MICHIGAN STATE UNIVERSITY

Undergraduate Research Michigan State University Hannah Administration Building 426 Auditorium Road, Room 312 East Lansing, MI 48824 Phone: 517-355-7635 Email: ugrsrch@msu.edu Web: www.urca.msu.edu

FUNDING OPPORTUNITIES

THE PROVOST'S OFFICE

The Provost's Office has provided a half million dollars to support university-wide undergraduate research initiatives. Every college with undergraduate degree programs receive this funding to support undergraduate research and creative activity opportunities. Visit http://urca.msu.edu/faculty/funding to find the contact for your college.

STUDENT CONFERENCE SUPPORT

The Undergraduate Research Office has limited funding available to support undergraduate students presenting their research at professional conferences or meetings. Criteria include:

- · Applicants must be currently enrolled undergraduate students at MSU, who are working towards their undergraduate degrees at the time of the conference.
- Undergraduate students must be presenting their research.
- The college or academic department is responsible for completing the necessary travel authorization forms for each student.
- A financial contribution is required from the academic department and/or college. For example, if a student's cost for a conference is estimated to be \$1,000, and if the academic department can contribute \$200 and the college can contribute \$300, the Undergraduate Research Office will try to provide \$500 to match. However, a match is not guaranteed.
- Include a budget of estimated total expenses with each request.

Requests will be considered individually; the funds are available on a first-come, first-served basis. Students should work with their research advisors to facilitate the process. Send requests to Dr. Korine Wawrzynski at steinke7@msu.edu.

ISSUE SPRING 2015

UNDERGRADUATE RESEARCH





Writing Abstracts February 17, 5:00-6:00 PM Bessey Hall, Room 312

UURAF Registration Deadline February 22, 11:59 PM uuraf.msu.edu/registration

Preparing Poster **Presentations** April 1. 5:00-6:00 PM Bessey Hall, Room 106

Preparing Oral Presentations April 2. 5:00-6:00 PM Bessey Hall, Room 105

Preparing for Success at UURAF April 8. 5:00-6:00 PM Bessey Hall, Room 106

University Undergraduate Research and Arts Forum (UURAF) April 10. 9:00 AM-5:00 PM MSU Union

Mid-Michigan Symposium for Undergraduate **Research Experiences** (Mid-SURE) July 22, 2015 MSU Breslin Center

Full workshop descriptions are available at urca.msu.edu/event.

For more information. contact Megan Shannahan at 517-884-1559 or shannah2@msu.edu.



THIS ISSUE

UURAF CHANGES FACULTY MENTOR RESEARCH MENTORING GROUPS V. INDIVIDUALS

FUNDING OPPORTUNITIES

UURAF CHANGES

Michigan State University hosts the annual University Undergraduate Research and Arts Forum (UURAF) each spring that provides students with the opportunity to showcase their research, scholarship, and creative activity in an academic setting. Last year 660 students presented at the forum. **UURAF 2015 will occur on** April 10 at the MSU Union.



NEW CATEGORIES

All UURAF presentations are organized by category, which students select when they register. The list of categories has continuously evolved over the life of the event based on presentation trends and input from presenters and research mentors.

Based on faculty feedback, we updated the UURAF categories for this year. New categories include

- Anthropology
- Epidemiology & Public Health
- Food Science & Human Nutrition
- Global & Area Studies
- Integrative & Organismal Biology
- Kinesiology

- Neuroscience
- Plant Sciences
- Sociology

Additionally, we eliminated the Health, Food, & Wellness category. Most presentations that fit in this former category could be placed in either Food Science & Human Nutrition and Kinesiology.

REGISTRATION & ABSTRACTS

Student registration opens on January 20 and closes on February 22 at 11:59 PM. Please advise your students on their category selection and review their abstracts before they register.

UURAF abstracts are published in the program book and on the UURAF website. It is important that students understand what information is acceptable to share publicly. We urge mentors to discuss information sharing, copyright laws, and intellectual property with their students in order to protect the rights of individuals performing research and publishing data.



KEY UURAF DATES

February 22, 11:59 PM Registration closes

April 10, 9:00 AM-5:00 PM **UURAF. MSU Union**

STUDENT UR POSTER DISPLAY

Each year, thousands of MSU undergraduates participate in research or other creative activities. We spotlight some of their experiences on our website and display their posters in rotating displays in all five Neighborhood Engagement Centers.

If you'd like to nominate a student for a spotlight. please send their name and contact information to ugrsrch@msu.edu.

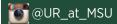
SOCIAL MEDIA

UR at MSU is represented on various social media sites, and we want to connect with you and your students. Find us on Facebook, Twitter, WordPress, and Instagram. We share information through these sites. including new opportunities in Venture, workshop reminders, and student spotlights. Be sure to connect with us to stay up to date on all the latest MSU UR news.





(V) urmsu.wordpress.com

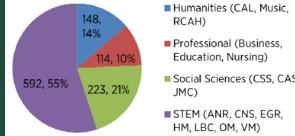




FACULTY MENTOR RESEARCH

Little information has been collected about who has mentored undergraduate student researchers at MSU. The MSU Undergraduate Research Office analyzed faculty undergraduate research mentor data over a three-year period (2010-2013). We included faculty members who had mentored students through the Provost's Undergraduate Research Grants, Professorial Assistants, Honors College Research Seminars, and students who presented at UURAF and Mid-SURE. There were 1,100 faculty in the sample and we examined their college affiliation, faculty rank, and basic demographic information.

