

# WISE



THE UNIVERSITY  
of  
**WISCONSIN**  
MADISON

## 2007–2008 WISE LEADERSHIP TEAM

**Katrina Forest**  
Faculty Co-Director  
Assoc. Prof. Bacteriology

**Katherine (Trina) McMahon**  
Faculty Co-Director  
Asst. Prof.  
Civil & Environmental  
Engineering

**Carolyn Bell**  
Assistant Director of  
Residence Life

**Jessi Gauger-Kiraly**  
House Fellow

**Ann Haase Kehl**  
Program Coordinator

**Jennifer Johnson**  
Residence Life  
Area Coordinator

**Kay Reuter-Krohn**  
Director of Residence Life

**Hanna Vanderloop**  
Involvement Intern  
Residence Life

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## WISE

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# WOMEN IN SCIENCE & ENGINEERING RESIDENTIAL PROGRAM

## Annual Report 2007–2008

### Message from the Faculty Co-Directors

As another year comes to a close and as we reflect on the 2007–2008 WISE experience, we are especially excited to share our thoughts on this year's successes. We treasure our opportunity to engage with WISE students in so many interesting venues (e.g., Professor Dinner, weekly seminar, lab tours, and Winter Workshop). Our WISE students provide a window into the lives of women facing the challenge and promise of a career in science, technology, engineering, or math. We thank all of the WISE students and Peer Mentors for providing us with such a rewarding and inspiring experience!

This year we placed a high priority on enhancing the career development facilitation and support opportunities available to WISE students. Based on numerous research results showing improved first-year student retention following a one-on-one interaction with a faculty member during the first few weeks of the fall semester, we partnered each incoming WISE resident with one of thirteen faculty members from all across campus for individual meetings in September. This effort was an amazing success, and led to ongoing mentoring relationships between WISE students and faculty.

We are pleased to note that the WISE peer mentoring program is going strong after its second year. Peer mentors participated in a training program created by Dr. Angela Byars-Winston as part of a Sloan Foundation-funded research project on mentoring as a strategy to increase retention of underrepresented groups in science, technology, engineering, and math.

These are just two examples of how we continue to strive to support our WISE students during their first year on campus in a way that will launch them into a rich lifetime of learning and appreciation for science and engineering.

None of these achievements could have been possible without the outstanding efforts of our WISE leadership team: Ann Haase Kehl, Jennifer Johnson, Hanna Vanderloop, Jessi Gauger-Kiraly, Carolyn Bell, and Kay Reuter-Krohn. Special thanks to them, and to all the faculty and staff who dedicate their time and effort to make WISE so successful.



**Katrina Forest**  
Assoc. Professor,  
Bacteriology  
WISE Co-director 2006–2008



**Katherine (Trina) McMahon**  
Asst. Professor,  
Civil & Environmental  
Engineering  
WISE Co-director 2007–2009

*New to college, I was nervous about meeting professors in such a large university. The professor one-on-one experience through WISE helped me to be more comfortable around professors and to meet a really cool person, Jean Bahr, Professor in Geology. When she heard about my interests, she took me to the geology museum for a personal tour, helping me see that learning in college is going to be fun! I am glad that I had the chance to meet Jean Bahr through WISE.*

*Jolie Lizotte, 2007–2008 WISE resident, considering major in geology*

## WISE MISSION:

**To create an affirming, living/learning community for undergraduate women by integrating students' cultural, academic, and professional development experiences to create a lifelong engagement in science, engineering, technology, and math fields.**

## The Grand Finale—Reflecting on the Last of My Four Years in WISE

This year was my second as the WISE Involvement Intern and fourth year in WISE. What had the greatest impact on making this year my favorite was not the trips, service projects, or other wonderful events—it was working with the amazing community of first-year women. They consistently supported

each other, whether it was ordering pizza and studying in the resource room on a Friday night, hanging treats in the hall for everyone on Valentine's Day, or making sure that the new students who moved in at second semester knew about WISE events. Their enthusiastic participation in WISE activities far surpassed that of any group that I've seen. I got to know all of them very well and will miss them a lot.

