



JMU Research, Scholarship & Creative Endeavors

Volume 7, Issue 2

JMU's Center for the Advancement of Sustainable Energy (CASE), was recently highlighted in a story by *VPM Science Matters*. The piece highlights a partnership between CASE and the Valley Scholars Program, where high school students learned about global energy needs and developed [two mobile solar power generators for a Kenyan refugee camp](#). CASE's Director of Education and Outreach, Remy Pangle, elaborated on the scope of the project, "Once students have a better understanding of the problems surrounding energy access and the extent of the issue, they are then confronted with the coexisting issue of climate change." Additionally, CASE's commitment to intellectual diversity in their programs and activities was recognized by *Energy Today* on their list of 20 "university programs making outsized contributions to energy."

JMU is again a top producer of Fulbright U.S. Students. Under the leadership of Meredith Malburne-Wade, Director of Fellowships and Awards, JMU students secured [four awards from 49 applications](#) during the 2021-22 awards cycle.

Please join us for the [virtual Beitzel Symposium](#) on Thursday, April 7 from 6:00-7:30 p.m., as we continue to honor and celebrate the life and legacy of Dr. Terry Beitzel. In this symposium, we highlight Dr. Beitzel's scholarship in the area of responsibility by presenting research from the *International Journal on Responsibility*, which he co-founded with Howard Carrier. This event is hosted by the Mahatma Gandhi Center for Global Nonviolence and the Department of Justice Studies at James Madison University.

ICYMI, sustained growth in research and scholarship activities and graduate education has [elevated JMU](#) to a new Carnegie Commission classification, R2: Doctoral Universities – High Research Activity. "I am tremendously proud of our faculty for establishing an environment in which JMU can remain distinctive in its emphasis on strong mentoring and high-quality teaching at all levels and on providing students with rich opportunities to learn through hands-on experiences and participation in research," said JMU Provost and Senior Vice President of Academic Affairs Heather Coltman. "We arrived at this milestone through the increasing national reputation and success of our graduate and doctoral programs, combined with our continued growth and prominence in research, scholarship and creative activities."

Office of Research & Scholarship
James Madison University



JMU's [Gathering of Hope](#) on February 11.

Grant Awards

For a monthly listing of faculty grant awards, please [visit the Office of Sponsored Programs website](#). Here are some notable awards from October, November, and December 2021:

Karen Barnard-Kubow (Department of Biology) received \$378,051 from the National Science Foundation to gain an understanding of the role of the plastid genome in driving the generation of new species through cytonuclear coevolution and incompatibility.

Kenneth Barron (Department of Psychology) was awarded \$16,620 from the University of Virginia to support online learners, consult with project team and program partners on implementation of learning mindset supportive practices, develop logic models to plan and evaluate meaningful professional development for educators, assist with the qualitative coding of online resources, and share relevant findings with practitioner partners.

Robert Nagel, Daniel Castaneda, Jacquelyn Nagel, and Kurt Paterson (Department of Engineering) received \$100,000 from Arizona State University to explore the use of “Entrepreneurially-Minded Learning Community Circles” as a central feature for a dynamic and multi-directional mentoring approach to yield more positive results.

Bethany Nowwiskie (JMU Libraries) and Joanne Gabbin (Furious Flower Poetry Center) received \$2,000,000 from the Andrew W. Mellon Foundation to secure the future of the Furious Flower Poetry Center’s digital publishing infrastructure and audiovisual collections, while planning for the Center’s 2024 decennial conference.

Remy Pangle (Center for the Advancement of Sustainable Energy) received \$25,000 from the Dominion Foundation to support an engineering design competition where students build a wind turbine and compete to generate the most energy.

Paul Raston (Department of Chemistry and Biochemistry) received a Faculty Early Career Development Program (CAREER) award from the National Science Foundation. The \$350,000 CAREER award will be used to investigate microscopic superfluidity in uncharted territory using state-of-the-art high-resolution spectroscopic techniques and developing virtual instrumentation and associated experiments for a variety of upper-division courses.

Student Research Testimonials

With summer session around the corner, we are reminded of the importance of high-impact practices like student research experiences. Student Creative Activities and Research, led by Coordinator of Student Research Dayna Henry, gathered these testimonials about summer research projects (more to follow in our next issue).

Kianna Butts Sophomore Biology

What advice do you have for a student thinking about a summer research experience?

