



January 27, 2012
Issue 3: 33

Women in Science and Engineering

www.usc.edu/programs/

UPCOMING WISE EVENTS

IN THIS ISSUE

WISE FACULTY NETWORKING MEETING

Meetings held the last Thursday of the month at 12pm in HNB 107.

This month's meeting will be on
February 23, 2012.

Research Presentation by:

Dr. Anitha Kurup, Associate Professor
National Institute of Advanced Studies,
Indian Institute of Science Campus, Bangalore India

"TRAINED SCIENTIFIC WOMEN POWER: HOW MUCH ARE
WE LOSING AND WHY?"



Followed by a discussion of her current
research: "A Comparative Study of Women
Scientists and Engineers: Experiences in
India and the US."

Bring your own lunch. Coffee, tea, and
cookies provided.

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JOINT WISE ADVISORY BOARD,
DORNSIFE, AND VITERBI
COMMITTEE MEETING

February 7, 2011
University Club, Room B

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



WISEPROG@USC.EDU

UPCOMING WISE DEADLINES

GRADUATE TOP-OFF FELLOWSHIPS

Deadlines: USC Dornsife College: March 3

Viterbi School of Engineering: February 22

Award Amount: Top-off awards of \$5,000/year for 2 years

Graduate Top-Off Fellowship funds are available to facilitate the recruitment of outstanding doctoral students to USC. The funds provide four incoming Ph.D. students in USC Dornsife and four incoming Ph.D. students in the Viterbi School of Engineering with a WiSE Fellowship to supplement their financial support packages. Each WiSE Fellowship will carry a stipend of \$5,000 and may be renewed for a second year pending satisfactory progress verified by the faculty advisor.

Each department may nominate two candidates. Candidates must be ranked and briefly summarized in a cover letter from the Department Chair. Nominations and supporting documentation should be submitted electronically.

http://www.usc.edu/programs/wise/programs/graduate_topoff/

MERIT FELLOWSHIP FOR CURRENT DOCTORAL STUDENTS

Deadlines: March 5

Award Amount: \$5,000

The Merit Fellowship for Current Doctoral Students is offered to current Ph.D. students at USC who demonstrate exceptional work in their field. Two candidates will be chosen from the USC Dana and David Dornsife College of Letters, Arts, and Sciences and two from the Viterbi School of Engineering. Candidates are nominated by the faculty. Each one-year WiSE Fellowship carries a stipend of \$5,000. To be eligible for the Merit Fellowships students must plan to be enrolled full-time for both the upcoming Fall and Spring semesters, be in at least their fourth year of study or passed their qualifying exams, and be funded by a 50%-time research assistantship, teaching assistantship, or fellowship during that period. Expected date of graduation should not be earlier than the Spring semester.

Department chairs submit application materials electronically in digital form to the WiSE program office: wiseprog@usc.edu.

http://www.usc.edu/programs/wise/programs/merit_fellowship/

MERIT AWARD FOR EXCELLENCE IN POSTDOCTORAL RESEARCH

Deadlines: March 5

Award Amount: \$3,000

The WiSE Merit Awards for Excellence in Postdoctoral Research are offered to current Postdoctoral researchers at USC who demonstrate exceptional work in their field. Candidates must be working under the mentorship of a faculty member in a WiSE-eligible department of the USC Dana and David Dornsife College or Letters, Arts, and Sciences or in the Viterbi School of Engineering. A maximum of four awards will be given each year. Candidates are nominated by the faculty and each department may nominate up to two candidates. Each WiSE Award will be for \$3,000.

Department chairs submit application materials electronically in digital form to the WiSE program office: wiseprog@usc.edu.

http://www.usc.edu/programs/wise/programs/postdoctoral_excellence_award/

For Immediate Release

Contact Information:

Janet Bandows Koster
Executive Director & CEO
koster@awis.org

AWIS and the Elsevier Foundation Partner to Rethink Future of STEM Workforce

Alexandria, VA – *January 20, 2012* - The Association for Women in Science (AWIS) today announced a new collaboration with the Elsevier Foundation: "Rethinking the Future of the STEM Workforce: An Action Plan for Higher Education."

