



JMU Research, Scholarship & Creative Endeavors

Volume 5, Issue 4

We hope this issue of the JMU Research, Scholarship & Creative Endeavors newsletter finds you safe, healthy, and resilient.

We'd like to express our sincere gratitude to the thousands of frontline workers sustaining our healthcare facilities, keeping the food supply functioning and grocery store shelves stocked, cleaning and sanitizing work and public spaces, and responding to community members in critical situations. [Many JMU alumni are counted among these courageous individuals](#). And while you may have already heard about some of the many examples of JMU Dukes offering a helping hand in recent weeks, we think these stories of selfless innovation and community spirit are worth repeating:

- Softball student-athlete [helps feed children and families](#) in Page County;
- Faculty, students, and the JMU X-Labs joined business and community leaders to [launch an online marketplace](#) for the Harrisonburg Farmers Market;
- A co-founder of Pale Fire Brewing, Tim Brady ('06), organized a [pop-up food pantry](#) – Pale Fire Helps – in their downtown Harrisonburg tap room for local service industry workers impacted by the COVID-19 pandemic.

We also extend a warm congratulations to the more than 4,500 students who became JMU graduates during a virtual conferring of degrees on May 8th. View the [digital program and congratulatory messages](#) from university leaders.

During this period of social distancing and remote work, please know that the Office of Research and Scholarship remains open and committed to assisting faculty and students advance their research, scholarship, and creative endeavors, while also collaborating with industry, government, nonprofits, and other academic organizations to support JMU's mission and vision and the priorities of the Commonwealth.

Office of Research & Scholarship
James Madison University

*All group photos in this issue were taken prior to the implementation of Virginia's Stay-at-Home order.



JMU faculty, staff, and students pose for a group photo after participating in the Hunger Symposium Packing Challenge. The friendly competition between Blue Ridge Community College, Bridgewater College, James Madison University, and Mary Baldwin University saw almost 20,000 lbs. of sweet potatoes packed into bags for distribution to families in the Blue Ridge Area Food Bank's service region.

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 February and March 2020:

Kenn Barron (Department of Psychology) received \$10,880 from the University of Virginia to assist the project team at Motivate Lab to develop systematic communication structures and knowledge management system, develop logic models to plan and evaluate meaningful professional development for educators and administrators, execute workshops and training sessions at Tennessee pilot institutions, and present findings throughout Tennessee.

Raymond Enke and Oliver Hyman (Department of Biology) received \$26,490 from Cold Spring Harbor Laboratory to support broad implementation of course-based undergraduate research experiences into large enrollment undergraduate core curriculum courses in an effort to increase student retention and graduation rates in STEM majors.

Alleyn Harned (Virginia Clean Cities) received \$198,589 from the U.S. Environmental Protection Agency to significantly improve the environmental performance of goods movement fleets across Pennsylvania, Virginia, West Virginia, Delaware, and Maryland.

Brant Jones and Hala Nelson (Department of Mathematics and Statistics) received \$259,177 from the National Science Foundation to support two cohorts of undergraduate students for a Research Experience for Undergraduates (REU) program at James Madison University.

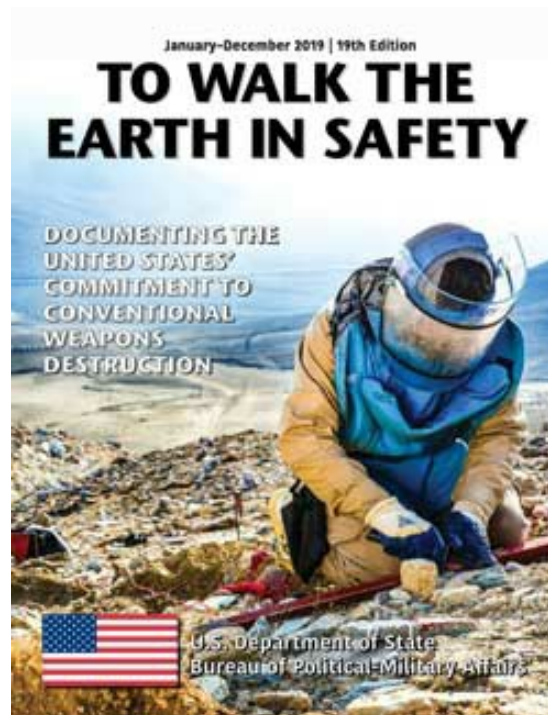
Biology Lends Expertise and Equipment to COVID-19 Response

