



## Research and Scholarship

### JMU Research, Scholarship & Creative Endeavors

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Volume 4, Issue 5

Greetings!

With a new academic year underway, we would like to welcome two new deans to the JMU and Harrisonburg community.

Mark L'Esperance [joins JMU as Dean of the College of Education](#) L'Esperance previously served as professor and chair of the Department of Elementary Education and Middle Grades Education at East Carolina University, and has coached hundreds of school administrators in the areas of strategic planning and instructional leadership.

JMU also welcomed Bethany Nowviskie [as the new Dean of Libraries](#) on July 1<sup>st</sup>. Nowviskie's most recent roles have included serving as the distinguished presidential fellow at the Council on Library and Information Resources and director of the Digital Library Federation.

*Volume 4, Issue 3 UPDATE:* Physics and astronomy associate professor Adriana Banu, whose publication on research conducted at Duke University was featured in an earlier issue of our newsletter, [received a National Science Foundation award](#) of \$218,758 for her project – RUI: Exploring the Origin of the Rarest Stable Isotopes via Photon-Induced Activation Studies at the Madison Accelerator Laboratory. From the abstract -- “The proposed research aims to advance fundamental knowledge on a forefront topic in nuclear astrophysics - the synthesis of elements beyond Fe and of the rarest stable isotopes naturally occurring on Earth.”

Additionally, this past June, professor of political science and director of the Center for International Stabilization and Recovery, Ken Rutherford, participated in a Capitol Hill briefing on the global landmine crisis. Held in the U.S. Capitol Visitor Center, the focus of the briefing was on landmines and the humanitarian disaster in Yemen. Rutherford was joined by an internationally recognized group of experts, including HE Ahmed Awad BinMubarak, Ambassador of Yemen to the U.S.

Office of Research & Scholarship  
James Madison University

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Left to right: Marshall Legacy Institute Director Perry Baltimore, CISR Director Ken Rutherford, retired mine detection dog Yankee, Ambassador of Yemen to the United States of America Ahmed A. BinMubarak and CISR Associate Director Suzanne Fiederlein.

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## Faculty Grant Awards

For a monthly listing of recent faculty grant awards, please [visit the JMU Office of Sponsored Programs website](#). Here are some notable awards from May 2019:

Keigo Fukumura (Department of Physics and Astronomy) received \$20,611 from the Smithsonian Astrophysical Observatory to study the variation of the warm absorbers properties with their variable X-ray property.

Patricia Kennedy (Department of Early, Elementary, and Reading Education) was awarded \$81,275 to address barriers of quality preschool education within community-based settings, develop shared curriculum and assessment, and enhance teacher qualifications through individualized professional development plans.

Erin Piker (Department of Communication Sciences and Disorders) received a \$2,500 award from the American Academy of Audiology Foundation to characterize the relationship between the VOR and perception of vestibular sensation during sinusoidal harmonic acceleration and to investigate the effect of VOR suppression on perception of vestibular sensation.

Felix Wang and Jennifer Wiley (Center for Global Engagement) received \$31,541 from Georgetown University to host a cohort of youth that will be immersed in the community while having ample opportunities for academic growth in the focus areas of leadership, environmental protection, and social entrepreneurship.

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## College of Business Scholarship Highlights

Diane Lending and Tom Dillon, faculty from computer information systems and business analytics partnered with Keston Fulcher, executive director of JMU's Center for Assessment and Research Studies (CARS) to spearhead a webinar titled "An Example of a Successful Program Improvement Effort." With more than 70 higher education participants, the webinar served as an extension of a journal article that provided examples on how a program or major can be assessed efficiently and effectively by an academic assessment office.

Management faculty Marshall Pattie led an effort that resulted in the Society for Human Resource Management (SHRM) officially recognizing the JMU HR curriculum for aligning with their education standards. In addition to the national recognition, students are now able to waive the two-year work experience requirement prior to sitting for SHRM's professional certification exam.

Miki Sato, faculty in the Hart School of Hospitality, Sport and Recreation Management has been named a Research Fellow for the North American Society for Sport Management (NASSM), and was acknowledged at the 2019 NASSM Conference in New Orleans. A recent study by Sato and a collaborator at Temple University examined the "association between access to parks and recreation facilities, physical activity rate, and health care costs among older adults," and was published in the *Journal of Leisure Research*. A notable finding from the study found that "a 1% increase in the physical activity rate in a county was associated with reducing older adults' health care costs per person in that county by \$15.32 in 2013 and \$20.79 in 2014."

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## Geochemist Publishes in *Nature*



Professor Johnson (front left) poses with students enrolled in Introduction to Petrology, which includes field research on Mole Hill and other nearby volcanic rocks.