While women comprise roughly half the US work force, they hold just 24% of science, technology, engineering and mathematical (STEM) jobs according to the Department of Commerce. Whether the root causes lie in a lack of female role models, gender stereotyping, or a lack of family friendly flexibility, the resulting erosion along the academic pipeline means that the US is halving its potential for innovation.

"The attrition of top talent from the scientific workforce severely hampers countries' ability to lead in innovation and stay globally competitive in these disciplines," said Janet Bandows Koster, AWIS Executive Director & CEO. "We know that professional women with the skills needed for successful careers in these fields are available, yet often choose to leave the workforce because of outmoded institutional structures. The Elsevier Foundation New Scholars program has been integral to exploring innovative approaches for a more family friendly academia. We look forward to working with the program to spearhead a fresh, forward-looking dialogue with global thought leaders."

The Elsevier Foundation New Scholars Program supports projects to help early- to mid-career women scientists balance family responsibilities with demanding academic careers. Recent grants have promoted institutional research, advocacy, and policy development to retain, recruit and develop women in science and have enabled researchers to attend conferences critical to their careers by assisting with childcare, mentorship and networking.

"Stemming the attrition of talented women from the academic pipeline cannot be achieved through advocacy, campaigning or policymaking alone," added David Ruth, Executive Director of the Elsevier Foundation. "It requires both institutional change and investment and the development of knowledge and skills to help the individuals achieve more work-life satisfaction."

About AWIS

The Association for Women in Science (AWIS) is the largest multi-discipline organization for women in science, technology, engineering, and mathematics (STEM) dedicated to achieving equity and full participation of women in all disciplines and across all employment sectors. AWIS reaches more than 15,000 professionals in STEM with members and chapters nationwide. Membership is open to any individual who supports the vision and mission of AWIS. www.awis.org

About The Elsevier Foundation

The Elsevier Foundation is a corporate charity funded by Elsevier, a global provider of scientific, technical and medical information products and services. The Elsevier Foundation provides grants to knowledge centered institutions around the world, with a focus on developing world libraries, nurse faculty and scholars in the early stages of their careers. Since its inception, the Foundation has awarded more than 60 grants worth millions of dollars to non-profit organizations working in these fields. Through gift-matching, the Foundation also supports the efforts of Elsevier employees to play a positive role in their local and global communities. www.elsevierfoundation.org

GRADUATE STUDENTS: OPPORTUNITIES OF INTEREST

THE 2012 CRA-W GRAD COHORT WORKSHOP

April 13-14, 2012 in Bellevue, WA

Application deadline: February 1, 2012

<http://www.cra-w.org/gradcohort>

CRA-W is announcing the formation of the 2012 Grad Cohort for Women. Cohort activities will kick off with a workshop April 13-14, 2012 in Bellevue, WA, this year generously funded by Microsoft, along with significant support from Google as well as contributions from Yahoo!, IBM, and other contributors. This workshop is the cornerstone of CRA-W's efforts to increase the ranks of senior women in computing by building and mentoring nationwide communities of women during their graduate studies.

At the Grad Cohort Workshop, we will welcome new women graduate students in their first year of graduate school into the community of computing researchers and professionals by providing them with a broad range of strategies and role models. Strategies and mentoring for students in their second and third years of graduate school will also be provided.

All of the students will meet for two days with 10 to 15 senior computing researchers and professionals who will share pertinent information on graduate school survival skills, as well as more personal information and insights about their experiences. The rewards of a research career will be emphasized. The workshop will include a mix of formal presentations and informal discussions and social events. Through this workshop, students will be able to build mentoring relationships and develop peer networks that will form the basis for ongoing activities during their graduate careers.

Eligibility:

*Women students in their first, second or third year of graduate school in computer science and computer engineering or a closely related field at a US or Canadian institution.

UNDERGRADUATE STUDENTS: OPPORTUNITIES OF INTEREST

FLUID POWER SCHOLARS PROGRAM: A PAID INDUSTRY SUMMER INTERNSHIP!

Application deadline: February 3, 2012

<http://www.ccefp.org/get-involved/students/fluid-power-scholars-program>

The Fluid Power Scholars Program is a collaborative effort between the Center for Compact and Efficient Fluid Power (CCEFP) and companies in the fluid power industry who are corporate members of the CCEFP. This highly selective summer program identifies and connects the very best undergraduate engineering students across the United States to the fluid power industry with the purpose of training the next-generation of fluid power leaders.