Just this week, JMU profiled [one JMU center's work in support of the global effort to develop life-saving therapies](#) in response to COVID-19. From the story:

Steve Cresawn, co-director of JMU's [Center for Genome and Metagenome Studies](#) or

CGEMS, is lending some underutilized computing power to a crowd-sourced research effort that is running simulations of COVID-19 proteins. Normally, the CGEMS computers would have plenty of work to do handling research questions for students. Due to the pandemic, that work is either substantially curtailed or not happening at all, Cresawn said. So, he installed Folding@home software on them in mid-March to aid the project's search for ways to attack the COVID-19 virus. What the project does is give researchers direction in what experiments to run, Cresawn explained. "When it comes to understanding how living things work, the simple thing to do is to read the information in the genome, to sequence the genome," he said.

JMU Center Produces State Department Annual Report



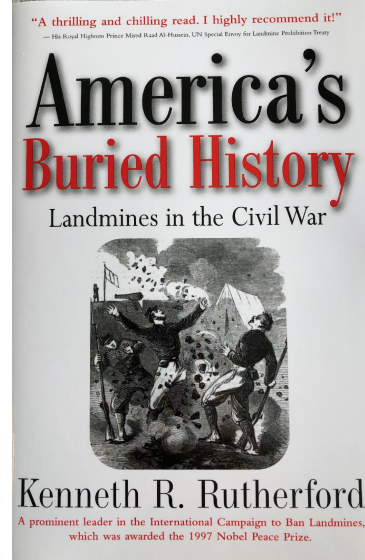
On April 2, 2020, the Office of Weapons Removal and Abatement in the U.S. Department of State's Bureau of Political-Military Affairs released the 19th Edition of [*To Walk the Earth in Safety*](#), an annual report documenting the humanitarian demining accomplishments of the U.S. Conventional Weapons Destruction Program. For more than 20 years, the United States has led the international donor community in promoting peace and security by allying with nations around the world to reduce the availability of excess, loosely-secured, or otherwise at-risk small arms and light weapons and munitions, as well as address the humanitarian hazards from landmines and unexploded ordnance in post-conflict countries.

The [Center for International Stabilization and Recovery](#) (CISR) at JMU has proudly partnered with the U.S. Department of State to co-write, edit, design and produce this publication since 2008. View the publication online at the [U.S. Department of State website](#) or on the [CISR website](#).

Professor Publishes Book on Landmines in the Civil War

Professor of political science and former director of the Center for International Stabilization and Recovery Ken Rutherford published [*America's Buried History*](#), an examination of "the development of landmines from their first use before the Civil War, to the early use of naval mines, through the establishment of the

Confederacy's Army Torpedo Bureau, the world's first institution devoted to developing, producing, and fielding mines in warfare." This eight-year investigation into the rise of landmines during the American Civil War claimed the #1 new release spot on Amazon in the "19th Century World History" genre.



Food Drive Generates 8,700 Meals



Thank you to the hundreds of students, faculty, and community members who participated in the 2019-20 Food Drive, organized by the Office of Research and Scholarship and benefiting the Blue Ridge Area Food Bank. The 12th annual drive collected 3,277 lbs. of food and \$1,500 in cash donations. The 8,700 meals equivalent brings the event's overall impact to 35,640 meals donated, which could feed eight families of four for an entire year. [Visit the food bank's website](#) for information about how to support their efforts during the COVID-19 pandemic.

