



May 6, 2011
Issue 2: 20

Women in Science and Engineering

www.usc.edu/programs/wise

WISEPROG@USC.EDU

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***Congratulation to ANDREA HODGE who recently received a career award from the National Science Foundation for her research, "Exploring Nanoscale Growth Twins for the Development of Grain Boundary Engineering at the Nanoscale." To see the announcement, click [here](#).

***Congratulations to ANDREA ARMANI who won the VsoE Junior Research Award and to ELLIS MENG who won the VSoE Used-Inspired Research Award at this year's Viterbi awards' ceremony. To see the announcement, click [here](#).

*** In March 2011 Professor ANA KRYLOV gave a presentation entitled "Personal account of cultural and societal obstacles facing women pursuing careers in science" at the annual conference of the American Chemical Society in Anaheim, CA (March 27-21, 2011). Her presentation can be accessed here: "[Personal account of cultural and societal obstacles facing women pursuing careers in science](#)."

WISE PROGRAM UPCOMING DEADLINES

Fall Undegraduate Research Awards

Dornsife: August 28

Viterbi: August 1

CONGRATULATIONS TO RECIPIENTS OF THE SUMMER 2011

UNDEGRATUATE RESEARCH AWARDS

Victoria Saadat
Alexa Sieracki
Linda Peng
Aye Thu
Audrey Harker

Chuanchuan Zhou
Soumya Mourag
Jessica Kuo
Nishita Deka

CALENDAR, WISE UPCOMING EVENTS

WISE FACULTY NETWORKING MEETING

Meetings held the last Thursday of the month at 12pm in HNB 107; Thursday, May 26, 2011; Bring you own lunch. Cookies, coffee and tea provided.

WiSE Advisory Board Meeting
Wednesday, May 26, 2011



To see all the USC WiSE Grant Programs, including ongoing grants without specific deadline, please [click here](#).

CONFERENCES/ WORKSHOPS

AWIS SAN DIEGO

Women in Science and Technology Conference (WIST)

Saturday, May 14, 2011

Deadline to register: May 7, 2011

Keynote speakers:

Peggy Johnson, Executive VP & President of Global Market Development - Qualcomm

C.J. Warner, President and Chairman - Sapphire Energy

8 AM to 6 PM (Registration starts at 7:30am)

At the Salk Institute for Biological Studies



Keynote speakers: Peggy Johnson, Executive VP & President of Global Market Development - Qualcomm
C.J. Warner, President and Chairman - Sapphire Energy

Who should attend? Individuals at all levels in Science, Technology, Engineering and Mathematics (STEM)

What is the WIST conference about?

- * A one-day symposium focusing on career and personal development, as well as peer networking
- * Inspiring, prominent keynote speakers
- * Exciting and informative workshops, round-tables, and seminars for individuals at all stages of their careers in both academia and industry
- * An excellent opportunity to network, develop new skills, and explore career opportunities with 300 attendees from the scientific community

What is the purpose of the WIST conference? To empower women in STEM at all levels to enhance their careers through networking, discussion of relevant career development topics, and exposure to a wide range of specialties within STEM. As we enter a new decade now is the opportunity to make positive changes in our careers and lives.

For more information about these and other workshops please visit our website at

www.wist2011.org

Presented by the Association for Women in Science - San Diego

www.awissd.org

CRA-W TO HOLD CAREER MENTORING WORKSHOP AT FCRC 2011

June 4-5, 2011

San Jose, CA

Deadline to apply for travel support: **March 25th**

Notification about travel support: **April 15th**

Early registration ends - on or around May 5th (check FCRC site for updates)

The CRA Committee on the Status of Women in Computing research (CRA-W) will sponsor a Workshop on Research Career Mentoring for Women in Computer Science and Computer Engineering at the 2011 Federated Computing Research Conference.

For more information about the workshop and to apply for financial support to attend, [click here](#).