This is a highly competitive program, open to undergraduates who have successfully completed at least two years in an accredited engineering program in the United States. The Scholars program begins with an intensive three and 1/2 day instructional program in fluid power, taught at the Fluid Power Institute at the Milwaukee School of Engineering (MSOE), and follows with internships in the fluid power industry. The Fluid Power "Bootcamp" at MSOE will be held May 21-24, 2012. Students should expect to spend 10-11 weeks as a intern in their host company. Up to ten undergraduate students will be selected as Fluid Power Scholars by a committee of faculty and industry representatives. In addition to their paid internships, scholars will receive stipends for travel and living expenses associated with their work at MSOE.

SUMMER 2012 RESEARCH EXPERIENCES
FOR UNDERGRADUATES (REU) IN SCIENCE & ENGINEERING!

Application deadline: February 15, 2012

<http://www.ccefp.org/get-involved/students/research-experiences-undergraduates-reu>

Welcome to the Center for Compact and Efficient Fluid Power (CCEFP) Research Experiences for Undergraduates (REU) Program. This program allows undergraduates to gain hands-on experience in conducting original research and apply it to cutting edge applications in fluid power and related disciplines.

The program and center are funded by the National Science Foundation. Students come from all around the country to work at the seven universities that are part of the Center. Students have a diverse range of majors, experiences and interests. We hope that you will consider joining us this summer.

Students work in a university research lab on a project related to fluid power along with a faculty advisor with expertise in the field. Projects may involve background reading of technical literature and reports, computer-aided design, mathematical modeling, fabrication designs, experimental testing and group discussions and project team meetings. Every student has a project of their own with specific responsibilities and deliverables. At the end of the summer, every student creates a scientific poster and a project report. In addition, there is a program of professional development and social activities with other REU students.

REU positions are available at Georgia Tech in Atlanta, University of Illinois in Urbana-Champaign, University of Minnesota in Minneapolis, Milwaukee School of Engineering in Milwaukee, North Carolina A&T State University in Greensboro, Purdue University in West Lafayette, IN and Vanderbilt University in Nashville, TN.

VANDERBILT UNIVERSITY NSF- RESEARCH EXPERIENCE FOR UNDERGRADUATES (REU) PROGRAM
IN NANOSCIENCE AND NANOENGINEERING

Application deadline: February 15, 2012.

The Vanderbilt Institute for Nanoscale Science and Engineering (VINSE) focuses on interdisciplinary nanoscale research at the interface of biology, chemistry, physics, and engineering. More than 40 faculty participants from the School of Engineering, College of Arts and Science, and the School of Medicine inspire students by creating an atmosphere of excitement and creativity. Each REU participant will work directly with VINSE faculty members and their research groups and be part of the larger VINSE community.

PROGRAM INCLUDES

- Hands-on research in state-of-the-art facilities
- Seminars, workshops, and field trips
- Group social activities and banquet
- Optional outreach opportunities to high school students

ELIGIBILITY

- Undergraduate students majoring in science or engineering
- U.S. Citizen or permanent resident
- Minorities and women strongly encouraged to apply

AWARD

- \$5,000 stipend
- \$400 travel allowance
- Room and board

Selections will be based on a combination of research interests, academic qualifications, and faculty recommendations.

For more information or to apply go to: www.vanderbilt.edu/vinse/reu

SUMMER 2012 RESEARCH INTERNSHIPS AT THE NASA LANGLEY RESEARCH CENTER

Application deadline: February 1, 2012.

<http://www.nianet.org/larss/>

**Female students and under-represented minorities, first-generation college students, and students from economically-disadvantaged backgrounds to apply.

Langley Aerospace Research Student Scholars (LARSS) Program

LARSS is a paid, year round (3 sessions) research internship program for undergraduate and graduate students pursuing degrees in science, technology, engineering, and mathematics (STEM). It is also a unique and highly competitive research internship program. For the 2011 summer session, we received 759 applications; about 200 applicants from 92 colleges and universities in 37 states were accepted. LARSS is also a nationally ranked internship program. In 2011, the staff of Vault-Career Intelligence reviewed over 800 national internships and named LARSS one of its top 10 best internship programs. For 25 years, the LARSS program has helped to preserve U.S. leadership in engineering and science by providing exceptional students the opportunity to work with Langley researchers on some of the nation's most important, difficult, and challenging problems that require multi-disciplinary and collaborative solutions.

