



March 2008

Read on to see what is planned for UR WISE during Spring 2008! It appears that most of our activities will focus on outreach to pre-college students, so now's your chance to share your excitement about science, engineering and math with students who will follow in your footsteps.

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Upcoming WISE Events

Reminder: Mad Scientists Club Rochester

Friday, March 28, 4:00-6:00 pm, The Meliora

WISE, along with the Society of Undergraduate Biology Students (SUBS), the Undergraduate Chemistry Council (UCC), the Society of Physics Students (SPS) and possibly a few other science-related campus groups are sponsoring a Mad Scientist themed Club Rochester. In addition to saving the date, please let Melanie Pelcher (mpelcher@mail.rochester.edu) know if you are interested in serving on a planning committee to come up with fun science-related activities and food for this event.

Volunteers Needed: Special Opportunities Fair

Monday, April 7, 8:30– 9:30 a.m., Rush Rhees Library's Welles-Brown Room

UR WISE needs students to staff its information table during the Special Opportunities Fair of Spring Open Campus' Engineering Day. Prospective students who have been admitted to the University and who have expressed an interest in engineering will stop by the Fair to learn about engineering and science opportunities available at the University of Rochester. Current WISE students will pass out brochures and buttons, and answer students' questions about being a WISE student. Contact Melanie Pelcher at mpelcher@mail.rochester.edu by Tuesday, April 1 to volunteer.

Volunteers Needed: Project ADEPT Workshop

Wednesday, April 9, 12:30-4:00 pm, Washington Irving Elementary School, 2400 Chili Avenue
Transportation provided if necessary

UR WISE has been invited to sponsor an activity for BOCES' Project ADEPT (A Diversified Enrichment Program for the Talented) Workshop for gifted and talented elementary school students with a high interest in problem solving. Through demonstration and discussion, these students will gain an understanding for how engineers, mathematicians, and scientists must use creative problem solving in their work every day. Community members and WISE students will develop real life "engineering problems" for students to practice thinking and working like scientists, mathematicians and engineers. After analyzing a problem scenario, students will work in teams to brainstorm possible solutions, evaluate the options, and then design the best solution.

This workshop will run from 1:15-3:15 p.m.:

- 1:15-1:30 Introduction of engineers & scientists and the type of problem at each station
- 1:30-3:00 Students will rotate from group to group in 20-30 minute intervals
- 3:00-3:15 Review, Questions & Answers

We need volunteers to design and run UR WISE's activity. Please contact Lisa Norwood at lnrw@seas.rochester.edu or 275-4144 by Tuesday, April 1, to suggest ideas for activities or to volunteer to help at the event. If you are volunteering, please include a 2-4 sentence biography for the teachers. Thank you!

Volunteers Needed: Take Your Child to Work Day

Thursday, April 24, 9 a.m. to 12 p.m. (shorter shifts available), Goergen Hall Atrium

On April 24, 2008, children ages 9-15 will be on campus experiencing a variety of fun, educational activities during a University-wide program entitled, "Take Your Child to Work Day." WISE and the School of Engineering and Applied Sciences will sponsor a tour location called *Extreme Science and Engineering* for three groups of 15-20 children for 45 minutes each. We need volunteers to design and run a variety of hands on activities. Please contact Nikki Terry at nterry@ur.rochester.edu or 275-2354 to suggest ideas for activities or to volunteer to help at the event.

UR WISE Ice Cream Study Break

Thursday, May 1, 12:30-1:30 p.m., Welles-Brown Room

Stop by for a few minutes or more, grab a cup of ice cream and jazz it up with an assortment of toppings (strawberries, bananas, chocolate sauce, nuts, mini M&Ms, caramel sauce, mini marshmallows, peanut butter sauce, whipped cream, cherries... YUM!). Bring a friend and your sweet tooth!