With funding from the National Science Foundation, professor of geology and environmental science Liz Johnson co-authored a paper in *Nature* about the formation of volcanoes in Bermuda. A [description of the research](#) states that "the researchers discovered the first direct evidence that material from Earth's mantle transition zone can percolate to the surface to form volcanoes. Before this discovery, researchers knew volcanoes formed when tectonic plates converged or diverged, or as a result of mantle plumes that rise from the core-mantle boundary to make hotspots at Earth's crust." [View a video on Professor Johnson's local research in the Shenandoah Valley](#)

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## English Faculty Member Contributes to WWI Memorial

Professor Emeritus of English Mark Facknitz proposed two quotations that will appear at the upcoming [first National WWI Memorial](#) at Pershing Park in Washington, DC. Facknitz serves on the World War One Centennial Commission, whose purpose is to educate, honor, and commemorate America's forgotten war. Guided by years of research on topics

including war, commemoration, memory, and the arts, the accepted quotes chosen by Facknitz are by Archibald MacLeish, a poet and ambulance driver during the war, and American frontier writer Willa Cather.

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## ‘Edge Walkers’ Arrives at JMU

The Duke Hall Gallery of Fine Art will [host the group exhibition \*Edge Walkers\*](#) from September 10-October 13. From the announcement -- “Curated by Keenan Rowe, Digital Design and Fabrication Manager in the JMU School of Art, Design and Art History, *Edge Walkers* examines the tenuous boundaries that exist between the disciplines of art, design, and craft. Influenced by her upbringing in Tijuana, Mexico, Tonya Aguiniga’s work uses craft as a vehicle for community empowerment by generating conversations about identity, culture and gender.” Director of the Duke Hall Gallery of Fine Art, Beth Hinderliter, commented, “This exhibition features artwork by a talented and diverse group of artists and designers, including furniture, lighting, textiles, sculptures, as well as works that defy easy categorization.”

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## Professor Named Editor of Leading Intelligence Journal



Marrin presenting at the 2018 Association of International Risk Intelligence Professionals conference.

Intelligence analysis program director, Stephen Marrin, was recently named editor of the journal – [Intelligence and National Security](#). From the publisher’s website, “*Intelligence and National Security* is widely regarded as the world’s leading scholarly journal focused on the role of intelligence and secretive agencies in international relations.” Prior to joining the School of Integrated Sciences at JMU in 2013, Marrin held faculty positions at Brunel University in London and Mercyhurst University in Pennsylvania. The JMU intelligence analysis program graduates approximately 55 students each May, most of whom become analysts in a wide range of fields.

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## Can Dorm Design Impact Grades?

Elisabeth Spratto, a data analytics specialist with the Office of Institutional Research, [co-authored a study](#) in the *Journal of Student Affairs Research and Practice*, which examines how the design of residence halls can influence students’ academic outcomes. From the abstract, “This study investigates the impact of residence hall architecture on students’ academic achievement, also considering the influence of race and homophily opportunity—a tendency to create social bonds with like others.” Discussing the impact of the study, Spratto commented, “I think this research is important because college represents a major transition in students’ lives, and the difficulties of that transition can be exacerbated by being a member of a minority group. The fact that the socializing nature of communal

dorm styles may have a positive impact on minority students' transition to college - and subsequently their academic success - is important for student affairs professionals to recognize." *The Hidden Structure: The Influence of Residence Hall Design on Academic Outcomes* was published in collaboration with colleagues at the University of Virginia and Liberty University.

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## JMU Grad Leading the Lincoln Park Zoo

Biology and psychology graduate Megan Ross is the [eighth director of Chicago's Lincoln Park Zoo](#), and the first female to lead the 151-year-old institution. Ross completed her dissertation on the effects of ultraviolet light on bird behavior, and commented on her experience while at JMU, "There was a 100% JMU influence on me. I knew I loved science, but I didn't know what career opportunities there were besides those in the medical field before I got to JMU."

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## Engineering Professor Wins Award for Advancing Entrepreneurially Minded Learning

Justin Henriques, an associate professor of engineering, [earned a Rising Star award](#) from the Kern Entrepreneurial Engineering Network. The selection committee pointed to Henriques' impressive record of achievement creating and promoting entrepreneurial minded learning. When asked to share his thoughts on receiving the award, Henriques commented, "I'm incredibly grateful for Kern Family Foundation's support for our work here in the engineering department. The Foundation's support has been instrumental in helping us to transform many of the learning experiences for our students."

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## Hacking the Problem



Twelve JMU students spent the first day of their spring break developing surveillance devices for a federal contractor in North Carolina. Using a Raspberry Pi—a single-board computer—along with cameras and sensors, teams from JMU and Virginia Military Institute were given [24 hours to create a prototype](#) that could count the number of people walking past a designated area, but with a catch—their device needed to be accurate enough to avoid counting the same person twice.

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