



**September 2007**

Welcome to another academic year! The University of Rochester Woman in Science and Engineering Program (UR WISE) has big plans for this year! We kicked things off during Orientation with a reception for incoming freshman on August 30. Thanks to all of the volunteers who helped hand out brochures and answer questions.

The UR WISE Program is a support program based out of the College. We are here to help prepare you for a successful career in one of the many disciplines of science and engineering through a variety of recruitment, retention, and outreach programs. There are many opportunities for you to network with peers, professionals, and faculty, who can all provide you with valuable advice and guidance as you pursue your SMET degree. We hope that you take a look and see how UR WISE can enhance your experience at Rochester!

Read on to see what is planned for UR WISE 2007-2008!

### **New WISE Brochure!**

For those of you who were here during Freshman Orientation, you got to see the brand-new WISE brochure. Plans are underway to have more copies made and be widely distributed on campus.

### **New WISE Website on the Way!**

Thanks to juniors Gloria See and Sara Plumridge, a new WISE website should be up and running in the next month or so.

### **New WISE Logo!**

Sara Plumridge is also to be thanked for creating the new WISE logo at the top of this newsletter.

### **New Mentoring Programs**

Beginning Fall 2007, we will offer two mentoring programs:

- **Peer-to-Peer Mentoring Teams** designed for first year WISE students in computer science, electrical and computer engineering, mechanical engineering, physics and optics who are placed on a team with four to six freshmen and matched with two upper-level WISE students who serve as peer coaches. These coaches assist their freshmen throughout the fall and spring semesters to make them aware of all of the opportunities that exist in SMET at Rochester.

- **MentorNet**, for undergraduate and graduate WISE students, provides positive, one-on-one, email-based mentoring relationships with mentors from industry, government, and higher education. Watch for more information about a registration event in early-October.

Mentoring occurs when a person who has been successful in an environment or context shares her knowledge with you to help you negotiate a similar experience. The purpose of the UR WISE mentoring programs are to:

- Provide you with positive role models;
- Facilitate personal, career, and professional development;
- Encourage you to continue your study in SMET;
- Ease your transition, for example, from high school to college or from college to the professional world.

Through relationships with mentors, gain the confidence and perspective necessary to be productive members of a global and multicultural workforce.

## **Upcoming WISE Events**

### **Summer Scientific Research Overview**

#### **Friday, September 24, 8:45 am, Lounge area outside of Starbucks**

"What did you do this summer?" You're probably sick of hearing this question by now, but many WISE students were involved in fascinating research projects, and several of them have offered to give an informal overview of their recent research to other WISE student. Since many women majoring in science and engineering have difficulty picturing themselves in the lab environment, we hope that by sharing listening to their experiences, you will be inspired to consider doing research as well.

Bring your breakfast and will gather at 8:45 am for the first of three 6-7 minute presentations that will begin at 9:00 am. This program will end in time for students to attend 10:00 classes.

If you are interested in participating as a presenter, please email Lisa Norwood (lnrw@seas.rochester.edu) an abstract or a short description of your research. If enough upperclass students volunteer to present, we will do another session next month.

### **National Women's Hall of Fame Induction Ceremony**

#### **Sunday October 7, 12:00 pm, Chiropractic College, Seneca Falls, NY**

If you will be staying in Rochester over Fall Break, please join URWISE as we travel to Seneca Falls to celebrate two women of science who will be inducted to the National Women's Hall of Fame this year:

- University of Rochester's own Dr. Judith L. Pipher, is a faculty member at the University of Rochester, whose research in the field of Infrared Astronomy began in

graduate school with work on some of the first rocket-borne telescopes.

- Dr. Eleanor K. Baum who is currently serving as the Dean of Engineering at Cooper Union and the Executive Director of the Cooper Union Research Foundation. Dr. Baum is the first female engineer to be named dean of a college of engineering in the United States.

Information on these and other nominees can be found at [www.greatwomen.org/news.php?action=view&id=56](http://www.greatwomen.org/news.php?action=view&id=56). Please contact Lisa Norwood by Monday, October 1 to reserve a spot on this road trip.

