Whether harnessing technology to better the world or redrawing the map of history, the Madison community embraces a culture of innovation through cross-disciplinary collaboration.
Honors Seminar: Dominican Republic

This intensive service-learning trip over spring break is part of the Honors Program’s Global Studies area of emphasis. JMU students, including political science major Tristan Keightley ('18), volunteered at a local school and conducted a supply drive. They also had the opportunity to learn about the social systems and cultural aspects of the island nation. Participants were asked to reflect on their experiences and how they relate to their own worldviews.

PHOTOGRAPH BY MIKE MIRIELLO ('09M)
INNOVATION & DISCOVERY

Whether harnessing technology to better the world or redrawing the map of history, the Madison community embraces a culture of innovation through cross-disciplinary collaboration.

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**Picture This**  
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Kara McGuirk-Allison ('95) helps people apply social science to everyday life. **PAGE 18**

**The challenge of drones**  
Madison students put drones to work for common good **PAGE 34**
Dear Ms. Graham,

I read [the story of Micah Hodges and Ted Aronson] in Madison magazine as I was waiting on my car to be repaired. I have a grandson on the Autism Spectrum, and we are looking at colleges for him that have the sensitivity he needs for him to be successful with experiencing college life.

When parents who have a child with ASD read an article such as yours, it gives us hope. Without hope, we then accept what others have told us: “Your children can never go to college.” I would very much like for my grandson to meet Micah and/or Ted face-to-face this summer if at all possible.

Thank you for writing such an awesome article.

Best Regards,

Mrs. Elizabeth Salter

Madison contributor Martha Graham received a very special letter in response to her article, “Hope for Autism: Ted and Micah’s Excellent Adventure,” in the Fall 2015 issue.

Madison is CASE Grand Award winner

Madison, the tablet edition, won the Council for Advancement and Support of Education’s 2015-16 Grand Award in the category of Electronic and Digital Media for Southeast District III.

The free app version of Madison launched at the beginning of 2015. We’re doubly proud that our initial efforts in the realm of digital publishing were recognized with this honor.

We hope you are enjoying this mode of Madison magazine delivery. As the tablet edition of Madison continues to evolve, we welcome your feedback. And, if you haven’t explored the interactive magazine as yet, download the free Madison app at jmu.edu/madisonmagazine.
March 15, 2016, will be long remembered for the wonderful outpouring of support from alumni, students, parents, faculty, staff and Dukes from all around the globe. The overwhelming response during the 24 hours of JMU’s first-ever Giving Day once again affirms that something very special is happening at JMU.

THANK YOU FOR YOUR GENEROSITY!

2,840 Total gifts (exactly 5x the original goal of 568)
901 first-time JMU donors
1,765 Number of gifts in the $5 to $50 range
$338,964 Total dollars raised from JMU’s first-ever Giving Day
3,342 Number of social media posts about Giving Day
Yvonne Harris serves as JMU’s first vice provost for research and scholarship, providing leadership for the offices of Sponsored Programs, Technology Innovation, Research Integrity, and Research Development and Promotion, in addition to five research and outreach centers addressing security and energy issues. Read her essay on innovation on Page 22.

David Ehrenpreis is professor of art history at JMU and director of the Institute for Visual Studies (read more about this center for multidisciplinary collaboration on Page 24). He has curated eight exhibitions at IVS and a survey of the contemporary Chinese artist Xu Bing’s work. Currently he is preparing an exhibition and edited volume, “In the Heart of the Shenandoah Valley: Visions of Harrisonburg, 1867-2017.”

University Communications and Marketing assistant Rachel Petty (’17) hopes to work for a magazine or online media company in the future. She is majoring in media arts and design with a concentration in journalism and minoring in Spanish and creative writing. Petty writes about JMU engineering students working with NASA on Page 48.

Assistant Athletic Director for Communications Kevin Warner (’02) joined JMU Athletics in 2006 and currently oversees all of the department’s communications and community relations efforts. Among his recent accomplishments, he was integral in bringing ESPN’s College GameDay to JMU. His feature on JMU’s new Integrated Health and Sports Performance Model is on Page 28.

Eric Gorton (’86, ’09M) earned his bachelor’s degree in mass communications and worked for 12 years as a reporter and editor at the Daily News-Record in Harrisonburg. After working for a local tech company and then at the Virginia Department of Transportation, Gor- ton returned to JMU in 2005 to work for University Communications. Read his story on JMU’s collaborative research efforts with U.Va. into antibiotic-resistant bacteria on Page 40.

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Problem-solving in every discipline

At Madison, the link between engagement and innovation is readily apparent

...we at JMU are working to instill in every member of our community the spirit of possibility that animates the necessary and critical function of innovation.

Published by JMU Scholarly Commons, 2016

SPRING/SUMMER 2016
Finding new ways to diagnose and fight malaria is pretty important to the National Institutes of Health, and the agency likes the approach a JMU biology professor is taking.

Chris Lantz (’90) recently received a $445,500 grant from the NIH to fund potentially groundbreaking research into the role of a protein the body produces in response to certain diseases. Lantz will use the new grant to advance his exploration of how Interleukin3, or IL-3, works in the body’s immune system. In 2010, Lantz and his lab students made a startling discovery about IL-3—it appears to hamper the body’s defense against malaria.

For now, Lantz and his students are concerned with finding out what cells are responsible for producing IL-3 and the timing involved in its production. To do that, they will study mice with genes that are modified to alert researchers to the presence of IL-3.

If the research pans out, Lantz said, it could lead to improved clinical approaches to diagnosing and treating the disease.

“That’s always the hope, but like any area of research, my work will have to be confirmed.”

‘We want to understand the mechanism of how this protein is actually working ... so we are now focused on its role in the body’s immune response against malaria.’

— CHRIS LANTZ (’90), biology professor
Art on the moon
Mark Rooker chosen to help craft miniature human time capsule

Mark Rooker, associate professor of art at JMU, is one of about 50 international artists, scientists, designers and engineers chosen to craft a miniature human time capsule for discovery on the moon.

The gift, known as the MoonArk, contains elements representing all of the arts and humanities—art, architecture, design, music, drama, ballet and poetry. It will take the form of four elaborately constructed chambers, each holding two engraved sapphire disks, metal sculptures, microcapsules containing evidence of life on Earth, high-resolution dye sublimation imagery on metal foil, and a variety of data, imagery and physical traces. Together, these four chambers will occupy no more than 6 ounces of payload.

Since joining the team in July 2013, Rooker has focused his efforts on building sculptural components for the four chambers. His small-scale work with primarily titanium has been possible because of the laser welders in JMU’s state-of-the-art Metals and Jewelry lab. To help him accomplish the task, Rooker enlisted the help of master machinist Mark Starnes in JMU’s College of Integrated Science and Engineering and his student apprentices.

The project, in partnership with Carnegie Mellon University and Pittsburgh-based Astrobotic Inc., will hitch a ride to the moon later this year.

Honors College plan advances
Program awaiting state approval; recruitment to begin this fall

Pending approval by the State Council of Higher Education for Virginia, JMU’s Honors Program is poised to become the Honors College. The next step follows the JMU Board of Visitors voting at its Jan. 15 meeting to approve the change.

Bradley R. Newcomer, director of the Honors Program, anticipates that this advancement will not require any organizational or curricular changes due to the fact that the program is functioning as a college now. “The time is right for us to move from a program to an Honors College because we cross into all academic majors and offer honors experiences for students throughout their undergraduate years at JMU,” Newcomer said.

Recruitment for the Honors College will begin in Fall 2016 with the inaugural freshman cohort joining JMU in Fall 2017. Students who are currently enrolled in the Honors Program will be grandfathered into the new college. There are approximately 950 students currently in the program.
Breathing easier
Wearable air quality sensors receive EPA backing

With nearly $15,000 already in their pockets, a group of JMU engineering students is hoping to earn an additional $75,000 from the Environmental Protection Agency to create wearable air quality sensors.

Air quality is traditionally monitored by fixed stations. Wearable air quality sensors would collect data at various locations and times for use by both individuals and communities. People who exercise outside, for example, could use the data to plan the best times and places for doing so. And communities could use the space and time data to make better policy decisions regarding air quality.

In Fall 2015, students majoring in industrial design, computer science and engineering developed a prototype using 3-D printers. It uses GPS to monitor its location and an accelerometer to measure its movement. Data is stored on an SD card.

This semester the engineering team is collecting data around Harrisonburg using six prototypes. They can then compare that data to what is collected at traditional stations.

Empowering student leaders
University Innovation Fellows team boosting JMU's national profile

Chris Ashley ('17) didn't have any qualms about giving up part of his spring break to attend the SXSWedu Conference in Austin, Texas, in March. "It was easily worth it," the economics major said. "It was a great opportunity, and I didn’t know if it would come back around."

Ashley was part of a University Innovation Fellows team that discussed ways students can influence the direction of their universities.

The University Innovation Fellows program strives to empower students to become leaders of change in higher education. The program is run by the National Science Foundation-funded Epicenter, which is directed by Stanford University and the nonprofit VentureWell. To become a Fellow, students have to complete a week of training at Stanford and then conduct programs at their home institutions. Ashley is part of JMU's second cohort of University Innovation Fellows.