The conclusion to my WISE story is very satisfying. I know that these women took advantage of the same things that were important to my own experience as a resident in WISE: a supportive environment in which to explore many different career options, great activities and trips, as well as the opportunity to build the confidence and skills to face any challenge in the future.



*WISE students are lucky to have professor of geology Jean Bahr lead camping and hiking excursions.*



### **Hanna Vanderloop**

May 2008 BS, Biochemistry  
Entering UW School of  
Medicine and Public Health in  
August 2008

## Message from the WISE Program Coordinator

This has been an exciting time to be the WISE Program Coordinator. As a program that now serves primarily first-year students, we are called to think broadly about first-year goals and ways to help students experience success and strengthen belief in their abilities to succeed in science, technology, engineering and math (STEM) fields.

The successful 2007–2008 year in WISE could not have happened without the broad base of support and resources from initiatives and people across campus and from the community. The faculty co-directors, students, and staff on our leadership team have brought their gifts, talents, and unique perspectives to bear on what is created for and with the first-year students. I am proud of this program as a way to create a smaller community that is ever evolving within the resources and opportunities of a large research university.

I am particularly excited about the peer mentoring program. I thank these wonderful young leaders (all former WISE residents) for their flexibility, warmth, and dedication to WISE. This program has clearly enhanced the transition of entering women who come to UW–Madison to pursue studies in STEM fields.

We have also prepared for our move from Cole Hall in the lake-shore area to Sellery Hall. Our new location, as of August 2008, will host a vibrant and diverse community in a prime location closer to the central campus. We look forward to continuing to serve WISE students with a lively, engaged living and learning community.



**Ann Haase Kehl**  
Program Coordinator

## Cultural Enrichment—An Integral Part of WISE

An appreciation for and commitment to the arts has been a long-standing tradition and integral part of WISE, reaching beyond the WISE seminar. This would not have been possible without the sustained and generous support of the Brittingham Fund, Inc. This year's highlights included:

- Shakespeare's *Much Ado About Nothing* under the stars at the beautiful American Players Theater (APT), Spring Green, Wisconsin
- The Broadway musical *Rent* and classical ballet *Romeo and Juliet* at Overture Center for the Arts on Madison's State Street

- The Broadway musical *Wicked* in Chicago
- Seminar guest faculty from arts and humanities
- Art museums, international movie nights, and faculty concerts

*Remembering APT: We are under the stars, watching a Shakespearean play. I know this is a memory that I will cherish forever. I am refreshed and ready to start off my new college life, remembering that there is always something beautiful I can return to when I am discouraged. Arts are truly the connection to wider life in the world, and this experience has reminded me just how beautiful that connection is.*

Vidhya Raju, senior, biomedical engineering

## WISE Seminar

The role of the WISE weekly seminar in our core programming has continued to grow. This weekly opportunity to meet face-to-face has become far more than the academic cornerstone of the program. It has also become our regular "town hall" meeting, a chance to share a meal together, reflect on daily activities, deadlines, challenges, and opportunities.

The WISE one-credit seminar offered each fall provides a multidisciplinary introduction to current research topics in many areas of biology, biochemistry, math, engineering, and medicine. The interdisciplinary nature of the WISE seminar is a fundamental part of its mission as well as designation as a Liberal Arts and Science course. WISE manages to augment for its students all of the Association of American Colleges & Universities' recently defined learning outcomes for college graduates, which include:

- Knowledge of Human Cultures and the Physical and Natural World
- Intellectual and Practical Skills
- Personal and Social Responsibility
- Integrative Learning

Our spring seminar format recognized the emerging confidence and independence of our students, and their growing abilities to synthesize their own scholarly works. Students worked in teams to prepare scientific posters (which covered many topics and were based largely on studies published in the literature), with critical input from each other, the WISE co-directors, and a graphic arts and science expert. The idea of the spring seminar format was to complement the fall—to clarify that a degree in a science, technology, engineering, or



New to WISE this year were many science outreach opportunities to area schools. This was a popular service learning opportunity for both groups of students.

math field opens doors to countless opportunities, not all of which may be what students imagine now.

