



1-2018

## January 2018 news items

Office of Vice President for Research

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### WMU ScholarWorks Citation

Office of Vice President for Research, "January 2018 news items" (2018). *Research and Discovery News*. 46.  
<https://scholarworks.wmich.edu/inquiry/46>

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# January 2018 archived news items

## Undergraduate Research and Creative Scholarship Excellence Award

Western Michigan University recognizes the contribution of hands-on research and creative scholarship performed by undergraduate students in the education process and the advancement of our discovery mission. The WMU Undergraduate Research and Creative Scholarship Excellence Award will support WMU undergraduate students to pursue projects with faculty members on campus. Students may participate in research during the fall, spring or summer sessions.

### OVERVIEW

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*The goals of the award are:*

- To provide WMU undergraduate students with an opportunity to have a mentored research or creative scholarship-related experience under the mentorship of one of WMU's tenured or tenure track faculty. Students can apply for a \$750 award for a semester, or a \$375 award for each of one or two summer sessions. These funds can be used for a stipend for the student, travel or research related costs such as supplies.
- To provide WMU tenured or tenure track faculty who are actively funded or seeking external funding the opportunity to work with and mentor an undergraduate student in a project related to their expertise.

*For a faculty member to serve as a mentor they must meet one of the following criteria:*

1. Be a tenure-track Assistant Professor in their first three years of appointment when the student applies for the award. The award must be completed before the faculty member completes their fourth year of appointment.
2. Currently support undergraduate or graduate students on any externally funded research program of at least \$5,000 in total direct costs. The faculty mentor must have current active external funding at the time of the project that pays the student. Since students may not know who is currently funded, it is expected that the mentors will recruit students for their projects.
3. Tenured or tenure track faculty who demonstrate that they are **actively seeking** external funding. Submit at least one external grant or contract of at least \$5,000 total direct costs with full facilities and

administrative costs appropriate for the type of sponsor and work in the past year and whose budgets for external funding include support of students.

Faculty in categories 1 and 2 can request up to \$200 for supplies with justification to support the student. Students may apply for the award independent of a faculty member-requesting the additional funding but must have a letter indicating that their advisor can support them in their research.

*Additional policies and procedures:*

- Applicants cannot be awarded the research award in the same semester as their college or the Lee Honors College award.
- Faculty cannot sponsor more than two applications per cycle.
- Students who apply for the award with a faculty mentor who had two students receive funding for one of the application cycles will be given a lower priority in the following review cycle.
- Students cannot receive more than two awards in their time at WMU. A second award will only be considered for students who have demonstrated satisfactory program performance and priority will be given to students who have applied for external funding (travel award, fellowship).
- This is a competitive program and not all students are likely to be funded.



Application deadline Oct. 1, 2019 for spring semester and summer I support, and noon on **March 11, 2019** for work to be completed during the summer II session or the fall semester.

[Downloadable version](#)

## PREVIOUS WINNERS

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View a list of students who have benefited from this award: [previous Undergraduate Research Excellence Awardees](#).

### **Application deadline for Support for Faculty Scholars Award | Jan. 3**

Applications for the Support for Faculty Scholars Award are due by Wednesday, Jan. 31. Details on the submission process are available online.

# Spring convocation 2018

Contact: [Diana Hearit](#)

Jan. 8, 2018

KALAMAZOO, Mich.—Western Michigan University Spring Convocation on Feb. 23, 2018.



This day-long event is being organized collaboratively by the President's Office, Provost Office, Office of the Vice President for Research, Office of Diversity and Inclusion, Haenicke Institute for Global Education and Extended University Programs.

## FETZER CENTER

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### **Morning Session**

8 to 8:45 a.m.

Coffee and pastries

9 to 10:30 a.m.

Fullbright Workshop for faculty and administrators

9 to 3:30 p.m.

Virtual and Augmented Reality Demonstrations

Extended University Programs

9 to 11:30 a.m.

Discovery Symposia

## RSVP TO AUTISM SYMPOSIUM

## RSVP TO MOBILITY SYMPOSIUM

### Discovery Symposium on Autism, room 1040-1050

9 a.m.	Introduction — Stephanie Peterson
9:05 a.m.	Opening Remarks — Lt. Governor Brian Calley
9:15 a.m.	Early Detection and Early Intervention — Amelia Fonger and Becky Eldridge
9:35 a.m.	School-aged Kids' Services — Wayne Fuqua and Jessica Frieder
9:55 a.m.	High School Years' Services — Kayla Jensen and Kourtney Bakalyar
10:20 a.m.	Intermission
10:30 a.m.	Mid-session Remarks — Senator Margaret O'Brien
10:40 a.m.	Young Adult Services — Kourtney Bakalyar
10:50 a.m.	Older Adult Services — Kimberly Peck
11:05 a.m.	Senior Services — Brian MacNeill
11:15 a.m.	Summary and Questions — Stephanie Peterson