Nick Swayne, director of 4-VA at JMU and an advisor to JMU's University Innovation Fellows, said presenting at SXSWedu is impressive recognition for JMU. "Being on the same stage as Stanford and Clemson and some of those other guys … I think that really adds value to the institution."

Ashley also participated in a national meeting March 17-21 at Stanford, where our University Innovation Fellows team had a leading role in workshops and other activities for a new class of Fellows from universities across the country.

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"I was looking for an MBA program that focused on leadership and fit into my schedule and budget. This program accomplishes all three."
— David Thomas, Executive Leadership MBA student, vice president, senior advisor consultant, OppenheimerFunds, Inc.
If it hadn’t been for happenstance, Jeff Tickle might have never enrolled at James Madison University. “I’d really never heard of JMU,” he says. “My neighbor happened to be Ron Carrier’s cousin.” When she asked the soon-to-be-high-school graduate, ‘Have you thought about JMU?’ he took a look. “And the rest is history,” Tickle says. That history now includes a $2.5 million gift, whose seeds rest in an experience-based understanding of the kind of engineers the real world needs.

Proud to be a Duke

Tickle enrolled in the fall of 1986 and immediately loved it. “When I went to JMU, I knew one person.” That changed quickly when he pledged Pi Kappa Phi and found lifelong friendships. “We still get together. We still tell the same stories,” he says. “I’m proud to be a Duke.”

Tickle’s Madison Experience was so positive, he says, “I was trying to stretch it out for another semester. But my father had another idea.” One course shy of graduating, the class he needed was full. He told his father, who called “Uncle Ron,” and “Lo and behold, there was an opening.”

After graduating with a business degree, he worked for Ashland Chemical in Akron, Ohio, and later in Mobile, Alabama. He then returned to his home, Bristol, Tennessee, to work for a lumber company and for the family business, Strongwell, the world’s largest pultrusion company. Pultrusion is a manufacturing process that combines polymers with fibers into a continuous molded product that is adaptable to thousands of industrial and commercial uses. “I enjoy different things,” he says, admitting to a strong entrepreneurial bent.

His business undertakings expanded in 2001 when he started an import business. Today he’s investing in properties and busi-
nesses in and around the Bristol area, including restaurants, medical offices and an assisted-living facility under construction.

**Hands-on pragmatic design**

When Tickle learned about JMU’s innovative approach to engineering, he wanted to be a partner in its success.

“When I was working for the family business, there was always a struggle for good engineers.” Not just any engineers, he emphasizes, “but those who can understand process—how to do things.”

“The way [JMU engineering] is structured is unique. They are producing the kind of engineers that manufacturing needs,” he says. “And manufacturing is the backbone of the American economy.”

JMU’s engineering program combines traditional engineering coursework with hands-on design work, beginning in the first year, which is rare in undergraduate engineering. The curriculum is designed to address human and societal problems with pragmatic design, rather than a wholly theoretical approach. Tickle cites the experience of one JMU faculty member whose family owned a machine shop. “He knows what he’s talking about,” he says.

“Our students also do the full General Education program, which is not the case at many of our sister engineering schools,” says Bob Kolvoord, dean of the College of Integrated Science and Engineering. “So they develop a broader sense of not just the technology, but the context in which that technology sits. I think that gives them a competitive edge.”

Tickle understands well the contextual relationship between education and industry due in part to a mid-career foray into teaching. “I started teaching math part time and found I really enjoyed it,” he says. That evolved into a full-time job where he taught for eight years in public, private and alternative schools. “We need people going into math and science to study in those fields.”

Seeing an opportunity to encourage this kind of essential learning, he created an endowment for JMU’s College of Science and Mathematics to help students directly. Some students, he knew, worked to afford tuition, thus decreasing the time they could invest in school. His gift helps students with living expenses, so they can afford to pursue research. At last count, some 90 students have benefited from Tickle’s CSM endowment.

Now turning his attention to engineering, Tickle’s new, unrestricted gift provides an endowment for planning but also dollars for immediate needs—“start-up cash, if you will,” Tickle terms it. “Whatever the department needs right now. Kolvoord and [Kurt] Paterson [head of the

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*(Top): “JMU engineering is going places,” says Jeff Tickle (’90). “The way it is structured is unique.” His unrestricted gift provides an endowment for planning and dollars for immediate needs. JMU has “a great vision. I have the utmost confidence they’ll spend it frugally and wisely.” *(Bottom right): A wheelchair design by Jonathan Picart (’15) will benefit people in Haiti.

*(Below): Kurt Paterson looks forward to building “the best engineering program for the world.”

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‘Jeff Tickle understands this vision, and importantly, the rare opportunity to create something special together. Jeff’s gift will not only help us transform Madison Engineering from good to great, but in the process nurture engineers who can make your world better.’

— KURT PATERSON, head, Department of Engineering
department) have a great vision. I have the utmost confidence they’ll spend it frugally and wisely.”

“It’s significant,” Kolvoord says, “when a donor demonstrates this kind of trust in our university. It gives us flexibility to be agile and responsive to the changing needs of the program. Jeff is a savvy businessman, and he recognizes that it’s very hard to anticipate today what things will be like tomorrow. … Jeff’s gift represents a long-term investment in our engineering program. It’s going to allow us to take the next step in becoming a national model for this kind of engineering program.”

A gift that will resonate nationally
Being part of the Madison community comes naturally to Tickle. Giving back is “something I grew up with,” he says. “My father is a University of Tennessee alum, and I learned you give back to your community. It’s like your family. You have to take care of your family.”

It’s something that struck Kolvoord when he first met Tickle. “Jeff is a very down-to-earth guy,” who is very connected to his local community and to JMU. “If I were to imagine the model of an engaged person, it’s Jeff Tickle.”

Engagement is a value that Jeff and his wife, Robin, are teaching their 16-year-old son, Jet, who plays on the American Junior Golf Association circuit. Like his father and grandfather, Jet’s doing more. He is participating in Leadership Links, a program to raise funds for the Nicklaus Children’s Health Care Foundation. He also volunteers for his city’s First Tee program and, his father adds, “He mows the lawn. That’s the way I was brought up. You don’t get something until you earn something.”

As JMU engineering begins its ninth year, its graduates’ success affirms the program’s innovative approach. “Some JMU engineering graduates have gone on to graduate schools, including Cornell, Penn State and Carnegie Mellon, but the bulk go directly to work,” Kolvoord says. “We see them finding positions across a wide variety of industries and job types. But more importantly, they’re succeeding.”

‘Jeff Tickle is a savvy businessman. His gift gives us flexibility to be agile and responsive.’

— BOB KOLVOORD,
dean, College of Integrated Science and Engineering

“Jeff’s gift is going to impact much more than engineering. It’s going to have an impact across JMU. … This gift will resonate nationally amongst engineering programs,” Kolvoord says. “It’s going to allow us to send more of these interdisciplinary engineers out into society and to bring their problem-solving skills, their initiative, their creativity to bear on all manner of society’s problems. The gift will echo far into the distance and long into the future.”

“JMU engineering is going places,” Tickle says, “And I hope to be another cog in the wheel to get it there.”

Interdisciplinary expertise and collaboration steeped in General Education produce JMU engineers focused on problem-solving.
President Alger celebrates with 2015 Innovative Diversity Efforts Award winners (left) and 2016 Diversity Enhancement Award winners during the 10th Annual Diversity Conference. The conference recognizes the people and projects at JMU that enrich diversity and inclusion.

PHOTOGRAPHS BY HOLLY VEEVIS, NIKKI TRENT AND MIKE MIRIELLO (‘09M)
More than 450 guests gathered to celebrate the impact of giving at the annual Stewardship Luncheon on March 18.

“Our vision for JMU is great, and our aspirations and ambitions are great, so achieving them takes all of us,” President Alger told donors, professors and scholarship recipients. “We seek to become the national model for the engaged university. When one of us makes a gift, it lifts all of us closer to that national model. ... I thank you for your gifts. ... You enable our students and our professors to engage with ideas and with the world—and always, and most importantly, with other human beings. That’s how we solve the problems of the world. Human problems require human solutions. So it’s on us. That’s how we make the world a better place. Thank you for being part of the solution.”

(Right): Heather Payne (‘15, ‘16M), an education master’s candidate and scholarship recipient, said the generosity of scholarships made it possible for her to find new direction through education when an injury nearly derailed her life’s plan.

(Above): Richmond orthodontist Dr. Charlie Thomas (‘83) told the luncheon guests how receiving help to attend college motivated him to fund mentored scholarships to support faculty and student research.

Raiquan Thomas (‘18), (left) a scholarship recipient and vocal performance major, along with Jacob Dishman (‘16), a collaborative piano major and scholarship recipient, wowed the audience with a selection from Rodgers and Hammerstein’s “South Pacific.”

Caitlin McAvoy (‘15) shared how her Honors Hillcrest Scholarship changed her life when she traveled to Romania to bring a dance therapy-inspired program to young girls who were victims of abuse.
In his first two opportunities as a college head coach, Mike Houston inherited programs devoid of recent success and built them to compete at the national level. Now, at JMU, there is no need to rebuild or resurrect. The pieces are in place for Houston to make an impact quickly.