Summer Work, Internship, and REU Opportunities:

Biomedical Summer Undergraduate Research Experience (B-SURE) at the University of Texas

<http://b-sure.uthscsa.edu>

Application Deadline: March 14

The B-SURE program will primarily focus on an in-depth research experience in a host lab where the candidate will work on their own defined research project in collaboration with post-docs and graduate students trained in various biomedical fields. B-SURE offers summer support to students currently in engineering, mathematics, computer, physical, or chemical science tracks to explore the wealth of opportunities provided in the biomedical sciences. Students in the program will receive a salary of at least \$3000 with additional allowance for travel and housing costs for non local students. Candidates may choose to work with any of the approximately thirty mentors in eight departments within the Health Science Center:

- Mechanisms of pathogenesis
- Cell biology of inter- and intra-cellular signaling mechanisms
- Biophysics of ion channels
- Structural analysis of macromolecules
- Biophysical analysis of molecular interactions
- Enzymatic mechanisms, kinetics and regulation
- Genomic structure and evolution

There will also be several enrichment experiences incorporated into the program, including:

- Short courses on current topics in biotechnology and biomedical applications;
- A seminar series geared toward career opportunities;
- Field trips to local research facilities that illustrate the multiple applications of biomedical research.

Oakland University Summer Institute in Bioengineering and Health Informatics

<http://sibhi.secs.oakland.edu/>

Application Deadline: March 17

Students interested in a multidisciplinary summer research experience are invited to apply to the Oakland University's Summer Institute in Bioengineering and Health Informatics (SIBHI). SIBHI is funded by the National Science Foundation (NSF) and the National Institute of Biomedical Imaging and Bioengineering (NIBIB) of the National Institutes of Health (NIH). The students selected to participate will be immersed in a research environment under the mentoring of an interdisciplinary group of faculty. This program is a full time comprehensive educational experience targeted to minorities and women in particular. It should be understood by the students that this position is not merely a summer job, but rather a unique educational experience where the students are treated as colleagues.

For more information contact Professors Fatma Mili (mili@oakland.edu) or Debatosh Debnath (debnath@oakland.edu)

Undergraduate Computer Research at Oakland University

www.cse.secs.oakland.edu/reu

Program Dates: May 14 – July 18, 2008

Application Deadline: March 17

The Computer Science and Engineering Department at Oakland University invites students to apply to its sixth summer of an NSF-funded Research Experience for Undergraduate students. The students selected to participate will be immersed in a research environment under the mentoring of CSE faculty. This program is a full-time comprehensive educational experience targeted to women in particular. It should be understood by the students that this position is not merely a summer job, but rather an educational experience where the students are treated as junior colleagues.

Participants will receive a stipend of \$3,600 for the ten weeks, meal allowance, and travel subsidy for either travel to and from the program or to attend a conference.

For more information contact Professor Mili (mili@oakland.edu) or Professor Fu (fu@oakland.edu).

Instructors Needed: Pre-College Experience in Physics (PREP)

http://www.pas.rochester.edu/urpas/page/reu_application_details

Application Deadline: March 28

The Physics Department is looking for female undergraduate (sophomores or juniors, or 4th year Take-Five or KEY) instructors for its summer, 4-week program for 9th and 10th grade young women from Rochester area high schools. The work period is approximately 10 weeks and is compensated competitively, included free housing. The program participants will be on campus daily, 9:00 am - 3:00 pm, Monday-Friday, from July 7-30, 2008. The basic structure is that part of their time is spent in the lab, in both instruction and special projects, and the rest is spent in talks and field trips -- learning what doing science (in a range of fields) is really like.

This is a fun program, with lots of room for creativity. It has been running for almost fifteen years,

with great response from the high school students and their parents. Instructional materials and other supporting demonstrations and equipment, as well as solid staff support and contacts throughout the University and community is available to the undergraduate instructors. Although you do NOT need to be a physics major to perform this job, you must have taken a couple of semesters of college physics and have at least a 3.0 GPA. Science and engineering TA's have made wonderful PREP instructors in the past.

Melanie Pelcher (mpelcher@mail.rochester.edu) and Eve Privman (Eve.Privman@gmail.com) taught the program in 2007 and can tell you much more about it and assist you with the application.