The 10-week summer session begins on Monday, June 4, and ends Friday, August 10, 2012. Students participate in a variety of tours, lectures, and social events designed to achieve the "outcomes" established for the LARSS program. The summer session culminates with students presenting the results of their research in a variety of forums to various audiences.

Please visit the recently updated LARSS website. For a better understanding of the program's research focus, please "click on" project abstracts and student testimonials. Do not hesitate to contact the LARSS program staff (Ms. Debbie Murray and Ms. Sarah Pauls) if you have questions or need additional information. 757.864.2491 and by email at thomas.e.pinelli@nasa.gov.

FACULTY IN THE NEWS

LIFE DISCOVERED ON DEAD SEA VENTS

By Robert Perkins

January 25, 2012

USC News



Scientists at USC have uncovered evidence that even when hydrothermal sea vents go dormant and their blistering warmth turns to frigid cold, life goes on.

Or rather, it is replaced.

A team led by USC microbiologist Katrina Edwards found that the microbes that thrive on hot fluid methane and sulfur spewed by active hydrothermal vents are supplanted, once the vents go cold, by microbes that feed on the solid iron and sulfur that make up the vents themselves.

The findings - based on samples collected for Edwards by the U.S. Navy deep sea submersible Alvin (famed for its exploration of the Titanic in 1986) - provide a rare example of ecological succession in microbes.

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

OurAmazingPlanet featured research by KATRINA EDWARDS and Jason Sylvan of the USC Dornsife College, finding that marine life persists even after the hydrothermal sea vents it is based around go dormant. Edwards and her team found that when the vents die, the microbes that fed on a vent's gases are supplanted by ones that feed on the iron and sulfur in the vents themselves. "Seeing the shift in the microbial population — seeing who actually came and left was fairly illuminating for me," Edwards said. Sylvan added that cold, expired vents deserve study.

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

IN THE NEWS

NORTHWESTERN, UCHICAGO JOIN FOR GENDER DIVERSITY

By Patrick Svitek
January 23, 2012
The Daily Northwestern

In "Women Don't Ask," authors Linda Babcock and Sara Laschever reveal a not-so-shocking truth: men and women hear the word "no" differently.

According to the writers' research, for men, "no" means, "No, not now." For women, "no" means, "No, not ever."

It's gender differences like these Prof. Holly Falk-Krzesinski is trying to bridge in a new joint initiative between Northwestern and the University of Chicago.

Last week, the two schools launched the Chicago Collaboration for Women in Science, Technology, Engineering and Mathematics, a three-year push for greater presence and leadership among female faculty in those academic areas, frequently referred to as STEM fields.

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

WHERE CREATIVITY MEETS TECHNOLOGY

By D.C. Denison
January 22, 2012
The Boston Globe

Jennifer Chayes is the Managing Director of Microsoft Research New England in Cambridge, which she cofounded in July 2008. On Wednesday, Chayes will participate in a panel discussion on the importance of STEM - science, technology, engineering, and math - to building a talent pipeline in Massachusetts. The event is part of The Boston Globe's "Building a Better Commonwealth" series of discussions aimed at making Massachusetts a more desirable place to live and work. Chayes spoke to Globe reporter D.C. Denison.

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

WRONGLY WIRED? WHY THERE IS A LACK OF WOMEN IN COMPUTER SCIENCE

By Fran Hall

January 18, 2012

The Huffington Post UK

A pattern is emerging in my blog posts. What really gets me fired up are ill thought through, blind assertions that men and women are so fundamentally (read biologically) different. There has been recent talk about the UK boosting the computer literacy of the next generation. During such discussions when women are mentioned in technology and computer science this divisive kind of language is dominant. How often have you heard someone say that women are better at multi-tasking? Or that men are 'systemisers' and women 'empathisers'? Or even that women are irrational and men rational. Of course the skills set required to succeed within the remit of computer science and technology are the so called 'masculine' ones. What I want to discuss is what solid evidence (or lack of) supports this gender discrimination and therefore why is it that women are underrepresented in this field (you'll no doubt guess the former is the cause of the latter).