“The more research I did, I kept hearing the same things,” Houston said as he settled into his new office in the Plecker Athletics Performance Center. “This is a place where you can win and where they care about athletics. That’s really held up after I was hired. Everyone here wants to see JMU succeed.”

Houston was formally introduced as JMU’s new head coach on Jan. 19. In a whirlwind first few months, he filled an entire coaching staff, welcomed his first signing class of new student-athletes, led the Dukes through their first spring practice session and hit the road to make appearances with the Duke Club on its annual spring tour.

Houston also found time to move his family to Harrisonburg to become part of the local community. Houston is excited about the new home for himself, his wife, Amanda, and their boys, Owen and Reid, saying, “I think it’s a place where we’re going to be very happy, and I think it’s a good place to raise a family.”

One of Houston’s priorities was to convince a new recruiting class to sign less than three weeks removed from his own signing with JMU. In an era of college athletics when many recruits claim loyalty to a coach more than a school, Houston and his staff were able to retain 15 of 17 JMU commitments.

As Houston and the staff immediately turn to recruiting the next class, they will focus on bringing as many recruits as possible to campus for tours or as part of camps. “We’ve got to do a great job with spring recruiting,” he said. “We want to try to get as many rising high-school seniors on campus in the spring and summer as we possibly can because this place sells itself. They have a different vision of what Madison is once they’ve been on campus.”

The current squad will spend much of the early summer focusing on academics and working with JMU’s new football strength and conditioning staff to be prepared for fall camp.

As autumn rolls around, Houston looks forward to the opportunity to really make his mark on the program with winning results on the field and a foundation for long-term success in Harrisonburg.

“My biggest focus will be to build a program that consistently represents what Madison is all about and one that JMU alumni can be proud of, no matter where they go. That means being a first-class program on the field and off the field and achieving at a very high level, because that’s what Madison is all about.”

Head coach Mike Houston is excited about his new home and the future of JMU football.
A tremendously successful fall for James Madison Athletics spilled over into the winter as the Dukes continue to make 2015-16 a benchmark year for success. Altogether, through March 27, JMU teams have an aggregate .674 winning percentage. That mark would be the best at JMU since 1982 and the best by a Division I school in Virginia since 2010.

Besides the overall record, James Madison has captured conference championships in football, women’s soccer and women’s basketball to go along with regular-season titles in volleyball and field hockey. Additionally, football, women’s soccer, women’s basketball, swimming and diving, and cross country have advanced to NCAA postseason play.

Individually, five JMU student-athletes have earned CAA Player of the Year accolades: football senior Vad Lee, volleyball junior Janey Goodman, field hockey senior Taylor West, women’s basketball senior Jazmon Gwathmey and diving junior Olivia Lehman.

JMU captured its third consecutive CAA women’s basketball crown in 2016 and its fifth in the last seven years. The Dukes compiled a 27-6 overall record, which included a 17-1 league record, a 20-game winning streak, votes in both major national polls and a third straight NCAA appearance. With reigning CAA Player of the Year Precious Hall suffering a preseason, season-ending injury, Jazmon Gwathmey stepped up to become the third different JMU student-athlete to claim CAA Player of the Year honors in as many years. Angela Mickens joined Gwathmey as a First Team All-CAA honoree, while Kayla Cooper-Williams was named CAA Rookie of the Year and Kenny Brooks claimed his fourth CAA Coach of the Year title.

Indoor track and field finished its season with a third-place finish at the ECAC Indoor Championships out of 44 Division I programs. In the midst of multiple personal records and other achievements, graduate student Amber Monroe made an immediate mark in her first season in purple and gold. Monroe set and then topped the shot put school record on multiple occasions. She won the event title at the ECAC Championships, climbed into the top 25 in the nation in the event and qualified for the USA Track and Field Indoor Championships.

Swimming and diving put together a memorable season, with a 7-0 record in dual meets and a close runner-up finish in the CAA Swimming and Diving Championships. JMU continued its diving dominance, with Olivia Lehman being named CAA Diver of the Year. She went on to capture the 1-meter board title at the NCAA Zone meet, becoming the second diver in program history to qualify for the NCAA Swimming and Diving Championships in Atlanta.

Midway through the season, JMU softball has been making a statement, ranking as high as No. 6 in the nation as of press time. The strong start includes a 7-2 mark against top-25 programs and two pitchers ranked in the top 20 in the nation in earned run average. Reigning CAA Player of the Year and two-time All-American Jailyn Ford is a top-10 finalist for the Lowe’s Senior Class Award, bestowed upon a senior student-athlete who represents all-around excellence.

MM SPSM16 16-17.indd   17
MM SPSM16 16-17.indd   17
"By the age of 28, I had my dream job," says Kara McGuirk-Allison ('95), "and it would never have happened without the connections and foundation I received from JMU."

A public-radio veteran, she has applied her production talents to diverse National Public Radio offerings, from "Justice Talking" to "Weekend Edition." Today, McGuirk-Allison is producer of the NPR podcast "Hidden Brain." The program's exploration of social science research aims to help people "understand the world—and themselves."

McGuirk-Allison enjoys the challenge of the public-radio environment. "You can work on a show that allows you to become an expert on a topic, or work on a news magazine where every day you can be editing four different stories on four different topics."

The seed that blossomed into McGuirk-Allison's career took root on the Madison campus. Transferring to JMU in her sophomore year of college, the mass communications major began working at the student-run radio station, WXJM.

"Because of JMU, my whole career trajectory changed," says McGuirk-Allison. "The NPR affiliate WMRA supervised WXJM during my time there. I became the general manager at WXJM in my senior year. Through that experience, I was shown how public radio works. I fell in love with college radio, educational radio and public radio. I knew that was what I wanted to do with my life."

"JMU is a place that affords students practical opportunities. For those who want to work in radio, the practical, real-world experience is so helpful," she says. And while she lauds those opportunities, McGuirk-Allison says she found further value in her Madison Experience.

"JMU broadened my horizons on so many levels because of the liberal arts education it provides. As a producer, you have to have had an exposure to a lot of things. I got that at JMU. I can look back and still remember classes in poetry, psychology, even terrorism. The exposure to a broad array of thought and experience builds you as a person. It provides awareness and foundation. And, it is what helps you most in the job market today."

It certainly helped McGuirk-Allison. "Producers tend to have very broad interests," she says. That broad focus has come in handy as she collaborates with "Hidden Brain" reporter Shankar Vedantam, the show's host. Recent podcasts have provided insight on wide-ranging topics, from the radicalization of young terrorists to mastering the challenge of starting life anew.

She describes Vedantam as "very rigorous," with "an encyclopedic knowledge about topics." Coupling his exactitude with "those of us who are generalists allows for good storytelling," she says. "That's our goal: to teach people through good storytelling something about social science that they can apply to their everyday lives."

"Podcasts are really enjoying a moment," she says. While she acknowledges that there's a lot to learn about this emerging technology, she's happy to be involved: "It's been great to be in the forefront and working with really good people to make it happen."

Despite the hectic nature of her job—editing, scripting and producing, all at lightning speed—McGuirk-Allison is clearly thriving. "I'm always challenged and always learning something new," she says. "You always have to be on your 'A' game."
Kara McGuirk-Allison (‘95) says the practical experience she received at JMU and WXJM prepared her for her role with NPR’s "Hidden Brain" podcast.
When did you know you wanted to work with computers?
I was lucky enough to be exposed to and have access to computers very early. I think I always knew I would do something with computers and do something of my own as an entrepreneur.

How did your experience at JMU prepare you for a career in technology?
JMU taught me the core concepts of software engineering while also giving me the opportunity to do my own projects, both in and out of the classroom, and learn by doing, which is really the best way to learn.

Did any of your professors inspire or support your work during college?
I was extremely lucky to have the support of several professors, including Ramon Mata-Toledo (computer science and my academic advisor), James Sochacki (mathematics) and Malcolm Lane (computer science department head at the time.) These three professors, in particular, encouraged me and pushed me to reach my potential, and were critical to my success at JMU and beyond. They supported my crazy projects and ideas, and I feel a deep gratitude toward them.

What types of products/services does Orbbec offer?
Orbbec designs and manufactures 3-D cameras, which can see and understand the world around them in real-time 3-D. We believe that artificial intelligence requires computers that can see our world like we do, so we are making 3-D cameras for everyone, everywhere and every device.

What vision do you have for how humans will interface with computers in the future?
In a few years, it won’t be possible to buy a computing device without a 3-D camera. They will be as pervasive as webcams are today. When we get to this point, the way we interact with computers will be much more natural than today. With 3-D cameras and the proper software, computers can learn and understand us in our world, instead of us having to learn about computers.

What is your favorite aspect of the field you work in?
The reaction when people see our demos and products—the look on their faces when they realize that this technology is real, not just in the movies or books about the future. My colleagues and I work with this technology every day and sometimes take it for granted, but we often remind ourselves that this is amazing cutting-edge stuff! I feel very lucky to be able to do what I do.

What advice would you give to fellow JMU “computer nerds”?
Figure out what makes you really excited about computers or technology and figure out how to get a job doing exactly that. It can be very easy to find a decent job in the information technology sector in the Washington, D.C., area, for instance, but if your job tasks don’t match your interests, then after a few years you may find yourself stuck in that career path or losing your passion. Don’t be afraid to do your own thing. Maybe start after hours or make a jump to full time later. Don’t let anyone tell you that you can’t do what you love.