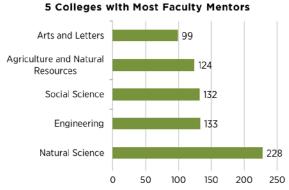
Faculty Mentor by Disciplinary Categories



COLLEGE AFFILIATION

About 55% (595) of UR faculty mentors were appointed in the STEM colleges (i.e., Agriculture and Natural Resources, Engineering, Human Medicine, Lyman Briggs, Natural Science, Osteopathic Medicine, and Veterinary Medicine). Approximately 21% (223) of UR mentors were appointed in the broad social sciences (i.e., Communication Arts and Sciences, James Madison, and Social Science), while approximately 14% (148) were appointed in the arts and humanities (i.e., Arts and Letters, Music, and RCAH). About 10% (114) of the UR mentors were appointed in professional colleges (i.e., Business, Education, and Nursing). The spread of **WHAT'S NEXT** UR faculty research mentors by broad disciplinary area appears to be representative to the kinds of research and creative activity opportunities available to undergraduate students.

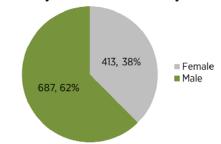
The five colleges with the most faculty mentors were Natural Science, Engineering, Social Science, Agriculture and Natural Resources, and Arts and Letters.



DEMOGRAPHICS

More men than women mentor undergraduate researchers. The UR faculty mentor breakdown by gender is 37.5% female and 62.5% male, which is similar to the university's breakdown by gender of 39% female and 61% male.

Faculty Mentor Breakdown by Gender



Approximately 64.2% of MSU faculty are part of Social Sciences (CSS, CAS, the tenure system, yet we found that 78% of UR faculty mentors were in the tenure system. 62% (678) of UR faculty mentors were tenured, while 16% (171) were tenure-probation. Only 22% (251) of the UR faculty mentors were continuing status or fixed term faculty.

Faculty Mentor Rankings 27, 2% ■ Continuing 224, 20% ■ Tenure Sys Prob ■ With Tenure Fixed Term 678, 62%

The Undergraduate Research Office is working with the Honors College to continue research on faculty mentoring undergraduate researchers. These results are the precursor to a future research study exploring the experiences, challenges, and motivations of faculty mentoring undergraduate researchers.

Photo courtesy of Communications and Brand Strategy



MENTORING GROUPS VS. INDIVIDUALS

A team has been examining multiple years of survey response data from undergraduate researchers at MSU. As part of their analysis, the team became interested in the nature of facultystudent interactions (a key benefit of undergraduate research experiences to undergraduate participants) and how they might differ based on the structure of the research experience. They sought to answer: can group research experiences provide similarly meaningful • faculty-student interactions as conventional, individual research placements?

The research compared two specific types of research experiences: (1) course-based, group research experience with 6-15 students, and (2) conventional individual research experiences where a student is placed with a faculty mentor. The analysis was limited to two similar populations of students (early career, highachieving students) to partially control for confounding factors.

By and large, the participants in group research experiences reported strong levels of agreement with statements about their interactions with faculty. The group participants reported they

Provided opportunities to work closely with a

faculty member

- Felt comfortable asking their mentor
- Received encouragement to offer their own
- Received help to start the project by the mentor
- Listened to by the mentor
- Checked in regularly
- Received constructive feedback
- Received clearly established expectations

In fact, when comparing the two experiences, group participants more often reported feeling encouraged to offer their own ideas than individually-placed participants. There were two items on which individually-placed participants more often agreed: (a) having opportunities to more closely work with a faculty member; and (b)

Overall, the results are encouraging that different mentoring structures can yield similar benefits. As faculty wrestle with the demands on their time, it is encouraging that many of the benefits derived from individual placement, can be achieved in other contexts.

Photo courtesy of Communications and Brand Strategy

discussing career and/or graduate school options.

SUMMER RESEARCH FORUM

Visiting and MSU undergraduate students conducting research on campus have the opportunity to present their work at the Mid-Michigan Symposium for Undergraduate Research Experiences (Mid-SURE) which will be held on July 22, 2015 in the Breslin Center Concourse. For those undergraduates interested in attending graduate school, Mid-SURE includes a graduate school fair with more than 20 representatives from various graduate school programs.

Mid-SURE represents a collaborative effort between the Undergraduate Research Office, the Graduate School's Summer Research Opportunities Program (SROP), the College of Engineering's Summer Undergraduate Research Experience (EnSURE), the BEACON Center for the Study of Evolution in Action, and the MSU Research Education Program to Increase Diversity in Health Researchers (REPID).

VENTURE

Venture is a database of undergraduate research opportunities and creative activities designed to connect research mentors and aspiring undergraduate scholars. The online database provides an easily navigable platform for research mentors to recruit outstanding undergraduate researchers. With Venture, research mentors can post projects, recruit qualified and interested undergraduate students quickly, and manage applications online.

In addition to posting oncampus opportunities, Venture can be used to promote summer undergraduate research opportunities at other campuses or through government agencies, such

- National Science Foundation's Research **Experiences for** Undergraduates (REU) Program
- Science Undergraduate Laboratory Internship (SULI) Program
- Department of Energy Scholars Program

Visit venture.msu.edu for more information and to post a UR opportunity today.

VENTURE TRAFFIC

Number of unique visitors to the site from mid-December to mid-January.

Average number of pages a user viewed per visit.

Venture is a great way to expose your research posting to a wide audience.