

News From Around the College

Biology

Two Biology graduate students received first and second place awards for Masters level presentations at the recent 16th Sigma Chapter - Graduate Women in Science Conference held at Cal State Fullerton on March 19. Both students work in the laboratory of **Dr. Kathryn Dickson**. First place for a presentation by a Masters student went to **Danielle Neumann** who spoke on *Comparison of Digestive Enzyme Activities in Tunas and their Ectothermic Relatives*. And, second place went to **Joan M. Backey** for her talk on *A Comparison of Lactate Processing in Endothermic and Ectothermic Sharks*.

Chemistry and Biochemistry

Recent publications by **Dr. Katherine Kantardjieff** (including one co-authored with **Dr. Mori Jamshidian**) have been highlighted in the Faculty 1000 of Biology (<http://www.facultyof1000.com>). This online service systematically features the most interesting papers in every subject in biology, regardless of the journal in which they were published. The articles describe correlations among protein crystallization parameters and their applications in high-throughput crystallography.

Kantardjieff, K.A., Jamshidian, M. and B. Rupp, *Distributions of pI vs pH provide prior information for the design of crystallization screening experiments*. Bioinformatics, 2004. 20(14): p. 2171-2174.

Kantardjieff, K.A. and B. Rupp, *Matthews coefficient probabilities: Improved estimates for unit cell contents of proteins, DNA, and protein-nucleic acid complexes*. Prot Sci, 2003. 12(9): p. 1865-1871.

Kantardjieff, K.A. and B. Rupp, *Protein isoelectric point as a predictor for increased crystallization screening efficiency*. Bioinformatics, 2003. 20(e2004): p. 1-7.

Geology

Dr. Jeffrey Knott was co-convenor at an International Quaternary Association (INQUA) Commission on Stratigraphy and Chronology The Drylands Dating Subcommittee is a group of international scientists who met at Zzyzx March 23-26 to select type localities for comparison of various geochronologic methods. One of the sites being nominated for study is presently being examined by Geological Sciences student **Marsha Sohn** for her M.S. thesis. Sohn will be lead investigator and collaborate with several internationally known laboratories in the study. **Aron Taylor**, an M.S. student in Geological Sciences also applied and was accepted to participate in the workshop. This is the first workshop for this sub-commission with future workshops planned for Argentina, the Canary Islands and Australia.

Drs. Matthew Kirby with Steve Lund (USC) and Jeanette Arkle (CSUF Geography major) will present a paper at the USGS Workshop on Late Cenozoic Drainage History of the Southwestern Great Basin and Lower Colorado River Region: Geologic and Biotic Perspectives entitled *Centennial-Scale Record of Late-Quaternary Climate Dynamics from the San Bernardino Mountains: Baldwin Lake, Southern California*. The meeting is held at Zzyzx from April 12-14.

Dr. Matthew Kirby received a Supplement for Underrepresented Minority Research Fellowship for his ACS/PRF grant *Developing Late-Holocene Records of Flood-Producing, Precipitation Variability from Small Lakes in Southern California*. The Supplement is a \$5,000 summer stipend/research materials grant. funded by The American Chemical Society/Petroleum Research Fund for research by undergraduate geology major **Joe Carrasco**.

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Geology

Several members of the Department of Geological Sciences are attending the Geological Society of America Cordilleran section meeting including **Drs. Diane Clemens-Knott, Phil Armstrong, and Jeff Knott**. Dr. Clemens-Knott's abstract is titled: *Geochronologic constraints on Early Cretaceous deposition of non-marine sediments and volcanics, and synplutonic deformation, western Sierra Nevada batholith, CA*. By Clemens-Knott, D. and Saleeby, J.B.

Mathematics

Dr. Charles H. Lee presented two papers that he has been collaborating with scientists at NASA Jet Propulsion Laboratory at the 2005 IEEE Aerospace Engineering Annual Conference: *The Impacts of Mars Reconnaissance Orbiter Roll Steering on Phoenix Relay Link*, and *Orbit Design Based on Global Maps of Telecom Metrics*.