Joshua Blake (’05) is co-founder and vice president of engineering at Orbbec, a Seattle-based developer and supplier of 3-D motion sensors. He is a well-known Natural User Interface, or NUI, community leader, early 3-D development pioneer and machine-learning expert. In this interview with Madison, Blake discusses how his experience at JMU inspired him to realize his dream of becoming a tech entrepreneur, and he shares his vision for how humans will interface with computers in the future.
Natural born explorers
BY YVONNE HARRIS

The art of finding the best solution
BY JAN GILLIS

A strange yet familiar challenge
BY BILL HAWK

Performance and health
BY KEVIN WARNER

Motivating middle schoolers
BY JIM HEFFERNAN

The challenge of drones
BY JEN KULJU

The good, the bad and the dangerous
BY MARTHA GRAHAM

Untangling a DNA mystery
BY ERIC GORTON

On the trail of Hernando de Soto
BY JANET SMITH

A space nut’s dream
BY RACHEL PETTY

Whether harnessing technology to better the world or redrawing the map of history, the Madison community embraces a culture of innovation through cross-disciplinary collaboration.
Early in my career teaching biology in Chicago, I began the course by telling students that we are born scientists. We are intuitive creatures and, by our very nature as humans, curious about our surroundings. We are creative physical beings, constantly observing and innovating to better our lives and those of the people we care about. We are explorers compelled to extend ourselves into the darkness of the unknown and bring what is there into the light. Why do we do it? We simply can’t help ourselves.

Innovation and discovery is not the sole domain of the brilliant, but rather something that we constantly strive for beginning at birth. If you don’t believe me, sit in a room with 2-year-old children and observe the power of human innovation and discovery. Unfortunately, too many of those preschoolers lose the excitement and the hunger to create and build by the time they reach adulthood.

At present, the United States leads the world in research and development spending; however, many Asian economies are not far behind. Between 1996 and 2011, China’s share of global R&D has risen by 12.3 percent, with the United States, the European Union and Japan falling by 8 percent, 5.2 percent and 5.7 percent, respectively. This slow decline in R&D investment, coupled with a decline in education spending, threatens our ability to develop a workforce that will thrive in the 21st-century economy.

Solving the big problems of our day will require a team-based approach, comprised of a diversity of experience, education and methods. Since arriving in Harrisonburg 20 months ago, I have been impressed by JMU’s commitment to interdisciplinary research and teaching. One terrific example is the JMU Drone Project, which saw 42 students from seven majors utilize unmanned aerial systems technology to tackle six real-world challenges: air pollution, river mussel populations, telemedicine, traffic monitoring, landmine detection and landmine disarmament.

As traditional higher education funding sources scale back their investment, collaboration will be the key to creating and sustaining a culture of innovation. We must expand our capacity to engage within our region, as public-private partnerships will drive new ideas, develop bleeding-edge innovations, create jobs and revitalize depressed economies.

One of the invaluable byproducts of working in higher education is an energetic and enthusiastic alumni base. As JMU graduates’ organizations and industries grow, my door is always open to discuss opportunities to work together.

China poised to outpace US in R&D spending around 2019

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‘Twenty-first century businesses will rely on American science and technology, research and development. … I want Americans to win the race for the kinds of discoveries that unleash new jobs.’

— President Obama, 2015 State of the Union Address

Natural born explorers
Collaboration key to creating and sustaining a culture of innovation

By Yvonne Harris, vice provost, research and scholarship
In looking for creative solutions to problems—from business to technology, health care to urban renewal, education to social crises—there’s an increasing recognition of the power of a multidisciplinary approach.

The reason is simple: It works.

George Sparks, dean of JMU’s College of Visual and Performing Arts, explains: “Every discipline sees the world in a different way.” And it is those differences that lend fuel to innovation and problem-solving, even when tackling complex issues.

An often unsung hero in the battle to find workable answers for difficult problems has been the voice of the artist. But things are changing.

“[Those with a background in] arts and humanities bring value to perspectives and processing information. Instead of getting one or two solutions, you get 25. The final solutions are much more creative, often borrowing from different perspectives for better solutions,” Sparks says. It is the reason, says College of Business Dean Mary Gowan, that “increasingly organizations are seeing that they need people in cross-disciplinary teams to develop innovations.”

At JMU, arts integration is central to the myriad efforts to expose students to cross-disciplinary opportunities and foster their ability to be innovative critical-thinkers.

One such opportunity is regular participation in the a2ru conference. The a2ru (the Alliance for the Arts in Research Universities) is a partnership of over 30 institutions committed to the support of arts and arts-integrative programs.

In March, Carissa Henriques, assistant professor of graphic design, accompanied JMU students to the University of Michigan and Detroit for the a2ru, Emerging Creatives Student Summit RISE: Forging Resilient Communities. Students explored how to use creative partnerships to revitalize communities in sustainable ways. “We were unique in that we took not just art students, but business students, engi-

The art of finding the best solution
Embracing different perspectives in the problem-solving process BY JAN GILLIS (’07)
‘The final solutions are much more creative, often borrowing from different perspectives for better solutions.’

— GEORGE SPARKS, dean, College of Visual and Performing Arts

(Above): David Ehrenpreis with artist Xu Bing. In 2008 Ehrenpreis curated an exhibition chronicling 30 years of the artist’s work.

(Left and clockwise): IVS serves as a center for scholarly, scientific and creative inquiry into the nature and workings of images.

neering students, art and design students, and College of Arts and Letters students—a real cross section."

“Problems are inherently interdisciplinary,” she says, “and problem-solving in the real world requires people from different disciplines to work together for an effective solution.”

Student participants at 2ru bring valuable decision-making tools back to campus, share them with their peers and enhance the climate of critical thinking at the university.

On Madison’s campus, faculty and students alike benefit from special opportunities for interdisciplinary challenge and arts integration through JMU’s Institute for the Visual Studies. The institute was recently cited by the Mellon Research Project as an “exemplar of best practice in the fusion approach to curricular integration.” The study entailed an expert in interdisciplinary initiatives visiting over 40 universities nationwide and conducting interviews with 30 to 40 faculty, staff and administrators.

“IVS connects people across campus and disciplines to allow them to do things they wouldn’t otherwise have the opportunity to do,” says IVS Director David Ehrenpreis.

The institute furnishes unique opportunities for faculty and students to explore the connections between art, science and technology unfeathered by the need to achieve a specific outcome. “IVS provides experimental space for exploration, and that, in turn, sparks creativity,” says Ehrenpreis. Seminar topics have included explorations of urban renewal, environmental and ecological health, the interplay of arts and mathematics, and the philosophical, religious and artistic perspectives of objects of play.

The Mellon Research Project lauded IVS Studio Seminars for creating “conditions for innovation” and concluded that JMU’s approach “exemplifies possibilities for groundbreaking arts integration fueled by administrative vision and creative problem-solving.”

The results go beyond the creation of an intensive, collaborative learning environment for students and enriched opportunities for faculty research.

JMU graduates will go out into the world better equipped to make a difference.

The value of Madison’s interdisciplinary efforts, says Henriques, is that JMU graduates will be oriented to “problem-seeking, not just problem-solving. They will be looking in their communities for possibilities. They will see a problem, investigate, find related problems, talk to community members and get people to work across disciplines to develop solutions across the board.”

— GEORGE SPARKS, dean, College of Visual and Performing Arts
A strange yet familiar challenge

BY WILLIAM J. HAWK, chair, Madison Collaborative

The American intellectual innovator William James advocated seeing “the familiar as if it were strange, and the strange as if it were familiar.” JMU’s The Madison Collaborative: Ethical Reasoning in Action illustrates, and plays a critical role in influencing, innovation. Let me explain. Our ethical reasoning program emerged from the cascade of newsworthy bad ethical decisions and the conviction that better informed decision-making can be taught. Added to these catalysts is the sobering fact that those with the knowledge of ethics, as typically taught in higher education, can demonstrate no measurable improvement of ethical decision-making.

Now the strange yet familiar challenge: If ethics, as typically taught, does not affect ethical decision-making, what does? Turning not to more ethics education but to the decision sciences (e.g., social psychology and behavioral economics), we learn that ethical decisions are driven chiefly by intuitions: quick, moral responses shaped by previous life experiences. We are all the captives to, and beneficiaries of, those who have taught us moral behavior. To improve ethical decision-making, we must slow down and curb our fast, intuitive responses. The Eight Key Questions (8KQ) introduce an array of moral considerations that disrupt intuitive reflexes and prompt strategic moral reflection. Thereby, asking the 8KQ informs and improves decision-making. Wedding ethical considerations to empirical decision sciences proves innovative.

In addition, the 8KQ ethical reasoning strategy complements innovation. Not all innovations are good. Genomic interventions facilitating casual “designer” children or psychologically risky experiential learning, for example, demand careful ethical reflection. Innovations should be tested ethically before they are introduced. To do so, we ask questions such as: What are the short- and long-term outcomes? What responsibilities are in play? Are there any rights involved? And do we honor the personal or social liberty of those affected? Innovators need a “moral compass” that does not go unused. The 8KQ ethical reasoning strategy provides disruptive questioning at precisely the right moment (i.e., when we are addressing vexing problems of modern life). As an academic community that celebrates innovations, JMU encourages an ethical reasoning/critical thinking strategy that embodies and safeguards that spirit.