IN THE NEWS

A SHARP DROP IN TENURE-TRACK APPOINTMENTS FOR WOMEN OCEANOGRAPHERS

WIA REPORT, MAY 5, 2011

LuAnne Thompson, a professor of oceanography at the University of Washington, reports some alarming statistics on the percentage of women who earn doctorates in oceanography who go on to earn tenure-track faculty positions at leading research universities. Professor Thompson presents evidence that in the early years of this century an average of 30 percent of all doctorates awarded in the field of physical oceanography were earned by women. (The National Science Foundation reports that in 2008, 34 of the 84 doctorates awarded in all fields of oceanography in the United States went to women.)

However, Professor Thompson's research shows that from 1980 to 2009, 28 percent of the men who earned a Ph.D. in oceanography obtained a tenure-track position. For women with oceanography doctorates, 23 percent were able to gain appointments to tenure-track positions in the period prior to 1995. But since then, only 8 percent of women earning a Ph.D. in oceanography were hired to tenure-track faculty posts.

For the remainder of the article please, [click here](#).



WOMEN ARE INCREASING THEIR SHARE OF DEGREES IN STEM FIELDS

WIA REPORT, APRIL 25, 2011

New data from the U.S. Department of Education shows that women are making progress in closing the gender gap in degree attainments in the so-called STEM fields of science, technology, engineering, and mathematics. In 2009, women earned 134,634 degrees in STEM fields. This was up from 127,134 STEM degrees in 2001. In 2009 women earned 31 percent of all degrees in these fields.



But if we eliminate two-year associate degrees from the calculations, we see that women do even better. (The number of women earning associate's degrees in STEM fields dropped by more than 25 percent from 2001 to 2009.) From 2001 to 2009, the number of bachelor's degrees earned by women in STEM fields was up 17 percent. For master's degrees, women showed an increase of 30.4 percent. The most dramatic increase was in doctorates. From 2001 to 2009 the number of doctorates earned by women in STEM fields increased from 4,146 to 7,417. This is an increase of 78.9 percent. To see the article, please [click here](#).



LESS THAN ONE FIFTH OF THE NEW MEMBERS OF THE AMERICAN ACADEMY OF ARTS AND SCIENCES ARE WOMEN

WIA REPORT, APRIL 25, 2011

Women have made tremendous progress in American higher education. Yet in many areas a wide gender gap remains. Election to the nation's most prestigious honorary societies is just one example.

Founded in 1780, the American Academy of Arts and Sciences (AAAS) is one of the nation's most prestigious honorary societies. It has a membership of more than 4,000 scholars from a wide variety of academic disciplines including all the natural sciences. Its membership includes at least 200 Nobel Prize winners and more than 50 winners of a Pulitzer Prize. This year, 212 new fellows were elected to the American Academy of Arts and Sciences.

For the remainder of the article please, [click here](#).

WOMEN PASS MEN IN ADVANCED DEGREES FOR FIRST TIME, GAINING NEW ACCESS TO JOBS AWAY FROM HOME

The Washington Post, April 27, 2011

WASHINGTON — For the first time, American women have passed men in gaining advanced college degrees as well as bachelor's degrees, part of a trend that is helping redefine who goes off to work and who stays home with the kids.

Census figures released Tuesday highlight the latest education milestone for women, who began to exceed men in college enrollment in the early 1980s. The findings come amid record shares of women in the workplace and a steady decline in stay-at-home mothers.

The educational gains for women are giving them greater access to a wider range of jobs, contributing to a shift of traditional gender roles at home and work. Based on one demographer's estimate, the number of stay-at-home dads who are the primary caregivers for their children reached nearly 2 million last year, or one in 15 fathers. The official census tally was 154,000, based on a narrower definition that excludes those working part-time or looking for jobs.



For the remainder of the article, [click here](#).