JMU Shows Up at Decision Science Conference

Earlier in the academic year, Helen You, faculty member in the Department of Health Professions, published a paper with JMU students enrolled in a course on health research statistics. The paper, *How Do Health Behaviors Affect Academic Performance?* was accepted for presentation at the Southeast Decision Sciences Institute (SEDSI) 2020 annual conference in Charleston, SC. Department of Computer Information Systems and Business Analytics professor Ping Wang [chaired the 2020 event](#), which included over 40 JMU faculty and student authors (the most from any school). Joining the JMU contingent and more than 200 additional attendees at the SEDSI conference, were three of You's students -- Abigail Wostbrock, Anna Zheng, and Sarah Douress -- who presented their research findings and shared the following comments regarding their experience:

- Douress: "The process of developing the project and attending the conference definitely confirmed what I want to do after graduating from JMU. I'm hoping to work for the community health and engagement department of a hospital system and eventually attend graduate school. Completing this project gave me valuable data analytic and critical thinking skills that I can transfer to my career and exposed me to an area of research that I can continue with at graduate school."
- Wostbrock: "My experience attending the 50th annual Southeast Decision Sciences Institute (SEDSI) Conference was unlike anything I've had the opportunity to be a part of thus far [in my career]. My coauthors and I were of the very few undergraduate students, but were so welcomed and respected nonetheless. The opportunity to present our research as well as network with other students, faculty,

and SEDSI members was beyond rewarding!”

- Zheng: “I really enjoyed the opportunity to attend the conference in Charleston, SC. It allowed for me to strengthen my public speaking skills and to speak to others on our study. It was also really interesting to see what others did their research on. Overall, this has been one of my favorite experiences in my undergraduate career.”

The JMU College of Business generously served as a sponsor for the event, and the Office of Research and Scholarship contributed funding to support professor You’s and her students’ travel.

Education Faculty Develop Virtual Book Club for Third Grade Students

College of Education faculty members Chelsey Bollinger (early, elementary and reading education) and Timothy Thomas (educational foundations and exceptionalities) teamed up to develop a virtual book club partnering with a regional third-grade class. Expected to go live during the fall 2020 semester, the program will be of mutual benefit to both the college-level JMU students and the third graders. Thomas explained, “For the JMU students, at least part of the learning would center on the dynamics of learning that would occur in a small group -- what are the effects when learners collaborate to reach deeper understandings, and how can educators work productively with learners to build the skills associated with good reading?” Regarding the connection between third graders and college students, Bollinger stated, “The opportunity to exchange ideas about books with university students could prove to be a unique motivator for these young readers, helping them make some gains in their reading performance.”

Bollinger’s utilization of technology to deliver online education also includes scholarly efforts with additional faculty colleagues from the College of Education and JMU Libraries. Shin Ji Kang, Christie Liu, Holly McCartney, Maryam Sharifian, D. Reece Wilson, and Bollinger presented “JMU’s AA to BIS Online Learning Environments: Being Real Humans with Faces and Voices” at the following conferences -- the 2019 Virginia Association of Colleges for Teacher Education and the 2019 National Association of Early Childhood Teacher Educators.

Music Q&A on Inspiration During Challenging Times and Inclusive Music Engagement in the Community



(L to R) Lily Gates (JMU ‘20), then-Gemeinschaft Home resident Brian Hogan, and Rebecca Kenaga (JMU ‘20) perform Hogan’s “Mud Driving” at Forbes Center for the Performing Arts in May 2018.

Research & Scholarship recently caught up with associate professor of music David Stringham for a [Q&A about hope and inspiration](#) during the COVID-19 pandemic, and to learn about music engagement activities facilitated by JMU faculty and their many partners. Stringham thoughtfully addresses the role of the creative arts, stating, "Creating is a part of what it means to be human, and we can connect with this piece of our humanity—within and beyond the arts—through composing, improvising, or arranging music, choreographing a dance, authoring a play, writing a novel, making furniture, developing a new piece of software, or designing a garden."