JMU may appear familiar, but stop, look below the surface, see the innovation!

The Madison Collaborative: Ethical Reasoning in Action was recently selected as a semifinalist for Phi Kappa Phi’s national Excellence in Innovation award along with Arizona State, California at Fullerton, Evergreen State, The New School and Tulane.

The Eight Key Questions (8KQs)

What are the key questions used to evaluate the ethical dimensions of a problem?

1. Outcomes: What are the short-term and long-term outcomes of possible actions?
2. Fairness: How can I act equitably and balance all interests?
3. Authority: What do legitimate authorities (e.g., experts, law, my god[s]) expect of me?
4. Liberty: What principles of freedom and personal autonomy apply?
5. Rights: What rights (e.g., innate, legal, social) apply?
6. Responsibilities: What duties and obligations apply?
7. Empathy: How would I respond if I cared deeply about those involved?
8. Character: What actions will help me become my ideal self?

Learn more at www.jmu.edu/mc or email us at mc@jmu.edu.

The 8KQ reflect the best of humanity’s ethical reasoning traditions. Each question names a distinctive, cross-culturally common, ethical consideration.
Lauren Steinbrecher completed her sixth season as volleyball coach of the Dukes in 2015. Her teams have had their ups and downs, with injuries playing a role in preventing the team from realizing its potential.

In 2015, the pieces fell into place and a deep and talented roster won the Colonial Athletic Association regular-season title and finished 22-8, with Steinbrecher sharing the league’s Coach of the Year honors.

It was volleyball’s first season operating under JMU’s new Integrated Health and Sports Performance Model, an innovative care network that emphasizes collaboration while maximizing performance and wellness of student-athletes.

While several factors converged to produce volleyball’s success, Steinbrecher believes the new model played a pivotal role. “I think it plays a huge part when you have the collaboration of a group of individuals asking what are we doing in the weight room, what are we doing to recover, or who’s homesick or maybe has depression or eating disorders—all the stuff that could come up while you’re in college. It absolutely helps the student-athlete experience because no one’s falling through the cracks.”

The new Integrated Health and Sports Performance Model at JMU is committed to assisting student-athletes realize their full potential, minimize risk of injury, achieve competitive excellence and have an exemplary student-athlete experience.

The new Integrated Health and Sports Performance Model at JMU is committed to assisting student-athletes realize their full potential, minimize risk of injury, achieve competitive excellence and have an exemplary student-athlete experience.

Performance and health

JMU’s integrated approach serves as a national model for the student-athlete experience

BY KEVIN WARNER (’02)
JMU’s Integrated Health and Sports Performance Model combines key components of student-athlete performance and wellness—sports medicine, strength and conditioning, sports nutrition, sport psychology and clinical psychology/mental health—in a shared setting.

For JMU Associate Athletic Director Tom Kuster, who is charged with coordinating and promoting this new collaborative process, the change was an obvious step in the university’s push to be the national model for the student-athlete experience.

“There’s overlap in all of those areas, so why wouldn’t those folks work together?” Kuster noted. “Other schools don’t maximize what they are doing because they work in these silos. The big thing for us is to get out of those silos because those areas can do so much more by working together.”

The research and planning for the new model began about three years ago as the sports medicine and strength and conditioning areas were undergoing a routine university program review. Kuster began pondering staff integration while reviewing other schools such as Notre Dame and California, which had recently implemented similar structures.

“When you look at what I call the ‘pillars of performance,’ we have all four of those areas here,” Kuster said. “So now it’s just a matter of those areas working together to improve the student-athlete experience. I felt that we had the right people here to implement the model, and the opportunity was there to really integrate all of the areas.”

Central to the implementation of the model across JMU’s 18 sport programs is what Kuster refers to as performance team meetings. At these meetings, coaches, advisors, trainers, nutritionists and others provide a comprehensive review of what is impacting the lives of each student-athlete in that program and their physical and mental performance.

“The whole point of it is to offer a proactive approach to using all of your resources,” Steinbrecher noted. “We are making sure that our student-athletes not only play their individual sports, but also grow as people and that they are healthy in all aspects of their lives.

So, to me, it was a no-brainer.”

Kuster added, “What we’re finding is when you look at every-
‘We are making sure that our student-athletes not only play their individual sports, but also grow as people and that they are healthy in all aspects of their lives.’

— LAUREN STEINBRECHER, Dukes volleyball coach

thing going on in our student-athletes’ lives—sometimes in the course of a year or a season—you can lose sight of why someone is tired all the time or why their performance is flat in practice. Well, it could be a nutrition issue, or it could be that they had exams this week. But having everyone around the table allows us to start having those conversations.”

While the benefits of such collaboration and integration may seem obvious, few schools have the combination of resources and student-athlete focus to implement the program that JMU has. Steinbrecher feels that gives Madison a distinct advantage.

“The No. 1 message that it sends is that we care about our student-athletes,” Steinbrecher said. “Your experience is important to us. Your mental stability is important to us. How you’re doing in the classroom is important to us. That’s a huge message to the parents, too, if they want to send their son or daughter to a school where they’re going to take care of their entire being, not just what they can do on the court.”

The JMU volleyball team, led by Lauren Steinbrecher, has seen success with the Integrated Health and Sports Performance Model.
One of the challenges in K-12 education involves teaching students who believe they can’t learn. Many schools reinforce this mindset of failure by classifying children from a young age as non-college-bound or remedial, and teachers may unknowingly contribute to the problem by focusing their attention on high-achieving students.

Improving student motivation requires intervention and training. “In education, that means developing and nurturing the psychological skills necessary for students to be successful in the classroom,” says psychology professor Kenn Barron, co-founder of the Motivation Research Institute at JMU.

When deciding whether to complete a homework assignment, for example, a student might weigh motivational factors such as expectancy (can I do this?), value (do I want to do this?) and cost (what will it cost for me to do this in terms of time, energy and resources?). A lack of commitment in one or more of these areas can cause students to underperform and ultimately question their ability to succeed.

One of the ways to address low motivation, Barron says, is to encourage growth mindsets. The concept, introduced by Stanford psychologist Carol Dweck, is aimed at getting students to persist through rigorous learning challenges. Key to growth-mindset thinking is appreciating that effort and use of appropriate learning strategies will lead to success rather than believing one’s success or failure is due to fixed, innate ability. “The growth mindset says to the student, ‘You can do this, you just may not have it yet,’” Barron says.

Three years ago, Barron and Chris Hulleman, co-coordinator of MRI, began working with a group of teachers at Thomas Harrison Middle School in Harrisonburg—all of them JMU graduates—who had identified a mindset of failure among some of their students. The partnership set out to identify and test new strategies for helping those students “start strong, stay strong and finish strong” psychologically.

Their work soon captured the attention of the Carnegie Foundation for the Advancement of Teaching, which invited the Harrisonburg team to join a select group of school systems around the country as test sites in a Student Agency Improvement Community. SAIC is focused on bringing practitioners and researchers together to learn about the latest research in educational psychology, to test whether such ideas can be adapted to a given educational setting or student demographic, and to accelerate the rate of learning by sharing promising ideas across community members.

With the help of the MRI research team, practitioners at THMS have employed new tools, techniques and messaging designed to introduce students to growth-mindset thinking. In addition, teachers are learning how to redesign their classroom environments to promote growth-mindset thinking by reinforcing students’ effort and progress toward mastering the material rather than just focusing on the grade.

“We’re implementing a system where our students aren’t satisfied with anything less than their best effort.”

— CAROL HALL (’90), eighth-grade science teacher at THMS
“We’re implementing a system where our students aren’t satisfied with anything less than their best effort,” said science teacher Carol Hall (’90), part of a group of eighth-grade educators at THMS who are teaming up to promote growth mindsets across content areas. “They’re receptive and appreciative, and their achievements are a source of pride.”

The data being collected at THMS by JMU co-researcher Thomas Hartka (’15) support that claim. Students experiencing growth mindsets are performing better on homework, quizzes and tests, as well as standardized assessments.

To begin scaling up the intervention, more than 200 fifth-graders at Thomas Harrison were introduced to growth-mindset thinking at the start of the 2015-16 school year. The app, which grew out of the researcher-practitioner partnership, is designed to reinforce the notion that students can effectively “grow their brains.” According to follow-up surveys and a drawing activity, 60 percent of participants reported an increase in growth mindset, while 20 percent moved from a fixed mindset to a growth mindset.

Pat Lintner, assistant superintendent of instruction for Harrisonburg Public Schools, said he wants to grow the program by making it more accessible to more teachers at more schools, including elementary and high schools.

**Growing your brain**

Students at Thomas Harrison Middle School respond to an app about the importance of growth mindsets

“In my opinion I thought it was cool and very kind for you to teach us this.’

“I liked it. I learned I should challenge myself more to help my brain get smarter.’

“I really loved it ‘cause now I feel like I can do anything if I just keep trying.’

“It helped me a lot. I always say I can’t do this but now I will try to do it over and over again until I get it.’

“I liked it because now I know that I can’t just give up on things. I have to keep trying until I get it because I know I can learn it.’