PEELING OFF THE LAYERS

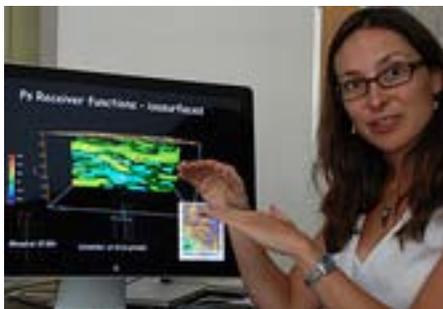
BY PAMELA J. JOHNSON

APRIL 27, 2011

USC NEWS

For the first time, an active delamination of continental lithosphere has been found beneath the Colorado Plateau. Meghan Miller, assistant professor of earth sciences at the USC Dornsife College of Letters, Arts and Sciences, and her team's discovery is featured today in Nature.

“The bottom of lithosphere is actually peeling off,” said Miller, referring to the outermost layer of Earth, comprising the crust and a portion of the upper mantle.



The detachment was detected at between 60 to 200 kilometers - or 37.2 to 124.2 miles - beneath the Earth's surface in a central-western portion of the Colorado Plateau, a tectonic province covering parts of Colorado, New Mexico, Arizona and Utah. In the past, researchers have imaged delamination structures that had stopped peeling off millions of years ago.

For the the full article, please [click here](#).

2011 VITERBI JUNIOR RESEARCH AWARD: ANDREA ARMANI, MORK FAMILY DEPARTMENT OF CHEMICAL ENGINEERING AND MATERIALS SCIENCE

2011 Viterbi Junior Research Award: Andrea Armani, Mork Family Department of Chemical Engineering and Materials Science: Her research involves developing new, high-performance optical sensors for the study of biological and chemical systems, with broad applications ranging from health to defense. The process of sensor development brings about fundamentally new insights and understanding of the physics underlying the many systems of interest. This research is pioneering, broadly interdisciplinary, leading the field, and highly sought after. It has been widely published and recognized with multiple national awards including the NIH Director's New Innovator Award, the PECASE award, the TR35, the ONR Young Investigator Award, and the CDMRP Award. And she has already received a handshake and a hug from President Obama. (Maja Matarić)



For a full description of the awards ceremony, please [click here](#).

2011 USE-INSPIRED RESEARCH: ELLIS MENG, DEPARTMENT OF BIOMEDICAL ENGINEERING

Her prolific and prestigious research into biometrically applied biomimetic micro-electronic systems (bioMEMs) is being used to revolutionize the treatment of previously incurable ocular diseases that affect millions of people worldwide. The research also covers novel implantable drug delivery components and systems for activation of neural networks through real-time neuroimaging and linking behavior to drug addiction, as well as their therapeutic use in cancer radiation dose reduction and epileptic seizure prevention. This awardee has also made significant impact on the BMES ERC by leading research into seamless engineered interfaces between living tissue and microelectronics to support implantation of prosthetics. This research has already been recognized by the Coulter Early Career Award, the TR35, and has been selected for the President's Innovation and Technology Advisory Committee (PITAC). The awardee has led the initiation of two start up companies to bring these innovations to patient care as soon as possible. (Maja Matarić)



For a full description of the awards ceremony, please [click here](#).

The UCLA Center for the Study of Women
is pleased to announce

Women and STEM

How stereotypes undermine the interest and success of women in science, technology, engineering, and math

Spring Speaker Series organized by Professor Jenessa Shapiro, Department of Psychology at UCLA

This speaker series will bring to UCLA some of the top researchers in the field of stereotype threat. These speakers will present research demonstrating the emergence of stereotype threat in STEM domains, the mechanism that account for this phenomenon, and the ways in which we can intervene to prevent the deleterious influence of stereotype threat.