Experimental Methods in Mechanical Engineering at SMU

<http://enr.smu.edu/REU>

Application Deadline: April 1, 2008

The Southern Methodist University's Department of Mechanical Engineering is hosting a summer research experience for undergraduate students in mechanical engineering or related engineering/science fields. Opportunities exist for research in state-of-the-art research facilities, including the Laser Micromachining Laboratory, the Experimental Fluid Mechanics Laboratory, the Research Center for Advanced Manufacturing, the Laboratory for Micro- and Nano-Mechanics of Materials, and the Micro Sensor Laboratory.

For more information, you may also contact Dr. David A. Willis (dwillis@enr.smu.edu) or Dr. Paul S. Krueger, (pkrueger@enr.smu.edu).

Research Experience for Undergraduates at University of California, Irvine

www.urop.uci.edu/chem-surf.html

Application Deadline: Monday, April 7, 2008

Program Dates: June 22 – August 30, 2008

The Chemistry Summer Undergraduate Research Fellowship (Chem-SURF) at the University of California, Irvine (UCI), provides a unique 10-week summer research opportunity for undergraduates to become fully immersed in a wide range of exciting, cutting-edge specialized and interdisciplinary research projects. With a goal of helping students gain the skills and confidence to become independent researchers and make better career decisions, the experience focuses on intensive and direct contact with a large number of faculty and their graduate students through a series of pre-research lectures, hands-on projects, weekly seminars and workshops, industry field trips, and social activities.

Participants will have the opportunity to choose from a variety of challenging and original research projects that explore a diverse and exciting range of topics in chemical biology, chemical physics, and analytical, atmospheric, bioinorganic, bioorganic, theoretical, inorganic, organic, physical, and polymer chemistry.

The Chem-SURF Program is committed to promoting diversity within the fields of science and engineering. Women, underrepresented minorities, and individuals from economically and socially disadvantaged backgrounds are especially encouraged to apply.

Safe Passage REU at Montana State University-Bozeman

www.wti.montana.edu/Education/REU.aspx

Application Deadline: April 30, 2008

Program Dates: June 2 – August 8, 2008

MSU is inviting applications from undergraduate students in all fields of engineering as well as biology, environmental and earth sciences, and related fields to participate in a unique interdisciplinary summer research program. The Safe Passages REU site will research the complex issue of simultaneously providing for safe passage of humans, wildlife, and aquatic organisms through rural transportation corridors. The Safe Passages REU program will center around three interdisciplinary topic areas:

- Water and Fish Passage;
- Habitat Connectivity and Wildlife Movement;
- Public Safety and Mobility

A 90 mile stretch of U.S. Highway 191 near MSU, which follows pristine mountain waterways and traverses part of Yellowstone National Park, will provide an ideal field site for students to pursue nationally replicable solutions to these issues. In addition to their project involvement, the students' REU experience will be enriched by research seminars, training workshops, and similar educational activities over the course of this 10-week program. Program covers all on-campus housing expenses for participants, and includes travel reimbursement up to \$900 for travel costs to MSU and a \$4,500 stipend (plus an additional weekly food stipend).

Scholarships and Competitions

Maria Mitchell Women in Science Award

www.mmo.org/category.php?cat_id=14

Application Deadline: March 15

The sponsor offers an annual award of \$5,000 to recognize an individual whose efforts have encouraged the advancement of girls and women in the natural and physical sciences, mathematics, engineering, computer science and technology. To be considered for the Maria Mitchell Women in Science Award an individual must: demonstrate consistent leadership and support for the advancement of girls and women in the fields of natural and physical sciences, mathematics, engineering, computer science or technology; or be someone who served as a mentor, role model or key player in a program designed specifically to encourage and advance girls and women in the fields of science, mathematics and technology; or work to stimulate change in the social conditioning of girls and women with regard to science, mathematics and technology.

Kepner Award for Excellence in Technical Communication

Submission Deadline: Monday, March 24

The Rochester Chapter of the Society for Technical Communication (STC) is again sponsoring the Ralph P. Kepner Memorial Scholarship Awards. This competition was established to encourage and reward excellence in technical communication by students in Rochester-area colleges. This year there will be the potential for several awards: a Distinguished paper (\$400), an Excellent paper (\$200), and a Merit paper (\$100). For more information and an application, contact Amy Friend at amy.friend@carestreamhealth.com.