60% of students reported an increase in growth mindset

20% who were initially fixed mindset flipped to growth

**Developing growth mindsets**

Model reinforces notion that success or failure is not tied to fixed, innate ability

The researcher-practitioner partnership at Thomas Harrison Middle School developed an app that was administered to more than 200 fifth-graders at the start of the 2015-16 school year. Follow-up assessments included surveys and a drawing activity.
THE CHALLENGE OF 
DRONES

An innovative interdisciplinary class takes problem-solving to new heights

BY JEN KULJU ('04M)
ADVANTAGE OR AFFLICTION,
THE FUTURE OR THE END?
For 15 weeks during the Fall 2015 semester, 42 JMU students from seven majors across the arts, humanities and sciences took on the challenge of harnessing drone technology for society’s betterment. They participated in a class taught by entrepreneurs from NOVALabs in Northern Virginia and professors from four disciplines. Their goal: Determine how drone technology can be used to respond to global problems.

Using six drones built by JMU students in the spring, the JMU Drones Project used collaborative learning, design thinking, social entrepreneurial skills and a variety of technologies to develop prototype solutions to real-world dilemmas. The students tackled problems associated with air pollution, river mussel populations, telemedicine, traffic monitoring, landmine detection and landmine disarmament.

Their efforts offer resounding proof that JMU’s interdisciplinary approach to teaching critical thinking and problem-solving skills yields powerful results. Facing design challenges as cross-functional teams allowed students the opportunity to seek the “sweet spot” of their collaboration and of their drones—which according to participant Niklavs Barbars (’17) is “that perfect, beautiful design in functionality and performance.”

The teams worked on their projects in the new X Lab at Lakeview Hall, the former WVPT television studio on the shore of Newman Lake at the Port Republic Road entrance to campus. The lab, one of four X Labs on campus, is equipped with a variety of shop equipment, includ-
‘Drones are going to be the newest form of technology that our world encounters in the next few years. Creating a safer and more efficient way to conquer tasks is what these machines do best.’

— FROM “THE FIVE THINGS YOU DIDN’T KNOW ABOUT DRONES,”
Hope Ucciardi and Patrick Murphy, Landmines: Detection, JMU Drones Project blog

The teams worked on their projects in the new X Lab at Lakeview Hall, one of four such labs on campus. The lab is equipped with a variety of shop equipment as well as 3-D printers and telepresence robots that enable instructors to interact with students remotely.

Drones Project’s landmine detection team. Lapolla says the class “epitomizes the Madison Experience in that it is taking all of the knowledge built up over the years and putting it to use in order to ‘Be the Change’ in the world.”

LEARN MORE: You can read more in Kulju’s online feature at bit.ly/1m1eG78, and check out the students’ blog at sites.jmu.edu/jmudroneschallenge.
As Joe Showker ('79) walked onto the stage at Clarke County Middle School, students were fidgeting, chatting, laughing, texting and checking smartphones.

Suddenly, you could hear a pin drop as Showker ticked off personal information about individual students. The retired teacher and coach had their attention—and he was telling truths they needed to hear.

**SEEING POTENTIAL**

In the mid-1980s, before cellphones were ubiquitous and the Internet was indispensable, Showker recognized technology’s impact on education. “I became a student of the industry,” he says. He was producing a school newsletter on an old floppy-disk system when the principal approached him about teaching this “new” technology. Showker’s response was instantaneous: “Yeah, I’d love to.” “We repurposed an old science room with a bunch of Apple II computers,” he says. From these makeshift beginnings, Showker devel-
Showker was tapped by then-Attorney General Bob McDonnell for a task force that worked with the state Department of Education to write “Guidelines and Resources for Internet Safety in Virginia Schools.” It became the first Internet safety curriculum in the nation.

In addition, Showker says, “Virginia was the first state to mandate Internet safety instruction in public schools.”

For his leadership, Showker was recognized by Rep. Bob Goodlatte, chairman of the House Judiciary committee, with a Children’s Champion Award in 2006.

"The ultimate teaching tool," the 36-year veteran teacher knows, “is a tool that reaches out and grabs the learner and influences their behavior or gives them content which they retain."

And in Showker’s case, it keeps them safe.
Untangling a DNA mystery
JMU, U.Va. expand research into antibiotic-resistant bacteria
BY RACHEL PETTY (’17) AND ERIC GORTON (’86, ’09M)

With the help of the 4-VA consortium, biologists at JMU and U.Va. are expanding their collaborative research into bacteria that are surprisingly resistant to a group of antibiotics used to treat critically ill or injured patients.

James Herrick, associate professor of biology at JMU, and Stephen Turner (’06), head of the bioinformatics core at the U.Va. School of Medicine, began developing a research methodology in 2013 to investigate the bacteria, which confer resistance to antibiotics used to treat people mainly in intensive care units and burn units.

Herrick said the antibiotics are generally used when other antibiotics fail. “They are not first-line antibiotics,” he said.

According to the Centers for Disease Control and Prevention, every year at least 2 million people become infected with bacteria that are resistant to antibiotics, and at least 23,000 people die as a direct result of these infections.

Herrick and his colleagues are now writing a paper based on findings from their prior research, which involved obtaining the DNA sequence of plasmids—small DNA molecules in bacteria that often carry antibiotic-resistant genes and can transfer the resistance to other bacteria. They found that such plasmids were common in bacteria in local streams and soils and that they conferred resistance to not only common antibiotics, but also to those that are typically reserved for human clinical use.

“What we did before was kind of a pilot,” Herrick said. “We’re now going to expand. We want to get an idea of how general this [resistance to unexpected clinical antibiotics] is.”

A new $57,000 grant from 4-VA will enable the researchers to re-analyze existing data with improved analytical methods, expand plasmid capture, use improved technology to study the genetics of the plasmids, and develop novel laboratory approaches and data analytics for investigating multiple genomes sequenced together. The researchers also plan to propose a framework to annotate, curate and broadly disseminate their findings to benefit other researchers.

At JMU, graduate and undergraduate students “will be exploring this phenomenon more widely using additional bacteria, such as the human pathogen Salmonella and the opportunistic stream pathogen Aenormonas,” Herrick said.

The U.Va. lab, run by Turner, who majored in biology at JMU, will work on the computational side of the research, analyzing DNA data collected at JMU with cutting-edge genome sequencers in the Center for Genome and Metagenome Studies.

“Both the genome-sequencing technology and the data analysis methods are cutting edge,” Turner said. “It will be exciting to apply these to understand resistance to these antibiotics showing up in this environment, and how that resistance spreads.”

The 4-VA consortium was organized in 2010 in an effort to meet the needs of the commonwealth as identified by the Governor’s Higher Education Commission and his Jobs Commission.
Biology major Jesmine Roberts-Torres ('16) and graduate biology student Kevin Libuit ('14, ‘16M) are using cutting-edge gene sequencing technology to investigate the ways antibiotic resistance spreads.
On the trail of Hernando de Soto

Physical artifacts are leading archaeologists to question path of early Spanish explorer

BY JANET SMITH ('81)
James Madison University anthropologist Dennis Blanton never planned to follow the trail of Spanish explorer Hernando de Soto through the American southeast. But in 2006, with the discovery of a single multicolored bead excavated in south central Georgia, his archaeological path became inextricably intertwined with the world of the first European to encounter the Mississippi River.

Excavating at a place called the Glass Site, Blanton and a team of professional archaeologists and volunteers from the Fernbank Museum of Natural History in Atlanta were enduring typical hot, humid Georgia conditions in Blanton’s quest to locate the site of an early 17th century Spanish mission, Santa Isabel de Utinahica. The explorations of de Soto were far away in time and location in the archaeologists’ minds.
As a student of southeastern American history and archaeology, Blanton believed the quest for Soto was already in the hands of fully qualified scholars. Plus, scholars, including Blanton’s University of Georgia mentor and Soto expert the late Charles Hudson, believed first-hand narratives by the explorer’s party indicated the path through Georgia was some 80 miles west of the Glass Site.

But when a high-school student volunteering at the excavation asked Blanton, “Is this anything?” while showing him a multicolored bead she had found while screening soil, the archaeologist realized “we had potentially turned the story on its head.”

“It was electrifying for me,” he recalls the moment he recognized the bead as a Soto-era artifact from the 1500s, 100 years too early to indicate the Spanish mission he sought. His next thought: “What’s it doing here?”

“I felt an obligation to pursue it,” Blanton said, “because one bead does not a Soto site make.” Over the course of excavation seasons since 2006, more beads, iron and other metal artifacts have been uncovered, all indicative of Spanish contact with Native Peoples.

“It is a very rich site,” Blanton said. “Very clearly it was an important community in the Indian world.” The trove of artifacts recovered in the last 10 years has convinced Blanton that the Glass Site evidence represents a meeting of two cultures – the Spanish explorers and the ancestors of the Creek people. He posits that the Glass Site is the principal town of the Indian province called Ichisi.

While finding Soto-era artifacts was a surprise to Blanton, he said their existence is logical. “Soto’s modus operandi was to find the richest Indian communities,” places his band of some 600 explorers would obtain food and possibly find the precious metals they sought throughout the expedition.

