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DISCOVERY

OFFICE OF VICE PRESIDENT FOR RESEARCH

Electronic versions available at wmich.edu/research/news.html

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OVPR VISION AND MISSION

VISION: TO BE A LEADER AND CATALYST FOR SCHOLARSHIP EXCELLENCE

MISSION: THE OFFICE OF THE VICE PRESIDENT FOR RESEARCH ADVANCES THE OVERALL SCHOLARSHIP AGENDA OF THE UNIVERSITY; SUPPORTS THE SCHOLARSHIP INITIATIVES OF WMU FACULTY, STUDENTS AND STAFF; AND ASSURES COMPLIANCE WITH ALL APPROPRIATE FEDERAL AND STATE REGULATIONS.

WWW.WMICH.EDU/RESEARCH

DISCOVERY EXPERTS DATABASE LAUNCHES MID-FEBRUARY

We have worked closely with the deans and provost to expand the University's leadership, scholarship, collaboration and resources with the creation of three to five year Discovery Plans. In addition, we have been working to create an experts database that will provide information about the faculty and staff researchers at WMU.

WMU *Discovery Experts* database will launch circa February 14 when business leaders, industry partners, and WMU scholars can access over 900 Western Michigan University experts for collaboration on the broad range of Discovery that we do.

Discovery Experts offers you the ability to showcase your Discovery activities to the world. This tool gives you the ability to build your discovery by finding collaborators and grant possibilities within and without the University including research and commercialization projects. We will also be linked with the other major research universities in Michigan through a State of Michigan web portal.

Discovery Experts will be unrolled in three phases: **Phase 1** concludes on Feb 14 when the database will be activated for use by internal and external audiences. Elsevier (the platform administrator) will utilize its Scopus database to link information about each expert's citations to the system. Scopus pulls citations from 60 million articles drawn from over 20,000 peer-reviewed journals, 390 trade publications, 370 e-book series and 5.5 million conference papers. Eventually Scopus will pull from print books as well. While February 14 marks the official rollout of Phase 1, when the system goes "live" to display the academic publication citations

captured from the Scopus' searches, this is only the beginning stage for initial population of the site.

During **Phase 2**, the University will provide additional information, pulled from standard University sources: external and internal funding awards, patents, licenses awarded, and other available data regarding faculty discovery activities. Phase 2, which includes the internally generated data, is set for completion by April 1.

Phase 3 will run from April 1 – May 1, when faculty and staff will be able to enhance their system profile by providing additional information regarding their teaching, service, and other activities not previously captured during Phases 1 and 2. You will be invited to submit information for inclusion during Phase 3 of the rollout. More information and instructions will be forthcoming on when and how to submit this material, but the plan calls for gathering this information by May 1, then upload the information into the site by September 2014.

Elsevier will update the database with more information on each expert on a weekly and monthly basis. WMU and individual experts will then periodically have the opportunity to add additional data to *Discovery Experts*.

We hope you are as excited as we are to offer you this tool to market your areas of expertise and to store electronically your portfolios of work. We **invite you to go to wmich.edu/research to access Discovery Experts** and to read the FAQs. Businesses and industry can access experts across the State through the portal: michigancrn.org. We encourage you to take an active role in the creation of your expert profile.

~Dan Litynski, VP for Research

SAMPI LANDS TWO NATIONAL SCIENCE FOUNDATION GRANTS TOTALING \$529,000

Western Michigan University's Science and Mathematics Program Improvement unit received two grants totaling \$529,000 from the National Science Foundation to enhance teaching and help retain students in science, technology, engineering and mathematics—the STEM disciplines.

The grants will fund two portions of a common project called Automated Analysis of Constructed Responses III. Prior work under the common project also was funded by the NSF.

WMU will be part of a team consisting of faculty from six universities across the country carrying out research intended to assist science, technology, engineering and mathematics faculty in understanding and responding to student thinking and misconceptions regarding major concepts covered in their undergraduate coursework. SAMPI will serve as external evaluators for the project.

Michigan State University is the lead institution. In addition to WMU and MSU, partners include the University of Southern Florida, the University of Colorado Boulder, the University of Maine and the State University of New York at Stony Brook. WMU's SAMPI is entirely grant funded, and the two grants will give a big boost to SAMPI's bottom line.

"A huge percentage of students drop out of science majors after their first year," says Dr. Mary Anne Sydlik, SAMPI director and head of WMU's evaluation team. "STEM undergrads struggle, for a number of reasons, which in turn can lead to low grades and the impulse to transfer into non-STEM majors."

Part of the problem is that the multiple-choice tests used in large classes do not always reflect whether a student fully understands the underlying concepts represented in

individual questions. Faculty using multiple-choice questions do not get the feedback on student thinking, particularly misconceptions, needed to support students' mastery of the subject. The NSF-funded initiative is designed to allow faculty to use an automated system that analyzes students' written answers to questions and then provides a report documenting where the class as a whole needs more assistance with difficult topics or concepts.