Dr. Bogdan Suceava will present a talk (joint work with Wladimir Boskoff, Univ. Ovidius, Romania) in the AMS Special Session on History of Mathematics American Mathematical Society entitled *Barbilian Spaces: The History*. The Western Section Spring Meeting takes place Saturday-Sunday, April 16-17 at UC Santa Barbara.

Abstract: The Cayley-Poincare model of the Lobachevsky's non-Euclidean geometry yields naturally a distance that can be represented as a logarithmic oscillation. Analyzing the generality of this procedure of constructing the distance, Dan Barbilian (1895 - 1961) established a theory of metric spaces endowed with this specific distance. Recent results connect the geometries with constant Gaussian curvature to the Barbilian spaces and emphasize how Barbilian distances yield generalized Lagrange metrics irreducible to Lagrange, Finsler or Riemann metrics. This work presents the history of the developments of these mathematical ideas from the first half of the 20th Century until today.

Physics

Dr. Murtadha Khakoo recently had an article published entitled, *Electron impact excitation of argon and krypton: improved r-ratios*. It is in the Journal of Physics B: Atomic, Molecular, and Optical Physics, December 2004.

Miscellaneous

A new Opportunity Center tutoring schedule is now available online at: <http://nsm.fullerton.edu/content/student/tutorschedule.html>

MARC Scholarship Application Deadline is April 15. Applications are available in the MARC Office, MH-488 and on the MARC website, <http://marc.fullerton.edu>.

Last month's newsletter incorrectly noted that **Sarah Millus, Kelly Connell, and Cindy Duong**, recipients of the Fleckles Awards all worked in **Dr. Kathryn Dickson's** lab. Cindy Duong works in Dr. Dickson's lab, while Sarah Millus works with **Dr. Paul Stapp** and Kelly Connell works with **Dr. Michael Horn**.

TSUNAMI!!!

The Colleagues of the College of Natural Sciences & Mathematics will host an entertaining and informative presentation by Drs. David Bowman, Matt Kirby and Brady Rhodes on "The Great Indonesian Earthquake and Tsunami: What Happened, and Could It Happen Here?" at the Fullerton Marriott on Wednesday, April 20 at 7:30 a.m. This inaugural Colleagues Colloquium Dean's Breakfast Briefing is presented by the Department of Geological Sciences and sponsored in part by Earth Tech.

The great (M=9.0) earthquake that struck Sumatra on December 26, 2004 was the fourth-largest earthquake since 1900. The ensuing tsunami impacted coastal communities throughout the Indian Ocean and claimed more than 280,000 lives. This special presentation will review the cause an impact of the earthquake and tsunami, and discuss the possibility of a similar event happening in California.

Seating is extremely limited for this event so contact Doug Colby at 714-278-7018 or e-mail dcolby@fullerton.edu to reserve your place today. Tickets are \$10 for non-members and free for Colleagues members. Registration begins at 7:00 a.m. and the breakfast and presentation will begin at 7:30 a.m. and conclude at 9:00 a.m. For information and registration visit us online at <http://nsm.fullerton.edu/colleagues>

Graduate Forum

The California Diversity Forum for Graduate Education will be held Saturday April 9, 2005 at the University of San Diego from 8:00 a.m. until 3:00 p.m. This forum is one of the best opportunities for juniors, seniors and graduate students to meet with faculty in specific graduate disciplines, attend workshops on graduate schools, and meet recruiters. This event is by invitation, so students who feel they are good candidates for graduate school should register on line. The committee is planning for 1,200 students from 23 campuses in southern California. Information on the Diversity Forum: <http://www.ucop.edu/acadadv/draft-new-div-forum/>

A charter bus will leave CSUF at 6:00 a.m. and return approximately 5:00 p.m. that evening. There will be a \$20 deposit that must be given to Gerald Bryant in UH-179, for riding the bus, but this will be returned when the students board the bus. If you do not show up, the check will go into a university fund account. If you have any other questions, please contact Gerald Bryant at (714) 278-7364.

Advisement Dates

Biology	Geology
April 11-29	April 11-15, 18-22
Chemistry	Math
April 18- May 6	April 25-29
Physics	
e-mail:	
jfeagin@fullerton.edu	



2005 NSM-ICC SYMPOSIUM & POSTER PRESENTATION

Wednesday April, 13th

Location: Titan Theatre

Noon-2p.m.