- Discovery Symposium on Mobility, Putney Auditorium

9 a.m.	Introduction — Sherine Obare
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9:05 a.m.	Opening Remarks — Senator Margaret O’Brien
9:15 a.m.	Transportation Center Overview — Jun Oh
9:25 a.m.	Increasing Pedestrian Safety at Unmarked Crossings — Ron Van Houten
9:45 a.m.	Mobility for People with Visual Impairments — Dae Kim
10:05 a.m.	Safety of Older Adults: Do Roadway Features Make a Difference? — Valerian Kwigizile
10:25 a.m.	Modeling Equity of Access to Public Health Resources: Assessing Multimodal Transportation Accessibility when Siting Interventions — Kathleen Baker
10:45 a.m.	Being Here and Not Being Here: Robots and Telepresence — Autumn and Chad Edwards
11:05 a.m.	Discussion and Closing remarks — Sherine Obare

11:30 a.m. to 1 p.m.

Light hor d'oeuvres and table Time—participants invited to spend time with resource tables and to network before afternoon session starts

11:45 a.m. to 1 p.m.

Discovery Excellence Recognition Luncheon—invited guests of the President, Provost and Vice President for Research

### **Afternoon Session**

1:15 p.m. to 3:30 p.m.

Emerging Scholar 2017, Putney Auditorium

- [Gellert Mezei](#), Bioinspired Anion Binding by Nanojars

Distinguished Faculty Scholars 2017

- [Thomas Gorczyca](#), Atomic Physics in X-ray Astrophysics
- [Victor Cunrui Xiong](#), Heavenly Khan: The Story of Li Shimin
- [Ping Zhang](#), A Problem in Graph Theory and Its Curious History

3:45 to 4:45 p.m.

Spring Convocation and Awards, Kirsch Auditorium

Immediately following

Gold Gathering Reception, appetizers and cash bar

[Downloadable version](#)

## Common Rule Changes effective Jan. 21, 2019

Regulations governing human subjects research are changing. The federal [Office for Human Research Protections \(OHRP\)](#) has announced changes to federal regulations that protect the rights and welfare of human research participants. These regulatory changes to 45 CFR 46, referred to as the “Revised Common Rule,” have been delayed twice and are scheduled to be implemented on January 21, 2019. The Common Rule changes seek to modernize, strengthen and make more effective the federal policies for the protection of human research participants.

### WHAT THIS MEANS TO WMU RESEARCHERS:

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All research projects that involve human subject must be submitted to the WMU IRB for review and receive approval prior to implementation (e.g., recruitment, data collection, etc. cannot proceed without IRB approval). The IRB will make the determination on the category of review, continuing review, and post approval changes.

The WMU IRB and Research Compliance have been updating and revising policies and procedures in preparation for the Revised Common Rule.

This guidance will take you through an overview of significant changes made to each section the Common Rule. New guidance will be posted to the website as it becomes available.

#### *Revised Common Rule Impact on Studies with Pending Approval on January 21, 2019*

The most notable changes are to the consent process and form, what qualifies for exempt review, and when continuing review is required. Due to the effective date and the implementation date of the Revised Common Rule being the same, some studies awaiting approval may need to be

updated and resubmitted for review. Your study approval date or pending approval will determine whether you must comply with the Revised Common Rule changes or will continue to follow the Pre-2018 Common Rule.

Approved Before January 21, 2019
If your study was approved before January 21, 2019, the <a href="#">Pre-2018 Common Rule regulations</a> will continue to apply to your study.

Approved On or After January 21, 2019
Approval Date on or after January 21, 2019, you must adhere to the <a href="#">New Revised Common Rule</a> .

1. Exempt or Expedited studies which are approved with modifications (revisions required), must satisfy all conditions before January 21, 2019 or must comply with the Revised Common Rule.
2. A Full-Board Study which is approved with conditions (revisions required), will have an approval date based on the date of the Full-Board Meeting when it was originally approved.
3. Important Note:  
The Pre 2018 Common Rule will still apply to studies sponsored by federal agencies that have not yet signed on to the Revised Common Rule (e.g., The Department of Justice (DOJ)).

## Revised Common Rule Impact on Existing Studies

There may be some circumstances under which studies that must comply with the Pre 2018 Common Rule may switch to comply with the Revised Common Rule. The Office of the Vice President for Research continues to work with the WMU IRB on this process. Guidance on existing studies will be posted in the future.

## Studies that must comply with the Revised Common Rule

“New” protocols (e.g., exempt, expedited, etc.) that are approved after the Revised Common Rule goes into effect on January 21, 2019 must comply with the [New Revised Common Rule](#). Some change will reduce researchers’ burden and other requirements will increase research responsibilities.