Featuring

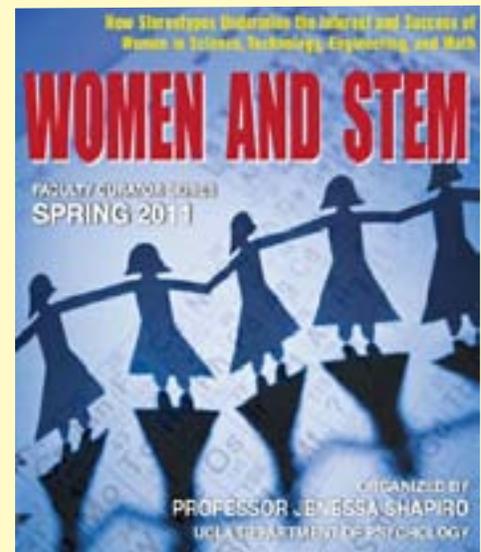
Nilanjana Dasgupta
Professor of Psychology, University of Massachusetts, Amherst

STEMing the Tide: Female Experts and Peers Enhance Young Women's Interest in Science, Technology, Engineering, and Mathematics (STEM)

Thursday, May 12, Franz Hall Room 3534, from 4 to 6 pm

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Joshua Aronson
Professor of Applied Psychology, New York University
Stereotypes and the Nurture of Intelligent Thought and Behavior
Thursday, May 19, Franz Hall Room 3534, from 4 to 6 pm



Cosponsored by UCLA Department of Psychology, the Psychology Diversity Science Initiative, and the UCLA Interdisciplinary Relationship Science Program

For more info, [click here](#).

Contact: Emily Walker, ewalker@women.ucla.edu

Earth Sciences, Biological Sciences (Division of Marine Environmental Biology),
WiSE and the Center for Deep Energy Biosphere Investigations (C-DEBI) are hosting:

Dr. Brandy Toner,

a 2011 Ridge 2K Distinguished Lecturer

May 18 and 19, 2011

Dr. Toner will give two lectures:

Science Community Lecture: May 18 at Noon, ZHS200

“Integrated nested-scale biogeochemistry of hydrothermal plumes at a back-arc spreading center”.

Abstracts: Hydrothermal venting associated with mid-ocean ridge volcanism is globally widespread. Hydrothermal plumes created by this venting represent a dynamic biogeochemical interface between the sub-seafloor and deep ocean that is poorly understood in terms of process-level mechanisms and global ocean implications. Advancing understanding of the role of plume processes in global ocean biogeochemistry requires highly integrated, multi-disciplinary research that accesses physical, chemical, and biological properties within individual buoyant plumes. In addition, comparisons among plumes in a given vent field, and among vent fields representing a continuum of geophysical and geochemical conditions are essential. To address this research need, a large nested-scale research program focused on hydrothermal vent fields along the Eastern Lau Spreading Center has begun. During June-July 2009, rising plumes at Kilo Moana, ABE, Tahi Moana, Mariner, and Tui Malila vent fields were sampled at discrete elevations for geochemistry, metal speciation, mineralogy, and microbial ecology. The trajectory of oxidation-reduction sensitive elements as they move through a buoyant plume at ABE vent field will be highlighted. In terms of global ocean elemental fluxes, hydrothermal vent plumes represent a critical oceanic interface where biogeochemical processes leading to particle formation, surface reactivity, and dispersal are poorly constrained.

General Public Lecture: May 19 at 11am, HNB auditorium (HNB100)

“Can iron from deep-sea hot springs fertilize the oceans?”

The global mid-ocean ridge system is a 60,000-km volcanic chain that crosses the floor of all major ocean basins on Earth. Dispersed along this baseball seam are deep-sea hydrothermal vents that release hot fluids rich in iron and other reduced chemicals. Every year, the iron released to the ocean by hydrothermal venting at the seafloor is approximately equal to all of the iron flushed from the continents by rivers - this is a lot of iron. With all of this iron entering the oceans, how do we explain the large regions of the global ocean where iron availability is so low that it limits life? The key to understanding iron mobility and bioavailability is the specific chemical form of the iron. In this lecture, I will discuss current scientific understanding of the chemistry and biology of hydrothermally derived iron. I will also highlight recent research discoveries that demonstrate the limits of current understanding and examine the rich complexities of iron biogeochemistry in the deep ocean.