"I would tell students thinking about summer research to just go for it. While it may be a large time commitment, the experiences and growing that you will do during this time will help you so much in the future. There is something so special about being around other driven researchers during summer and being on your empty campus doing meaningful work that is just indescribable."

What was the highlight of your summer research experience?

"The highlight of my summer research experience was truly getting to bond and hangout with other researchers in lab. We have gone out to dinner, got ice cream, and were able to get to know each other more."

SUMMER
RESEARCH



Miracle Ogbor Graduate Student Music

What was your most memorable experience from the summer research experience?

"When I got published and saw my name on 4 books. It was surreal, but I knew all the hard work I had put into it which made it worth it."

What advice do you have for a student thinking about a summer research experience?

"Like Mark Twain said, the best way to getting ahead, is getting started."

SUMMER
RESEARCH



"Research is a continuous growing process. Little drops of water makes a big ocean."

Virtual Book Displays

JMU Libraries launched four new virtual book displays over the past month. Visit their [book display site](#) for a wealth of resources on the following topics: Social Justice and Disability in Academia (also in Carrier Library), Food, Inc. (also in Rose Library), Learn About Ukraine; and Women in the Workplace.

Geology Faculty Creates Digital Map of Historic Cavern

The ongoing digital mapping of Grand Caverns, led by Ángel Garcia Jr., assistant professor of geology and environmental science, has been recognized for its innovative use of Lidar (Light Detection and Ranging) with simultaneous localization and mapping (SLAM) technology to construct a 3D map of the oldest show cave in the continental U.S. [Education Technology](#), a U.K.-based publication, highlights the project's rich results, which can be printed as 3D models, and the opportunities the mapping provides for experiential education for students. The project's successful use of SLAM is also covered in two geological industry publications, [GIM International](#) and [GISUser](#), which note additional product features that would be pertinent to industry professionals.

Author Jocelyn Johnson Visits JMU for a Reading and Fireside Chat



The College of Arts and Letters, JMU Black Student Alliance, and Department of English hosted alumna Jocelyn Johnson for a Reading and Fireside Chat in February. Johnson read passages from her novella *My Monticello*, [described by the publisher](#) as "Johnson's precisely imagined debut explores burdened inheritances and extraordinary pursuits of belonging: a young woman descended from Thomas Jefferson and Sally Hemings driven from her neighborhood by a white militia; a university professor studying racism by conducting a secret social experiment on his own son; a single mother desperate to buy her first home even as the world hurtles toward catastrophe—each fighting to survive in America."

During the Q&A, a student asked what advice Johnson would share with aspiring writers,

to which she responded, "Find joy in it. Creating is hard. Find that joy early on. You need a lot of that before you put things out in this world. Find a community of people that you can share it with. Writing groups, summer workshops, collecting friends – finding a good community of people who will give you meaningful feedback and also build you up."

Ag Education Opportunities Grow in JMU's Edible Forest Garden

[From CISE Marketing Communications:](#)

Imagine a campus with classrooms where students can learn and connect in outdoor spaces to gain first-hand knowledge and experience in agriculture and sustainability. This is what Mikaela Schmitt-Harsh, biologist and professor of Interdisciplinary Liberal Studies, envisioned when she brought the concept of an edible food forest garden to JMU.

An edible food forest garden is an ecosystem of plants that imitates the patterns of a natural forest. Located on the east campus, the JMU Edible Food Forest Garden is a step toward improving biodiversity and thinking about local food production.

[Read the full story](#)

Graduate Student Attends Council for Exceptional Children Conference



Colleen Fowkes, a soon-to-be Triple Duke who is completing her Masters of Education in Applied Behavior Analysis in the College of Education, recently attended the Council for Exceptional Children Conference (CECC2022) in Orlando, Florida, to present her work. The R&S Travel Grant Program, previously managed by the Graduate School, provided support for her experience. This program offers students destination-based funding reimbursement for both in-person and virtual conferences. R&S caught up with Colleen to learn more about the connection between students' preferred stimuli and their visual behavior.

[Read the Q&A](#)

Annual Undergraduate Juried Show



From the School of Art, Design and Art History:

ArtWorks Gallery presents the School of Art, Design and Art History's [Annual Undergraduate Juried Show](#) at James Madison University. This year's guest juror is Richmond-based fiber artist Marie Fornaro. Students in all undergraduate SADAH programs are eligible to submit work in a variety of materials and processes that reflect their unique, creative vision.