**Consent Form**—Informational Element



**New Requirement**—The consent form must begin with a concise summary of essential study information that individuals would want to know in order to make an informed decision about participation.

**New Requirement**—Consent form must disclose any plans to conduct future research using info and/or biospecimens collected during the research.

**New Requirement**—If applicable, consent form must disclose whether: (a) subjects will share in commercial profit; (b) clinically relevant research results will be returned; and (c) research will or might include whole genome sequencing.

## **Exempt Categories Updated**

New revised exempt categories and updated categories.

**New Option**—With safeguards in place, studies using benign behavioral interventions may qualify for Exempt Review.

**New Option**—With a "Limited IRB Review" of a protocol plan to safeguard subjects' privacy and confidentiality, more studies will qualify for exempt review.

## **Continuing Review Requirement Changes**

Continuing IRB review may no longer be required for many minimal risks studies. To assist researchers approval letters will indicate what type of continuing review is required. The IRB will continue to send notification at 60 and 30 days for the continuing review or progress report.

The IRB is still required to conduct post approval monitoring and an annual Progress Report and Final Report will be required.

## **Post Approval Changes/Amendments/Modification**

Amendments and modifications will still need to be submitted, reviewed, and approved by the IRB prior to their implementation. In addition, unanticipated problems, protocol deviations, and other Reportable Events will still need to be submitted to the IRB.

Post-approval monitoring will continue to ensure that study activities are carrying on as described in the protocol.

The following studies will still need to undergo continuing review:

- Research which requires annual review by a fully convened Board

- Research which is subject to the US Food and Drug Administration (FDA) oversight or by another sponsor that requires continuing review (e.g., Department of Justice, Department of Veterans Affairs, etc.)
- Research that was approved prior to the implementation date of January 21, 2019 and has not transitioned to the revised Common Rule
- Research subject to the discretion of the Human Subject Protection Program or WMU IRB that may involve the following:
  - o Student-led research;
  - o Research involving non-WMU investigators;
  - o Research conducted internationally;
  - o Research including particularly vulnerable populations;
  - o Research involving additional regulatory oversight, such as a conflict of interest (COI) management plan;
    - o Research amendment or incident report revealing new findings that require additional oversight;
    - o Investigator that has had previous protocol deviations.
    - o Investigator that has had previous serious non-compliance or a pattern of non-serious non-compliance;

**[Revised Common Rule Weblink](#)**

## Elsevier Cancellation Effective Jan. 31

Six years ago Western Michigan University joined with the six major public universities and nine affiliate universities to participate in the online portal created by the Michigan Corporate Relations Network (MCRN) and Elsevier. The portal was proposed to connect Michigan corporations to university assets as a means to promote research and grow the Michigan economy. Analysis of usage indicates that this product is not serving that purpose, and has few users,

WMU, along with some of our peer institutions, will no longer remain in the portal or have access to SciVal. The decision was made by the Office of the Vice President for Research along with the Provost Office to discontinue our subscription to Elsevier, effective Jan. 31, 2018. However, the data in the WMU Discovery Experts database has been migrated over into the University's newly implemented [Faculty Activity Reporting System](#). FARS allows faculty to document in the electronic system their achievements in teaching, research, creative activities and service. We are looking into alternatives to the functions provided by this commercial system and the potential to capture the research and creative activities data from the FARS.

## Professor transforming aviation education using augmented reality

CONTACT: CHERYL ROLAND  
JANUARY 26, 2018 | WMU NEWS

KALAMAZOO, Mich.—**Lori Brown**, associate professor of aviation at Western Michigan University, has teamed up with Microsoft to transform aviation training through the use of Microsoft's HoloLens mixed reality technology, the first self-contained, holographic computer.

Brown, who is recognized internationally for her use of technology in aviation education, has been chosen by Microsoft for its Women in Mixed Reality Spotlight Partner Program for her transformative work in aviation training. She was featured during Microsoft's Mixed Reality Academy at Microsoft headquarters in Washington state late last fall and was recently awarded the WMU Extended University Programs Innovative Teaching award.

Video of 5zFU-qFry9k

### [SH//FT Spotlight: Microsoft](#)

Learn more about Brown's JetXplore project and the work of other mixed reality pioneers.

Microsoft HoloLens enables users to engage with 3D holographic content mixed with the physical world, giving holograms real-world context and scale. With the technology, students in WMU's College of Aviation can be immersed, for instance, inside jet turbofan engines or interact with 3D cockpits to learn and practice real-world aviation scenarios and procedures.

"I wanted my students to be able to see inside and interact with aircraft components such as a turbofan engine," says Brown. "When I saw that the medical community was using HoloLens to allow students to see inside the human body, I realized that HoloLens could augment my lab. The ability to see inside an engine is similar to seeing the bones of a human body."