In summary, the WISE seminar's strong focus on interactive learning of current science topics, with a commitment to broader liberal arts and science education of these "renaissance" undergraduate women, will surely impact their ability to thrive as scientists and engineers in society. We are very proud of this component of the WISE program.

## Announcing the Dick Barrows Scholarship



Incoming WISE residents participate in the welcome retreat activities.

We are delighted to announce that WISE has made waves again as Associate Dean Emeritus Dick Barrows received the

Women's Philanthropy Council 2007 Champion Award in recognition of his efforts to develop and support the WISE Residential Program. We remain very grateful to Dick for his tireless efforts and are pleased to have implemented a scholarship program this year thanks to this gift. Dean Barrows' gift will provide four scholarships per year for the next five years. His longtime support of the WISE program continues through this award.

We would like to also extend our gratitude to Janine Jensen, without whom these scholarships may have never been brought into reality. Janine's tireless assistance with the WISE financial resources has provided continuity and guidance in many ways.

## About Our Faculty

WISE is very fortunate to have had faculty co-directors who are leaders in their fields. Our current co-director team is no exception.

**Associate Professor in bacteriology, Dr. Katrina Forest** has distinguished herself through her research. She was the first to develop a three-dimensional picture of a Type IV pilus that is used by bacteria for both attachment and twitching motility. Eventually her research may lead to the development of vaccines against bacteria that cause cholera, gonorrhea, and meningitis. See Prof. Forest's Web site: <http://www.bact.wisc.edu/gradstudies/facultyListing.php?id=8>

**Assistant Professor of civil and environmental engineering, Dr. Trina McMahon's** lab studies microbial ecology with an emphasis on use of microbes to remove pollutants from water. The information gathered will ultimately lead to the construction of better models to describe processes such as wastewater treatment, bioremediation, and nutrient cycling. Professor McMahon is the recipient of this year's Class of 1955 Award that honors faculty for teaching excellence. See Prof. McMahon's Web site: [http://www.engr.wisc.edu/cee/faculty/mcmahon\\_katherine.html](http://www.engr.wisc.edu/cee/faculty/mcmahon_katherine.html)

**Thank you to everyone** who assisted with WISE events this year. Special thanks go to L&S and Engineering Career Services staff, everyone who helped with the WISE Winter Workshop, and all WISE seminar presenters.

### Fall Seminar

Introduction by Faculty Co-director Professor Trina McMahon, Civil and Environmental Engineering

POD 1: Language and the Mind

- French - Professor Deborah Jensen
- Psychology - Professor Jenny Saffran
- Philosophy - Professor Larry Shapiro

POD 2: Small Molecules, New Targets, Big Money

- Entymology - Professor Que Lan
- Biomolecular Chemistry - Professor Jim Keck
- Wisconsin Alumni Research Foundation - Patent Officer Laura Heisler

POD 3: Plants, Ecosystems, and Science Education

- Landscape Architecture - Professor Evelyn Howell

- College of Agricultural & Life Sciences - Dean Molly Jahn
- Biocore and the Biocore Prairie - Dr. Janet Batzli
- Horticulture - Professor Sara Patterson

POD 4: Dance and Rehabilitation

- Dance - Professor Li Chiao Ping
- Mechanical Engineering

### Spring Seminar

Scientific communication poster display from the labs of Professors Forest and McMahon

Introduction to scientific communication and how to create an effective scientific poster

- Environmental Engineers - Angela Patnode, Mechanical Engineer, and Cassie Goodwin, Civil Engineer
- Equine Veterinarian - Dr. Michelle Krusing
- Insurance - Mary Neumann, Actuary
- College of Engineering External Relations - Renee Meiller, Science Journalist