The project has two main goals. One is to continue creating and validating questions for use in introductory biology, chemistry, chemical engineering and statistics courses and to develop a web portal to analyze students' written answers to homework, quizzes and test questions. The second goal is to form discipline-based learning communities for biology, chemistry, statistics and engineering faculty interested in new methods of assessment and using automated analysis to inform their teaching. The research team will determine the extent to which participation in the faculty learning community impacts a sustained adoption of the new assessment tools and changes in how participating faculty address student difficulties and misconceptions.

WMU Science and Mathematics Program Improvement will work closely with project team members as they develop and implement the effort. SAMPI's evaluation work will focus on documenting the initiative's impact on the project team and participating faculty, whether the project is carried out as intended, the strengths and limitations of the initiative, and the project's potential impact on prevailing models of undergraduate STEM education.

Source: University Relations

2014 TECH DEVELOPMENT FUND WINNERS ANNOUNCED; INTERIM DIRECTOR NAMED: DR. CLARK BENNETT

Four proposals were awarded funding from the Technology Development Fund (TDF) for 2014. The projects selected for the funding awards were the following:

Lori Brown, Aviation Flight Science, "Next Gen Information Systems for Pilots: Low Cost Mobile Training Solutions," \$18,531.

Daniel Kujawski, Mechanical and Aerospace Engineering, "An Interactive Online Fatigue Expert Design Tool," \$12,401.

Scott Puckett and Michael Sisk, Enrollment Management, "Mobile Counselor," \$10,000.

Brian Young, Chemical and Paper Engineering, "Composite Matrix Material Development for Low Cost, Disposable, Reagent Free, Resistance-Based Multiplex, Point-of-Use immunodiagnostic Biosensor Platform Technology," \$19,000.

In other news, Dr. Clark Bennett has been named interim director for Intellectual Property and Commercialization.

Contact Clark with questions by phone or email: (269) 387-8218 or dclark.bennett@wmich.edu.

NEA AWARDS \$10,000 TO UNIVERSITY PRESS

Western Michigan University's New Issues Poetry and Prose has started the new year with three recent accomplishments—an award, a major **grant** and recognition for one of its authors.

The University's literary press is celebrating its anthology, "Poetry in Michigan/Michigan in Poetry," being named a 2014 Michigan Notable Book, receiving a **\$10,000 grant** from the National Endowment for the Arts and a chancellorship for author Khaled Mattawa.

The Michigan Notable Book Award is given to the top 20 Michigan-related books each year, as decided by a committee of booksellers, librarians and reviewers through the Library of Michigan. New Issues will be formally recognized at an event in April in Lansing titled "Night for Notables. The Michigan Notable Book program will coordinate a series of 50 readings and author visits across the state during the upcoming year.

"Poetry in Michigan/Michigan in Poetry" features the work of 90 Michigan poets, including a former U.S. Poet Laureate, and 48 works of art by Michigan artists. The book was coedited by Dr. William Olsen, a WMU professor of English, and Dr. Jack Ridl, professor emeritus of English at Hope College. Poems by both Olsen and Ridl are included in the anthology, which has won high praise from others in the poetry world, along with works by Philip Levine, the former U.S. Poet Laureate,

Jim Harrison, author of "Legends of the Fall," and Thomas Lynch, whose books of essays inspired the television show "Six Feet Under."

With the **\$10,000 NEA grant**, WMU has earned the distinction of housing one of only four university-affiliated presses to earn an NEA grant this year for literature and one of only two publishing poetry.

The grant will help support the printing and promotion of New Issues' Green Rose Series. Titles in this series for 2014 include Ralph Angel's "Your Moon," Lisa Williams' "Gazelle in the House" and Judy Halebsky's "Tree Line." The grant also allows New Issues to pursue multi-media approaches to promoting the series. The press will collaborate with WMU assistant professor of art Adriane Little to produce poetry videos featuring the work of these poets. Little is currently utilizing New Issues titles to teach introductory film students how to engage poetry with this visual medium.

New Issues author Mattawa was elected chancellor of the Academy of American Poets, an honorary position that has been held by some of the most distinguished poets in the United States. Authors so honored include Marianne Moore, W.H. Auden, Elizabeth Bishop, Lucille Clifton, Adrienne Rich, Yusef Komunyakaa, and John Ashbery.

Source: University Relations

RESEARCH AND CREATIVE POSTER DAY APRIL 11

Join us for the Eighth Annual Research and Creative Activities Poster Day, 9 a.m.—1 p.m. in the Bernhard Center, North Ballroom.

The event features poster presentations by graduate students, including live performances by those in the arts, faculty FRACAA recipients, and WMU outstanding and emerging scholars. Currently the event planners are seeking nominations for student poster presenters and faculty judge volunteers.