## A FIRST FOR AVIATION CLASSROOMS

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Brown

Through Brown's HoloLens work, WMU has become the first aviation program in the nation to use augmented reality in the classroom. With the recent expansion of WMU's flight science program into Florida, marrying lab experiences with mixed reality allows larger numbers of students to have greater access to leading-edge innovation in higher education.

"Technologies like this bring forth a new medium for aviation training, a new paradigm of mixed reality, where for the first time, we have the ability to take the analog world and superimpose digital artifacts and create mixed reality aviation simulations," Brown says. "Unlike other advanced technologies, HoloLens is intuitive and offers a natural means of interaction. There's no mouse, wire or touch screen. All you need are simple gestures to create and alter holograms, your voice to communicate with apps, and your eyes to navigate and analyze content. With the HoloLens, students are able to see inside the jet engine while also interacting with the engine components and full flight deck. They're developing muscle memory, which increases retention."

Brown's research interests have included the use of virtual and augmented reality in technical training for years. She says that the incorporation of HoloLens into the classroom is a first for WMU, and the aviation industry at large.

"In the past 16 years that I've been teaching advanced aircraft systems, I have identified many gaps in the tools and equipment available to me as a professor. Ultimately, mixed reality bridges the gap between simulation, the aircraft and the classroom," says Brown.

Brown notes the operation and maintenance of modern aircraft requires an understanding of several interrelated human and machine components. Practice and immersion with these components can be created with mixed and augmented reality micro-simulations, making it possible to tackle challenging topics by creating a more visual and tactile experience."

## FROM FLIGHT SIMULATION TO AN ENTIRE VIRTUAL AIRPORT



Students learn and practice real-world scenarios in 3D cockpits.

Brown uses HoloLens to supplement flight simulation with WMU's CRJ-200 flight simulator, and has designed interactive textbooks with mixed reality overlays. Her team is currently designing an augmented reality application to transform aviation weather-related training for the Federal Aviation Administration that will overlay augmented reality 3D objects over traditional printed weather publications.

She is collaborating with other WMU colleges, instructors and students to take the technology a step further by creating additional applications with the help of computer science and aviation students and faculty, as well as a staff web developer.

Together, the team developed JetXplore, an interactive aviation training app that Brown uses with HoloLens in the classroom. Brown and her team are currently working with mentors from Microsoft to design an entire virtual airport, where the user controls what they see and how they see it. This puts the educational experience in the hands of the user creating immersive individual learning experiences.

Brown sees augmented reality as a solution to meet what she describes as unprecedented global training demands and a better way to engage the next generation.

"Bringing Microsoft's HoloLens headset to aviation and other professions such as the medical, auto and marine industries is reshaping education," she says. "The quality of its images is nearly unprecedented; you can almost suspend disbelief and imagine the objects it projects are real. That's what makes these partnerships so potentially exciting."

Brown joined WMU's Department of Aviation Sciences in 2001. She is an Airline Transport Pilot and has trained Ab-initio cadet pilots for British Airways, KLM and UAE, as well as pilots for national and international government agencies. She teaches courses in advanced aircraft systems, airline flight operations and aviation meteorology.

In addition to aviation programs offered at WMU's main aviation campus in Battle Creek, the flight science program is offered in Florida at the University's Punta Gorda location. Aviation management and operations programs are also offered online.

**Take a sneak peek at Brown's work:** <http://bit.ly/2Eb4wQ>.

**Learn more about WMU's College of Aviation:** [wmich.edu/aviation](http://wmich.edu/aviation).

**Learn more about the academic programs offered at WMU's regional locations,** including nearly 350 online courses: [wmich.edu/extended/academics](http://wmich.edu/extended/academics).

## Broader Impacts 101 Workshop



Date: March 1, 2018

Time: 9:30 to 11:30 a.m.

Meeting place: Bernhard Center, President's Dining Room

Learn new ideas valued by federal agencies, to strengthen research proposals. Presented by Dr. Laurie Van Egeren.

**REGISTER**

Proposals submitted to the National science Foundation are evaluated on both intellectual merit and broader impacts—BI. The Proposed research's potential to benefit society and contribute to the achievement of specific, desired societal outcomes. BI activities show the relevance of the research to the public—and increasing determine which of multiple excellent proposals get funded. This workshop will describe the BI criterion, how to approach BI in the research, common and innovative BI activities, and ways to build BI into your career plan. Leave with ideas, resources, and pathways to partners.

Presenter: Dr. Laurie Van Egeren, MSU Assistant Provost for University-Community Partnerships and Steering Committee for the National Alliance for Broader Impacts.



Questions? Contact [Sarah Pratt](#), Supervisor and Senior Research Program Officer  
Office of the Vice President for Research