Showker Shoutouts from the College of Business

Management Faculty is the New CSX Chair

Management professor Bill Ritchie will be the new CSX Chair starting in the fall. This endowed chair was created to recognize excellence in scholarly achievement in the management department. Bill currently has 35 peer-reviewed published articles, including an article in the *Strategic Management Journal*, one of the preeminent journals in the field of Management.

Ritchie shares this drive for scholarship with students through the Research Experience for Undergraduates (REU) program as well, and recently presented scholarly work at the SEDSI conference in Charleston, S.C. with two COB REU students. Sophomore and CIS major Jake Decker and Ritchie presented "Linking Blockchain, Supply Chain, and Student Learning: A Classroom Exercise," with Mert Tokman, faculty in the marketing department and the MBA program, as a co-author.



Bill Ritchie (right) poses with his students and Dean of the College of Business Mike Busing (left center) at the SEDSI conference.

Marketing Faculty Publishes in the Journal of Services Marketing

Marketing professor Kelly Naletelich recently published an article in the *Journal of Services Marketing*. Titled "How anthropomorphic cues affect reactions to service delays" and co-authored by Seth Ketron of California State Polytechnic University, Pomona, the research tests the effects of anthropomorphic cues (namely, happy and sad faces) on consumer responses to service delays, depending on whether service providers are at fault for those delays. It uses three experimental studies to test the proposed effects, and adds clarity to the literature on anthropomorphism by showing how blame attributions for service delays can lead to different consumer responses to anthropomorphic cues. The findings also show how anthropomorphism can help to mitigate negative consumer

responses to service delays.

Ethical Reasoning Education Works at JMU

Good news -- JMU's 8 Key Questions ethical reasoning framework is working! The management department's Laura Parks-Leduc and Matt Rutherford, with help from student research assistant Leigh Mulligan, recently published an article in the *Academy of Management Learning & Education* journal. Titled "Can Ethics Be Taught? Examining the Impact of Distributed Ethical Training and Individual Characteristics on Ethical Decision Making," the reasearch uses JMU's 8 Key Questions ethical training as a model to examine whether such training is effective, and what other factors influence its results. The three-part approach finds that exposure to ethical training of the type provided at JMU is "significantly related" to improvements in ethical reasoning, and takes into account personal values and personality traits that may also influence the outcome.

Occupational Therapy Clinic Creates "OT-to-Go" Kits for Children

"Unable to hold regular face-to-face sessions with clients since mid-March, a James Madison University-based occupational therapy program for children has found another way to continue its services during the COVID-19 pandemic, 'OT-to-Go' kits." Professional staff and students from JMU Occupational Therapy Clinical Education Services (JMU-OTCES) assemble the kits to correspond with a weekly theme, for example, "stress management and coping," "springtime and Easter," "environment and nature," and "chores and spring cleaning." "Located on Grace Street, the clinic serves children from around the central Shenandoah Valley who have sensory processing challenges, autism, Down syndrome, developmental delays, ADHD and a number of other conditions that complicate learning." [Read the full story](#)

JMU Industry Partner Hosts RF Workshop for Faculty

James Madison University hosted Rohde & Schwarz, an international firm specializing in test and measurement instruments, broadcast and media infrastructure, secure communications software, radio monitoring and network test equipment, and cybersecurity products, for a Radio Frequency (RF) Fundamentals Seminar in February. The Rohde & Schwarz team delivered an introduction to RF and presentations on transmission lines and components, signals and noise, and modulation for a group of JMU faculty and students representing physics and astronomy, as well as computer science.

Engineering Students Use Drone Technology to Assess Vineyard Health



As part of their capstone project, a team of JMU engineering students worked with Blenheim Vineyards to assist the vineyard manager gain data to improve the health of the crop. Images captured by the drone-mounted cameras can show “where special attention to things such as irrigation, soil remediation and cover crop is needed.” This effort includes a web app component that will “provide easy access and analysis of the images in the field and where notes can be made about the images and information about specific vines can be recorded.” The students delivered a virtual presentation of their project in late April, participating in the 2020 Madison Engineering Virtual xChange event. [Read the full story](#)

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