The event is overseen by the Research Policies Council, which falls under the purview of Faculty Senate. Mary Ann Stark is chairing the committee for this year's event.

To nominate a graduate student poster presentation or to serve as a graduate student poster judge, please contact Allison Weiner via email at allison.weiner@wmich.edu by March 14, 2014. Other questions may be sent to Mary Ann Stark at mary.stark@wmich.edu.

DISCOVER DISCOVERY WORKSHOPS

Faculty and staff still have time to join the Discover Discovery workshops on funding support for faculty scholarship. The workshops, held bi-weekly at the Fetzer Center in room 1055 from 12:30-1:45 p.m., cover a range of topics meant to educate, inspire and innovate research at the University.

Upcoming workshops include the following:

- February 18: "It's a University — Why wouldn't you engage students in your work?"
- March 18: "Using contracts to solidify research relationships"
- April 1: "Broadening your reach: global engagement @WMU"
- April 15: "You know they are talking about you — but what are they saying?"

The workshops are listed online at wmich.edu/research, along with details on what will be covered at each session. Contact your research officer or call 269-387-8270 with questions.

RESEARCH UNIVERSITIES PARTNER TO INCREASE FACULTY DIVERSITY

Western Michigan University is a partner with the state's other four research universities in a 3.5-year, **\$1.32 million project** sponsored by the National Science Foundation that ultimately would boost the number of minority faculty members.

WMU is joining with Michigan Technological University, the University of Michigan, Michigan State University and Wayne State University to test strategies designed to increase the number of domestic underrepresented minority graduate students pursuing careers in academia. The project will involve an extensive research component that will test the effectiveness of mentoring and community-building events on graduate students' persistence toward a degree and interest in continuing on to a career in academia.

"I am excited about this opportunity and proud to partner with the graduate colleges of the other Michigan research universities to collect data on the design and implementation of different mentoring and learning community models and to test the effectiveness of these models on the academic and career outcomes of all students," says Dr. Susan Stapleton, dean of the Graduate College and the WMU lead in the initiative. "A goal is to not only help us better meet the needs of our own students who are considering a career in academia, but also possibly serve as a national model for graduate schools across the country."

Called the Michigan Alliance for Graduate Education and the Professoriate, the research project is strengthened by having five very different universities participating in it. Leaders at all of the universities recognize that the demographics of the U.S. population are changing dramatically.

The project's goal is to diversify the ranks of higher education faculty to be more representative of the U.S. population at large and better meet the needs of students and employers. The project ultimately will help graduate schools across the country learn more about how to better serve students.

Also taking part in the project will be Tony Dennis, director of recruitment in the Graduate College, who will serve as a project coordinator. Faculty members from a number of areas will be selected to help design and implement the mentoring communities.

Source: University Relations

FACILITIES & ADMINISTRATIVE COST RATES (F&A) IMPORTANT TO THE UNIVERSITY

The work of WMU faculty, staff, and students on externally-funded projects includes direct and indirect costs. Direct project costs are usually straightforward and easily attributed to a specific project. Indirect costs, termed Facilities and Administrative Costs (F&A), are also essential for a project's implementation, but are more cumbersome to attribute and track in relation to specific projects.

F&A costs include such expenses as utilities, custodial services, security, payroll, purchasing, fiscal management and tracking, and department administration. F&A costs are expressed as a percentage of total direct costs minus exclusions; are agreed upon through formal negotiations every four years with our cognizant agency, the U.S. Department of Health and Human Services; and are based upon data presented by the University via a cost analysis.

Having such a rate helps the university reduce the costs of having to determine how much of these resources each individual project uses or consumes. WMU recently concluded this process and new rates for research- and instruction-related projects funded externally for both the University and WMed have been established as follows:

- July 1, 2013 – June 30, 2015 = 50% of modified direct costs
- July 1, 2015 – June 30, 2017 = 51% of modified direct costs

Project budgets are required to include full recovery of F&A costs at the appropriate negotiated rate. More information about specific rates and F&A policies are available on the OVPR website (www.wmich.edu/research/policies/proposalsubmit).

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Sarah Pratt: CAS (Biology, Chemistry, Psychology, Math, Statistics, Geosciences, Geography, Physics), Mallinson Institute for Science Education, Environmental Studies

Kim Squiers: CHHS, CDS, Unified Clinic, Aviation

John Risley: COEHD, Evaluation Center, HCOB, TGC, International Studies, LHC, EUP, Seita Scholars, Graduate College

Allison Weiner: CEAS, FRACAA Internal Funding

Annie Lenfest: CAS (Humanities, Social Sciences) CFA, Humanities Center, Libraries, VP for Student Affairs, Academic Skills Center, Miller Auditorium.

A complete list of constituency areas is posted online at wmich.edu/research

Contracts and Compliance

Kathy Purnell: Research Contracts Administrator

Julia Mays: Research Compliance Coordinator