“The weight of the evidence is that [the Spanish artifacts] are the result of an encounter with Soto,” Blanton said. Now, he and JMU anthropology students are analyzing archaeological samples recovered at the Glass Site during the summer of 2015 to learn more. Their work is supported by a $1,520 grant from the Fernbank Museum of Natural History.

Among the questions they are considering is if the 2.8-acre site is indeed Ichisi. Historical narratives from members of Soto’s expedition chronicle the party’s encampment near the settlement from March 30 to April 2, 1540.

Work conducted from 2006 through 2015 has fairly well defined the Glass Site’s Indian occupation, which is a circular...
The weight of the evidence is that [the Spanish artifacts] are a result of an encounter with Soto. ... This is what makes archaeology both incredibly interesting and exciting, but also complicated, even maddening.

— Dennis Blanton, assistant professor of anthropology
Divergent paths of Soto?

Historical narratives and modern archaeology both contribute to the puzzle

The route of Hernando de Soto through the southeastern United States, posited by the late Charles Hudson and other Soto specialists, draws heavily from the study of historical narratives by the Spanish explorer’s expedition party.

“Soto’s modus operandi was to find the richest Indian communities,” places where his band of some 600 explorers would obtain food and possibly find the precious metals they sought throughout the expedition.

Physical artifacts found in Georgia are spurring anthropologists to reconsider the path Soto and his men may have followed in spring 1540. The revised route is some 80 miles east of the previously posited trail.

The revised route offers Soto scholars a new perspective on the locations of key settlements of Native Peoples. The markers for modern-day cities help gauge the locations of the settlements and both Soto routes.
area resembling the shape of a bagel. A major feature included a council house or temple, where many of the uncovered Spanish artifacts were concentrated. Still a puzzle is the exact location of Soto’s encampment.

But results received in January of radiocarbon dating on burned wood excavated from the eastern ridge of the site – an area containing an abundance of Indian artifacts and an iron axe blade – substantiate that there is “a very, very high probability the Glass Site was actively occupied at the time Soto and his small army passed through that part of Georgia,” Blanton said.

Confirming whether or not Soto’s expedition encountered Native Peoples at the Glass Site is important because Soto was like an early anthropologist in that he described the way of life of people he met along the southeastern trail. “If we can pinpoint where Soto was, we have a bridge to the geography of prehistoric native populations,” Blanton said.

During the 2014 and 2015 excavations, Blanton was looking for closure on the site’s interpretation. Instead, a new wrinkle emerged in the form of “wrong type glass beads,” as Blanton described them, found in one spot on the site. The beads, while of European origin, are probably from the latter half of the 16th century.

“This is what makes archaeology both incredibly interesting and exciting, but also complicated, even maddening,” Blanton said. “We have introduced new questions.” Whatever mysteries the findings reveal to today’s and tomorrow’s discoverers, Blanton is confident in an important fact: “The Glass Site has produced more Spanish artifacts than any other excavation in the interior Southeast.”

“By the time of his retirement, Dr. Hudson was saying that we can only estimate Soto’s path by studying the historical narratives,” Blanton said. “He believed that we had squeezed all the life we could out of the written record and that it would be left to archaeologists to bring precision to the story. That’s what I feel we are doing.”

‘As an archaeologist, I feel confident enough in my skills because of the unique experiences that I have been able to have at JMU.’

— CATHERINE GRIMES (’16), anthropology major

Having the opportunity to work with the Glass Site artifacts, dating to the 1500s, makes for a rich anthropological experience for JMU students in the university’s archaeology lab.
(L to R) Zach Duda ('17), Christopher Graves ('17) and James Watkins ('17) are part of a team that is building a prototype for NASA.
A space nut’s dream
Engineering students embark on space travel project for NASA

BY RACHEL PETTY ('17)

It’s a space nut’s dream: working on a project for NASA to remove an obstacle to sending astronauts into deep space.

For their remaining undergraduate careers at JMU, engineering majors Quin Moore ('17), Christopher Graves ('17), J.P. Gaffney ('17), Zach Duda ('17) and James Watkins ('17) will research, plan and build a prototype device for sterilizing medical equipment on manned missions to Mars and beyond.

“If something happens on the International Space Station and they need to make an emergency trip, they can come straight back to Earth in a day or two,” said Watkins, whose colleagues have dubbed themselves Team M.O.B. (Mars or Bust). “But if you’re on the way to an asteroid or to Mars, you can’t just turn around and jump back if something goes wrong.”

NASA is looking for a cold plasma-based sterilization system that is compact, low-power and low-volume. “They want something that is cold plasma-based because of all the safety advantages it provides in a confined space,” said engineering professor Jacquelyn Nagel, who serves as faculty advisor on the project.

Nagel first connected with NASA at a conference in 2014, and the agency expressed interest in JMU’s two-year engineering capstone model. For the past year, Nagel has been working with a representative of the NASA Langley Research Center on the project’s design.

All five members of the team were selected based on their resumes and interviews. “I think most of us are space nuts, so we’ve been reading about NASA … the whole time we were growing up,” Watkins said. “So telling people I’m working on a project with NASA in college, that’s pretty cool.”

During the fall semester, the project involved a literature review, codes and standards review, and a set of system requirements. This semester the project is more design based and will be formally presented to NASA. During the 2016-17 school year, a working prototype will be generated and the project will be tested and finalized.

So who among the group would want to accompany their device if it does go into space?

“I wish,” Duda said.

“I’d do that in a heartbeat,” Gaffney added.
Students, faculty, staff and alumni from around the country gathered on March 18 to celebrate the 2016 alumni and faculty award winners.

The ballroom in the Festival Conference and Student Center was transformed to reflect the excitement of honoring these outstanding contributors. “Tonight is a special night as we recognize the achievements of alumni and faculty who have helped to make this campus a better place and all of our futures a little brighter,” said Alumni Board President Larry Caudle Jr. (’82).

The Alumni Association called for nominations in Fall 2015 for this year’s Alumni Award recipients. The awards process was different than in past years, with each academic college choosing an alum to honor for achievement. The winner of the Ronald E. Carrier Distinguished Alumni Achievement Award was selected from this pool of seven college recipients.

“This was a special evening to recognize the achievements of our alumni and faculty, but also to strengthen the connection between alumni, faculty and students,” said Ashley Privott (’94), executive director of the JMU Alumni Association.

During the day leading up to the banquet, the alumni award recipients toured campus, met with faculty and spent time with students. In their acceptance speeches, many mentioned the strong connection they felt to JMU and their gratitude that while the campus has expanded, the quality of the faculty and students has stayed the same. “The faculty and students at this university make it incredibly easy to come back and give back,” said Enrico Gaglioti (’94), recipient of the College of Business’ Distinguished Alumni Award. “JMU is an incredibly special place and in many ways is like my second home.”

The Carrier Award, the Alumni Association’s top award, is named for JMU’s fourth president, who presided over the university for 27 years. Carrier was in attendance to help honor this year’s winner, Jim Acosta (’93), who became the 35th alum in the school’s history to receive the award. Acosta is CNN’s senior White House correspondent, covering the Obama administration, presidential press conferences, visits by heads of states and issues impacting the executive branch, including the 2016 presidential election. Acosta was also the recipient of the Distinguished Alumni Award presented by the College of Arts and Letters.

(Distincted Faculty Award recipients Bill Buck, retired, School of Theatre and Dance; Conley McMullen (’80), Department of Biology; and David Wendelken, retired, School of Media Arts and Design; (Bottom row, L-R): Ashley Privott, executive director of the JMU Alumni Association; Graduates Of the Last Decade (GOLD) Network members join the celebration. (Above, left): Alumni Board President Larry Caudle Jr. (’82).)
Alumni Awards Banquet attendees in the Festival Conference and Student Center ballroom.

(Above, clockwise): Distinguished Alumni Award recipients Enrico Gaglioti ('94), College of Business; Elayne Starkey ('84), College of Integrated Science and Engineering; Stephen Geyer ('96), College of Education; Andrea Woodson-Smith ('94), College of Health and Behavioral Studies; Timothy Persons ('93), College of Science and Mathematics; and Brian Balmages ('98), College of Visual and Performing Arts. (Right): President Alger with Jim Acosta ('93), College of Arts and Letters, and the recipient of the Ronald E. Carrier Alumni Achievement Award.

“I am blown away by all the other recipients of these awards tonight,” said Acosta as he accepted his award. “It is a reminder to me of what a tremendous quilt of different walks of life this university brings together,” Acosta said he envied President Alger and the university he is leading today. “The promise when I see the young people on this campus … there is so much ahead of them, so much potential and so many opportunities. I think working toward that brighter future is what JMU is all about. That is the gift that was given to me, and I appreciate that,” he said. Acosta finished his acceptance speech by saying, “I, too, bleed purple and am very proud to be a member of the JMU Nation.”

Another bright spot at the awards banquet was the presentation of the Inez Graybeal Roop ('35) Distinguished Alumni Service Award. Beth ('84) and Jarl Bliss ('84) received the award for exemplary service to JMU. Both serve on various JMU boards, have made significant contributions to JMU, and never pass up a chance to wear purple. “Jarl and Beth as a couple should be role models for any alums. They have different interests but work together as a team to support their interests at JMU,” said Mary Gowan, dean of the College of Business.