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

WOMEN IN TECH: 2012 GRACE HOPPER CELEBRATION OF WOMEN IN COMPUTING OPENS CALL FOR PARTICIPATION

January 17, 2012

Daily Disruption

In the United States, the number of women represented in undergraduate computer science education and the white-collar information technology workforce peaked in the mid-1980s. Particularly in computer science, there has been a dramatic drop in women earning bachelor's degrees. Recent figures from the Computing Research Association Taulbee Survey indicate that the number recently fell below 12%, from nearly 40% in the mid 80s. A similar situation is observed in Canada, where the decline of women in computer science is apparent.

Research has shown that some aspects about computing may discourage women. One of the biggest turn-offs is the "geek factor". High school girls are repelled by the image of Computer Scientists sit in a cubicle writing code for the duration of their workday. The "geek factor" affects both male and female high school students, but it seems to have more of a negative effect on the female students. The Grace Hopper Celebration of Women in Computing is looking to change that perception.

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

ARE MENTORSHIPS THE KEY TO MORE WOMEN IN TECHNOLOGY?

By Jenn Prentice

January 17, 2012

The Style Geek

As one who is easily star-struck, I often wonder what it might be like to sit down with some of my favorite female tech celebs and pick their brain about how they got where they are—and what they do to maintain sanity (and meaningful relationships) in a fast-paced, male-dominated work environment. At the Consumer Electronics Show (CES) last week, I got about as close as I'll probably ever get to chatting it up with Google VP Marissa Mayer, Hunch co-founder Caterina Fake, Cisco CTO Padmasree Warrior and CNET editor-in-chief Lindsey Turrentine as I had a front row seat for CNET's Women in Tech panel.

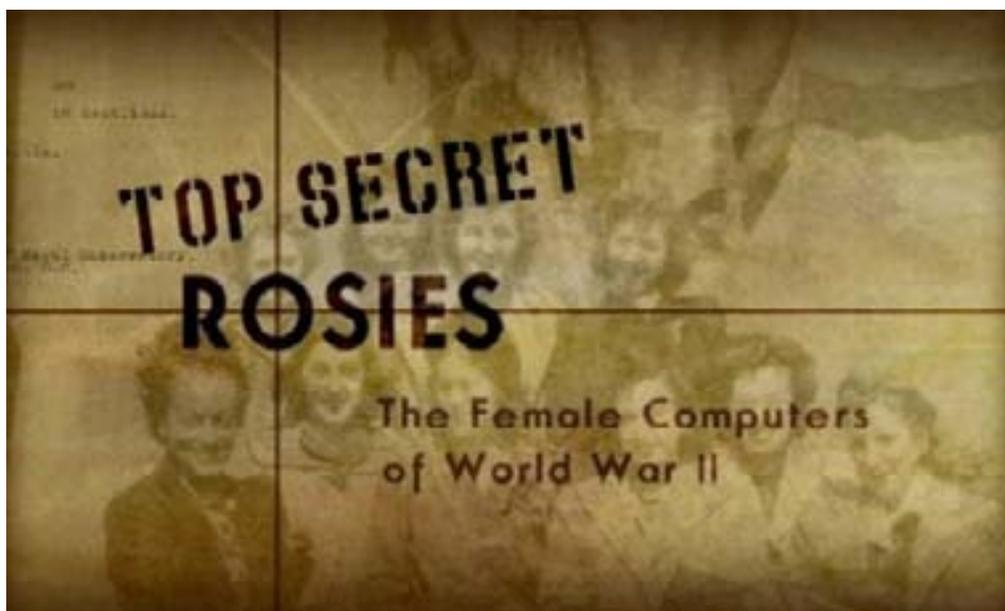
For the complete article, please [click here](#).

EVENTS THAT MAY BE OF INTEREST

Mindshare LA, which is a forum in Los Angeles that puts on events aiming to foster the exchange of ideas, build community, and promote cross pollination, is screening a documentary about female engineers called “Top Secret Rosies: The Female Computers of World War II,” which discusses the journey and struggles of the young female computers that helped win a war and usher in the modern computer age.

“TOP SECRET ROSIES: THE FEMALE COMPUTERS OF WORLD WAR II”

Sunday January 29th, 6pm - 9pm



Follow up discussion and Q&A after the screening.

Tickets, trailer, and screening details:

<http://mindscreen.eventbrite.com/>