-Poster presentations by CSUF undergraduate and graduate students

-Professional panel offering career information to interested students

2-3p.m. The Great Indonesian Earthquake and Tsunami: What Happened, and Could it Happen Here? Presented by Drs. Dave Bowman and Brady Rhodes

MARINE BIOLOGY AND ECOLOGY SCHOLARSHIP PROGRAM IN DENMARK

This summer program builds on the long-standing semester DIS program and is designed as an introduction to marine biology and ecology for students of biology in general, ecology, environmental science, and related fields. Courses include:

- * Marine Biology of European Coastal Waters
- * Ecology and Human Impact in the North and Baltic Seas

Students may opt to take both these courses or one of these courses and one summer Humanities and Social Sciences course. For more information contact Matthew Walters, Study Abroad Advisor at (714) 278-7626 or go to: <http://www.discopenhagen.org/Academic/Science/MBE/summer/summerIndex.shtml>

Seminar Schedules

Biology

All seminars meet Wednesdays @ 4:00 p.m. in MH-513

April 6

Now you see it, now you don't: Control of gene expression in the mouse with the lac operator-repressor system.

Dr. Heidi Scrable Department of Neuroscience
University of Virginia, Charlottesville

April 13

Molecular mechanisms used by Salmonella to modulate expression of its genes in response to environmental stimuli

Dr. Eduardo Groisman Department of Molecular Microbiology Washington University

April 20

Surfing Fish, Terrestrial Eggs, and California Beaches

Dr. Karen Martin
Pepperdine university

April 27

The Endangered Species Act

Dr. Wayne White Division of Endangered Species U.S. Fish and Wildlife Service.

Chemistry and Biochemistry

All seminars meet Thursdays @ 4:00 p.m. in MH-468

April 7

TBA

Mr. Ryan Shade Graduate Student
Department of Chemistry & Biochemistry
CSUF

April 14

Synthetic Applications of Trichloroisocyanuric Acid

Dr. Gene Hiegel
Department of Chemistry & Biochemistry
CSUF

April 21

Photochemical Formation and Processing of Atmospheric Organic Aerosols

Dr. Paul Ziemann
Dept. of Environmental Science UCR

April 28

TBA

Ms. Kwanruthai Tadpetch
Graduate Student
Department of Chemistry & Biochemistry
CSUF

Math

Tuesday, April 5, 4:00 p.m. in MH 476

Elementary Mathematics for Teachers: A Mathematician's Perspective

Dr. Scott Baldrige, Louisiana State University

This talk describes a mathematics course, designed by mathematicians, for prospective elementary teachers. The course is based on a new textbook written by Scott J. Baldrige and Thomas H. Parker: Elementary Mathematics for Teachers. The goal of the textbook and the course is to present mathematics clearly and correctly while keeping the focus on material that elementary school teachers will be addressing in their classrooms.

Thursday, April 14, 2:00 p.m. in MH 476

Decoding Reed-Solomon Codes

Dr. Daqing Wan, UC Irvine

We will give a simple and self-contained introduction to recent developments linking number theory and the decoding of Reed-Solomon codes.

Saturday, April 30, 9:00 a.m.-1:00 p.m. in MH 476

Problem Solving Workshop

Dr. Bogdan Suceava, CSUF,

9:00 am - Games Adrian Vajiac, Chapman University,

10:00 am Geometric Transformations and Applications

Other talks will be announced. For more information please go to <http://math.fullerton.edu>

Geology

All seminars meet Wednesdays @ 4:30 p.m. in MH-327

April 6

The Poverty Hills, Owens Valley, California: A Mega-Landslide Deposit, Not a Transpressional Uplift

Dr. Kim Bishop, CSULA

April 20

Early Paleozoic History of the Cuyania terrane of western Argentina: evidence from U-Pb geochronology of detrital zircons from Cambrian and Ordovician sandstones

Dr. Stanley Finney, CSULB

April 27

TBA

Dr. Richard Laton, CSUF