### **Save these Dates:**

- **Saturday, September 29 (2-6 pm, Wilson Commons Hirst Lounge)** – FIRST LEGO League Field Kit build session; Stop by to play with Legos or contact Fabian Taylor at [fabian.taylor@simon.rochester.edu](mailto:fabian.taylor@simon.rochester.edu) for more information.
- **Sunday October 7 (12:00 pm)** - National Women's Hall of Fame Induction Ceremony, Chiropractic College, Seneca Falls, NY
- **Monday, October 8 (evening)**- MentorNet kick-off (tentative)
- **Friday, October 12 (5:00 pm)** – Summer Scientific Research Overview #2
- **Tuesday, October 16 (evening)** – Xerox Information Session
- **Friday, October 26-27 (5:00 pm)** – Engineering at Rochester, overnight hosts needed
- **Thursday, November 1 (6:00 pm)** – Power Dead Even Rule And Other Gender Differences in the Workplace, with a discussion led by IBM's Mary Ellen Colema
- **Saturday, November 3 (10 am-1 pm)** – SWE's Computer Fun Badge Workshop for Junior Girl Scouts
- **Sunday, December 9 (8 am-5 pm)** – FIRST LEGO League Championship Tournament; volunteers needed.
- **Friday, December 14** – Study Break
- **Saturday, February 2 (10 am-1 pm)** - SWE's Making it Matter badge workshop for Junior Girl Scouts
- **Friday, March 28 (4:00 pm)** - Club Rochester
- **TBD (5:00 pm)** – Networking Dinner

### **Internship Opportunities:**

#### **Undergraduate Student Research Program NASA–USRP**

[www.education.nasa.gov/usrp](http://www.education.nasa.gov/usrp)

NASA-USRP offers undergraduate students across the United States internships at NASA centers under the supervision of technical mentors. This prestigious program seeks rising sophomore, junior and senior students in the disciplines of engineering, math, computer science and life/physical sciences. Students may apply for 10-week summer session and 15-week spring

or fall sessions. NASA-USRP provides students with hands-on, real-life research experiences that challenge, inspire and bring practical application to complement the students' academic education. Stipends are \$6,000 for the summer session and \$9,000 for fall and spring, plus a round-trip travel allowance. Application deadlines are:

Spring	October 22, 2007
Summer	January 31, 2008
Fall	February 29, 2008

### **WISE-Related articles:**

#### **University of Rochester Chemist Honored for Encouraging Women in Science**

<http://www.rochester.edu/news/show.php?id=2974>

Esther M. Conwell, research professor of chemistry and physics at the University of Rochester, has received the 2008 American Chemical Society Award for Encouraging Women into Careers in the Chemical Sciences.

The society recognized Conwell for her "consummate career accomplishments in an era when women in science faced extraordinary hurdles and challenges, and her unwavering dedication to and advocacy on behalf of women in chemistry and chemical engineering."

"Esther is one of the preeminent female scientists of her generation," says Robert K. Boeckman, Jr., chair of the Department of Chemistry at Rochester. "She has served as a mentor to countless female scientists and engineers over the years, and has worked tirelessly for the cause of equality for women in science and engineering. After a superlative career that now spans nearly half a century, she is still actively serving as an ideal and role model to young female scientists and engineers."

Conwell has worked very successfully with undergraduates at Rochester, serving as their research mentor under the auspices of a National Science Foundation Research Experiences for Undergraduates program. These efforts were acknowledged by her receipt of a Dreyfus Senior Faculty Mentor Award in 2004.

Conwell's research, exploring how electric fields affect the movement of electrons in semiconductors, earned her an uncommon dual membership in the National Academy of Sciences and the National Academy of Engineering, two of the highest honors a scientist or engineer can receive. Conwell is the only member of the University to hold this distinction.

She was the winner of the Thomas A. Edison medal of the Institute of Electrical and Electronics Engineers (IEEE) in 1997—the first woman to receive a major IEEE award. Among many other awards that she has received during her distinguished career are the Achievement Award of the Society of Women Engineers and an honorary doctorate from Brooklyn College. She has authored or co-authored several books, more than 270 technical publications, and several patents. In 2002, Discover Magazine named Conwell one of the "50 Most Important Women of Science" and most recently, the University honored her with a Susan B. Anthony Lifetime Achievement Award for her efforts in advocating and promoting women in science.