A [virtual tour](#) of the exhibition will be posted on the ArtWorks site.

JMU Sexuality Education Program Profiled by Federal Health Agency

The Institute for Innovation in Health and Human Services' *Vision of You* program was recently [profiled in the March issue](#) of the Family and Youth Services Bureau's newsletter (an office of the U.S. Department of Health & Human Services). Part of the Virginia Personal Responsibility Education Innovative Strategies ([VPREIS](#)) project, "The VOY program addresses comprehensive sexuality education as well as healthy life skills and relationships using engaging video, animation, interactive components, and gamification principles."

CoB Program Offers Research Experiences for Undergraduates

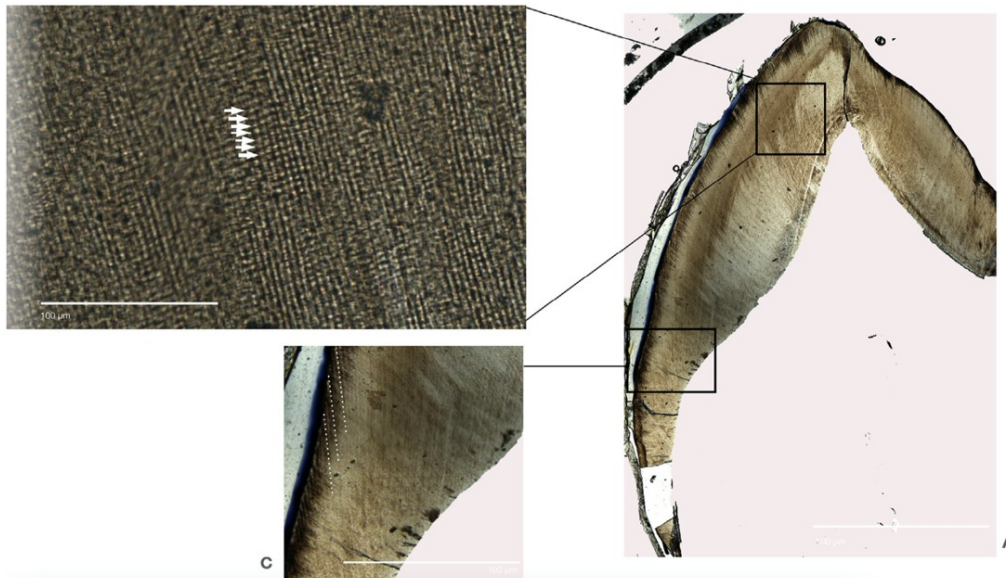
From CoB Marketing and Communications:

Although undergraduate research is commonplace for those studying in the science and technology fields, business students don't typically have that same opportunity. Therefore, in the summer of 2015, the college [launched the REU program](#). Since then, 268 students and 86 faculty members have participated in research projects together. Overall, there have been approximately 27,000 hours of research work completed since the program's inception.

REU program director, Andre Neveu, says, "given the growth of the 'knowledge economy' the students who get to participate in research as undergraduates will be better prepared to enter the workforce and make meaningful contributions at a very early stage...the students in this program are taking part in more advanced research and learning both the process and tools that have practical research uses."

Anthropology Faculty Publishes and Receives FYRE

Program Support



A histological section of a *Homo sapiens* molar.

Do dental microstructure variables distinguish between living primate groups and fossil hominins? The [latest article](#) from visiting assistant professor of anthropology Chrisandra Kufeldt and co-author Bernard Wood (George Washington University), “Distinguishing Primate Taxa with Enamel Incremental Variables,” published in the *Journal of Human Evolution*, explores the use of these traits in taxonomy and phylogeny. The dataset used includes the largest sample of non-human primates and is available in the Supplementary Material.

When asked about future research plans, Kufeldt commented, “I am currently part of the FYRE program at JMU working on a new project with an undergraduate student. I have μ CT scans of fossil primate teeth dated to 53 million years ago. We are trying to determine if size and shape taxonomically distinguishes between fossil specimens. I will also be conducting field work at sites dated between 53-44 million years ago in the Great Divide Basin in Southern Wyoming.” Hosted by Student Awards, Initiatives, and Research (STAIR), a unit of Research & Scholarship, the First Year and Transfer Student Research Experience (FYRE) Program seeks to match faculty with historically excluded first year and transfer students who are interested in gaining mentored research or creative experiences.

James Madison University | Research & Scholarship | www.jmu.edu/research