NAWIC Rochester Chapter Scholarship

www.nawicrochester.org

Applications Deadline: March 31

Applications are now being accepted for the National Association of Women in Construction, (NAWIC) Rochester chapter's annual scholarship. Applicant must be a current female college student continuing her education at an accredited college in the U.S. The scholarship is being offered to those pursuing a degree in construction, construction management; architecture; civil, mechanical, and structural or electrical engineering.

NAWIC is a professional association comprised of women working in construction and related industries established in 1955.

SWE Technical Poster Competition

www.swe.org/fy07postercompetition

Abstract submission deadline: June 15

The Society of Women Engineers (SWE) welcomes online submissions for its Collegiate Poster Competition. The top 10 finalists will be asked to display a technical poster in November 2008 at The Society of Women Engineers National Conference in Baltimore, MD. All 10 finalists will receive a \$250 travel stipend to attend the SWE National conference, FREE Collegiate Member registration, and 1 ticket to the Celebrate SWE! Awards Banquet. In addition, the following awards with cash prizes will be presented:

1st Place - \$500

2nd Place - \$250

3rd Place - \$100

The SWE Collegiate Technical Poster Competition is designed to emphasize the ability to deliver visual presentations. Subject matter is to be related to original research or work with an application in engineering. An abstract is a concise summary of the research. It should be assumed that the reader is knowledgeable in the broad category of the topic, but not necessarily an expert in the specialty of the project. Abstracts are prepared to serve either or both of the following purposes:

- To enable a reader to decide whether this topic is of sufficient interest to warrant taking the time to read the entire paper or to go hear the presentation.
- To acquaint a reader with recent research results without the need to read the entire article or hear the paper.

The abstract should give a clear indication of the objective, scope, and results of your technical research or project so that readers may determine whether the full presentation will be of particular interest to them. The abstract should be no more than 500 words and must be submitted online.

Please view the Abstract Online Submission Criteria to view all the information you will need to submit the abstract online.

[WISE-Related Articles](#)

Overnight Hosts Needed: Engineering Spring Open Campus Day

Monday, April 7, 2008, ~4:00 pm, Admissions Office, Wallis Hall

<http://enrollment.rochester.edu/admissions/apply/hosting/shtm>

Hosts are needed for Engineering Spring Open Campus Day for prospective engineering students. Your responsibilities will include picking up a prospective student at the Admissions Office at ~4 p.m. and showing them around thereafter. Click on the link above to get to the new hosting sign up and please fill it out completely (even if you have hosted before).

Study Finds Mentoring Gap for Women in Science

<http://insidehighered.com/news/2008/02/28/mentor>

Inside Higher Education (2/28/08, Jaschik) reported that "according to a new study focused on chemistry and published in the journal *Sex Roles*," the differences "between the ways male and female science students relate to mentors could have a significant impact on efforts to attract more women to certain fields." Susan Nolan, a co-author of the study and an associate dean at Seton Hall University in New Jersey, said that "she and her fellow authors hope the study will help academics 'pinpoint the patterns that lead to gender disparities we still see.'" The study followed students "who graduated from top doctoral programs in chemistry from 1988 to 1992" and asked them a "series of questions about their experience with mentors, finding notable differences." For example, the study found that 62 percent of men were likely "to remember receiving help from a professor" during their undergraduate years, compared to 54 percent of women surveyed. In addition, "83 percent of men and only 71 percent of women cited a professor" as the person "who helped them the most in selecting a graduate school." Nolan said that it is clear "that women do not perceive that they are receiving the same level of advising and mentoring as men."

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Monday, April 7 (8:30-9:30 am) – Special Opportunities Fair during Spring Open Campus
Engineering Day, Welles-Brown Room

Wednesday, April 9 (12:30-4:00 pm) – Project ADEPT Workshop, Washington Irving Elementary
School, 2400 Chili Avenue

Thursday, April 24 (9 am-12 pm) – Take Your Children to Work Day *Extreme Science &
Engineering*, Goergen Hall Atrium

Thursday, May 1 (12:30-1:30 pm) – Ice Cream Social Study Break, Welles-Brown Room

Contact Us

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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*