Sexual Motivation In Rats?*
Presenters: Neel Joshi, Danny Wudka, and Carlos Baez
Mentor: Dr. Lori Knackstedt, Psychology
- 11:40 *Breaking Through Barriers: The Perceptions and Realities Modern Day Women in the U.S. Military*
Presenter: Caroline Hertel
Mentor: Stacie Furia, Sociology

Noon-1:00 Lunch Break (*Lunch on your own*)

- 1:00 Afternoon Welcome: Dr. M. Polne-Fuller
- 1:10 *People's Attitudes Towards Emergency Contraception*
Presenters: Steven Sutro and Lucas Pantel
Mentor: Katrina Kimport, Sociology
- 1:30 *Reproduction of caprellids in natural reefs and oil platforms: an indicator of habitat quality*
Presenter: Lauren Der
Mentors: Dr. Mark Page and Dr. Jenifer Dugan, Ecology Evolution and Marine Biology
- 1:45 *Ecological Adaptation of the California Brome for Restoration*
Presenter: Corey Stein
Mentor: Dr. Kristina Hufford, Ecology Evolution and Marine Biology
- 2:00 *Gold Mediated Energy Transfers in Large Strands of DNA*
Presenters: Albert Chi and Jason Geisenheimer
Mentor: Stacey Peterson of Chemistry
- 2:20 *Harmful Algal Blooms Along The California Coast*
Presenters: Guillermo Hernandez, Anna James, and Claire Monroy
Mentors: Ellie Wallner and Karen Keltner, Ecology Evolution and Marine Biology
- 2:45 BREAK

- 3:00 *Welcome Guests*
 Dr. Loy Lytle, Dean of Extended Learning Services and Director of Summer Sessions
 Dr. Miriam Polne-Fuller, Research Mentorship Program Director
- 3:10 *Monitoring Tar Distribution on Coal Oil Point*
 Presenters: Sandhya Tillotson
 Mentor: Tonya Del Sontro, Geology and Dr. Ira Leifer, Chemical Engineering
- 3:25 *Cocaine induced changes in the dopamine receptors: short term use vs. long term use*
 Presenters: Frances Vernon, Dominique Fenton, and Allison Atwill
 Mentor: Dr. Osnat Ben-Shahar, Psychology
- 3:50 *Bathymodiolus childressi: A deep Sea mussel's Response to Thermal Stress*
 Presenter: Juana Becerra
 Mentor: Dijanna Figueroa, Ecology Evolution and Marine Biology
- 4:05 *Comparing the effects of magnesium and sodium ions in solutions containing DNA tubes*
 Presenters: Veronica Girma and Ekavali Mishra
 Mentor: Professor Deborah K. Fygenon, Physics Department
- 4:30 *Closing Remarks and Final Poster Session*

The UCSB Summer Research Mentorship Program matches highly motivated high school students from around the world with an active researcher or scholar who serves as faculty advisor and research supervisor. Students earn university credit while gaining valuable research experience.

For additional information, contact

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 Research Mentorship Program
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For information about making a gift to the Research Mentorship Fund, please contact Dr. Miriam Polne-Fuller at 805-893-8950.



**RESEARCH
 MENTORSHIP
 PROGRAM**

**Tenth Annual Student Research Symposium
 UCSB Pre-College Research Mentorship Program**

Tuesday, July 27, 2004
 and
 Wednesday, July 28, 2004

Donald Bren Hall
 Room 1414 — UC Santa Barbara