"Esther Conwell is a truly legendary figure in science," said William Jones, previous chair of the Department of Chemistry. "Her lifelong fascination with materials that shape the future has inspired our chemists and other scientists worldwide."

Nick Bigelow, chair of the Department of Physics, adds, "Esther Conwell's achievements in science are truly extraordinary when you consider that she contributed major scientific breakthroughs during an era when women in science were virtually unknown. She made major contributions as far back as World War II, and she's still working tirelessly in both her scientific research and in promoting the cause of women in science and engineering."

Conwell earned her master's degree in physics at Rochester and her doctorate at the University of Chicago. From 1946 to 1951, she taught at Brooklyn College, her undergraduate alma mater. She also spent a year as a visiting professor at the University of Paris in 1962, and a semester at MIT in 1972 as the Abby Rockefeller Mauze Professor.

This award consists of \$5,000 and a grant of \$10,000 to strengthen the University of Rochester's activities in encouraging women into the chemical sciences.

## **With Labor Crunch in IT on the Horizon, Why Are Careers Failing to Lure Women?**

**By Ben Worthen, Wall Street Journal, August 21, 2007; Page B5**

The percentage of women working in information-technology departments, which wasn't high to begin with, is dropping. With an IT-labor crunch looming, it's time to ask: What is it about it that may be repelling half the population?

While women hold 51% of all professional positions in the work force, they only made up 26% of IT pros in 2006, down from 29% in 2004, according to the National Center for Women and Information Technology. Only 13% of corporate officers at Fortune 500 tech companies are women. And Jenny Slade, communications director for the NCWIT, tells the Business Technology Blog that women who do pursue IT careers tend to leave them at a higher rate than men.

"Women feel discrimination in IT," Ms. Slade says. Indeed, a recent survey of nearly 2,000 female IT workers by Women in Technology International found that 48% say that their views aren't as acknowledged or welcomed as those of their male colleagues, and 44% say that they have fewer opportunities to participate in or lead large initiatives. Consequently, women feel they need to leave IT in order to advance, says Ms. Slade. Over time this becomes self-perpetuating: Women say that one of the main reasons they leave IT is that there aren't other women in the field, says Ms. Slade.

It isn't just a workplace-dynamics issue. Women are also losing interest in computer science long before they choose a profession. Women only received 21% of computer science undergraduate degrees in 2006, compared with 37% in 1985, says the NCWIT. The number of incoming freshmen women choosing to major in computer science dropped by 70% between 2000 and 2005.

And teenage girls seem less interested in computer science than they are in other scientific fields. Only 12% of the finalists in the 2005 Intel Science and Engineering Fair, a national competition for high-school students, were girls, compared with 54% of the finalists in biochemistry. Similarly, only 15% of the high-school students taking the advanced-placement computer science test in 2006 were girls, compared with 48% of the students who took the AP calculus test.

## **Contact Us**

Lisa Norwood

Assistant Dean for Undergraduate Studies, School of Engineering and Applied Sciences

Director, Women in Science and Engineering (WISE) Program

Coordinator, Kaufmann Entrepreneurial Year (KEY) Program

306 Lattimore Hall

Rochester, NY 14627-0076

(585) 275-4155

(585) 461-4735 (fax)

LNRW@seas.rochester.edu

Melanie Pelcher

WISE Student Assistant

Anderson 842

CPU 274690

Rochester, NY 14627

(585) 274-2371

mpelcher@mail.rochester.edu

*The University of Rochester's Women in Science and Engineering Program (UR WISE) was established in 1992 to support women's participation in scientific, engineering, and quantitative disciplines at all levels. The WISE Program seeks to ensure that women may fully explore science through study, research experience, and career-building opportunities. The mission of the WISE Program is to attract women to, and retain them in, science and science-related fields at the University of Rochester by:*

- Creating the conditions of equal access for the pursuit of science by women*
- Educating the University community about the issues of women and science*
- Pressing for this as a University priority and guiding the University community and leadership toward this objective*