For information on all of the 2016 Alumni Award winners, go to alumni.jmu.edu/alumniawards.
n December, the JMU Alumni Association announced that it had made a gift of $500,000 to the university for the new Convocation Center. As you are likely aware, the Convocation Center is one of many exciting initiatives in the Madison Plan. This gift is meant to inspire JMU alumni so that we can rally together to grow the association’s gift.

The JMUAA has a long history of giving to the university for both programmatic and bricks-and-mortar projects. For example, we made significant gifts to the university to commemorate the 100th anniversary of the Alumni Association and for the Forbes Center project.

More recently, we switched our strategy to leveraging Alumni Association gifts by making investments that will excite our alumni and thus motivate them to invest as well. In celebration of the inauguration of JMU’s sixth president, Jonathan R. Alger, we committed up to $100,000 as a 50-percent match gift to the Madison Forever Vision Fund. We were very excited when the university notified us almost immediately that alumni and friends rose to the challenge, and we wrote a check for the full $100,000 amount.

Since the turn of the century, the university has made monumental upgrades and expansions to campus facilities that enrich the daily lives of our students. Our dining halls, student unions, recreational facilities and many of our sports venues are first-rate and help to attract a diverse, talented and well-rounded student body. Many regard the “Convo” as the last element needed for Madison’s front porch.

Whether you are a 1970s-to-early-’80s graduate who rocked Godwin Hall to Lou Campanelli’s teams; a late 1980s-to-mid-’90s graduate who perfected the toilet paper toss during the excitement of the Lefty era; or a student of the 2000s who witnessed Kenny Brooks guide the women’s basketball program to national prominence, you likely consider JMU basketball an integral part of your Madison Experience. Our current facility, which opened in the fall of 1982 to a student body of less than 10,000, has been the source of innumerable experiences that are etched in our memories forever.

But the Convo represents much more than a basketball venue. Incoming freshmen attend Orientation there and in the fall are formally welcomed into the JMU family by the university president. A significant number of our students end their Madison Experiences at the Convo, where several schools hold graduation ceremonies. It also serves as the primary venue for concerts and special events for the university and for Harrisonburg and the surrounding community. Few would disagree that now is the time to Brighten the Lights in a state-of-the-art facility that will attract top-flight acts and musicians.

Consequently, the Alumni Association has chosen to make this investment. A centerpiece of the project will be a spacious outdoor plaza dedicated to our alumni, where special pre-event festivities will be held and outdoor special events will take place. We envision Alumni Plaza as a primary campus gathering spot. If you want to learn more about the project and view in-depth renderings of the building and site features, visit JMUconvo.com.

I have been honored to serve as the president of the JMUAA over the last two years and as my tenure comes to an end, I am hopeful that alumni will answer our challenge and join us in making the new Convocation Center a reality.
LAST DECEMBER, THE JAMES MADISON ALUMNI ASSOCIATION ANNOUNCED A

$500,000 GIFT

TO SUPPORT THE NEW CONVOCATION CENTER PROJECT AND CHALLENGED JMU SUPPORTERS TO RALLY TOGETHER AND GROW THE ASSOCIATION’S GIFT.

NOW IS THE TIME FOR YOU TO MAKE YOUR MARK ON CAMPUS. VISIT JMUCONVO.COM/#INVEST AND DONATE TODAY!
My Battlefield, Your Office
BY JUSTIN CONSTANTINE ('92)
THE CONSTANTINE GROUP, 2015
ISBN-10: 0692582037
Justin Constantine is a former Marine and attorney and is now an inspirational speaker and leadership consultant. His book is aimed at helping first-line supervisors and mid-level managers overcome leadership challenges.

Moments Matter
BY DAVE SANDERSON ('83) WITH CINDY WRIGHTSON
When US Airways Flight 1549, or "The Miracle on the Hudson," ditched into the Hudson River on Jan. 15, 2009, Dave Sanderson was the last passenger off the back of the plane. He was largely responsible for the well-being and safety of others, risking his own life in frigid water to help other passengers off the plane. His book details lessons and life strategies that readers can apply to their own lives when they face their "personal plane crash."

The Gluten Lie: And Other Myths About What We Eat
BY ALAN LEVINOVITZ
REGAN ARTS, 2015
ISBN: 978-1941393062
In his latest book, Alan Levinovitz, assistant professor of religion at JMU, reveals that much of the time, there is shockingly little science behind diets. His book The Gluten Lie explores the various reasons people self-diagnose as needing to be gluten free, and how this affects their relationship with food.

What’s Up in the Amazon Rainforest
BY GINGER NORRIS CLARKE ('94)
GROSSET & DUNLAP/PENGUIN YOUNG READERS, 2015
ISBN-10: 0448481030
In September 2015, Clarke launched a series of chapter books for upper elementary students about endangered world habitats. The first book, What’s Up in the Amazon Rainforest, takes kids through a journey into the jungle, exploring its unique animals and plants, introducing the native people, important resources, conservation challenges, and how young readers can help make a difference. The second book, What’s Up in the Gobi Desert, published in March, and will be followed by books on the Arctic Circle and African Savannah next year. Clarke has published more than 20 best-selling nonfiction children’s books.

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https://commons.lib.jmu.edu/madisonmagazine/vol39/iss2/1
Leading Ladies
JMU alumnae offer words of wisdom

Campus was abuzz on Feb. 27 as women leaders and students converged at the third annual Women in Leadership Conference. JMU alumnae shared with current students what it means to be a leader at every level and offered career advice and tips. Here’s what they had to say.

Susan Bonvouloir ('83), senior executive leader of human resources at SourceAmerica

What's one piece of advice you would give women in the workforce? Think like a man, act like a woman. Don't change your style; you don't have to be a man. Sometimes it is helpful to think like they would think.

What is one thing you learned at JMU that you have taken in your career? The thing I loved about JMU and love about hiring JMU grads is there is not a lot of ego and attitude. It is just good smart people doing good smart work. ... You learn to roll up your sleeves and do good work. ... JMU lays the foundation really well so that it is easy to do that when you get in the workforce.

How have you continued to stay involved with JMU? I have stayed very involved. First starting out my career, I begged my company to recruit from JMU. I was always raising my hand for the interviews and all that stuff, which led to me being on the Executive Advisory Committee for the Computer Information Systems department. In October, I joined the College of Business Board of Advisors. It is an amazing group of people and a great way to serve and stay connected and do great things. It is such an exciting time at JMU. It feels like the alumni are getting more and more engaged each year—helping graduates find their way and get connected to companies and build their network. It is a powerful thing.

Allison Browne Weiss ('98), journalist, line producer for Bloomberg TV

What's one piece of advice you would give women in the workforce? It is about the personal connections and about meeting people and having them remember you. A lot of times, as we go through our careers, it is not as simple as sending resumes and hoping someone gets back to you. It is about having touchstones in different parts in your careers and meeting people. It is important to have a network of professionals to touch base with every once in a while, even if that doesn't lead to an immediate job—it does pay off.

Kelly Spraker ('99), manager of communications and external affairs for Virginia Secretary of Commerce and Trade Maurice Jones

What's one piece of advice you would give women in the workforce? Take a leap of faith. Don't be afraid to reach out to anybody you know who will be able to help you out. Be bold.

What is one thing you learned at JMU that you have taken in your career? Teamwork is the best takeaway I learned from JMU—how important it is in the workforce to work as a team, across many different industries.

How have you continued to stay involved with JMU? I am more involved from a work perspective. I worked with the dean of the College of Business on some initiatives in the Governor’s Office. Through this I have gotten reconnected, and that has been nice. I hope to become more connected on a personal level going forward as well.
May 2016

Career & Networking Month

May is Career and Networking Month! A great chance for alumni to connect with each other and with JMU. Online and in-person networking events occur almost every day of the month.

Check alumni.jmu.edu/networkingmonth for all the details.

For more information and to register for all Alumni events, please visit alumni.jmu.edu/events

THREE GREAT THINGS ALL ALUMNI DO:
1. Update your info
2. Make a gift
3. Attend Alumni events

Career & Networking Month

SAVE THE DATE!

OCTOBER 28 - 29

2016 HOME COMING

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alumni.jmu.edu/homecoming JAMES MADISON UNIVERSITY.

MADISON EVENTS

M A Y 3
Alumni Webinar Series:
Meghan Ely ('03)

M A Y 5 - 7
Commencement 2016

M A Y 11
MetroDukes: Hard Times Café
Fairfax Happy Hour

M A Y 20 - 22
Late 1960s/Early 1970s
Reunion (1968–1974)
www.jmu.edu/alumni/60s70sreunion

M A Y 21
Boston, Massachusetts:
JMU Boston Red Sox Game

J U N E 18
Richmond Crabfest

For more information and to register for all Alumni events, please visit alumni.jmu.edu/events
A new landmark

Seal bearing JMU’s alma mater fosters new campus tradition BY JAVAY FRYE ('16)

There is a new must-see spot on campus. A seal bearing the words of JMU’s alma mater, written by music professor James Riley, is at the base of the Quad near the tunnel leading to the Forbes Center for the Performing Arts. The seal serves as a reminder of the relationship that alumni and students have with JMU; and, out of respect, it’s never stepped on. Its strategic placement introduces visitors to the spirit of JMU as they tour campus.

The seal was placed on campus in a collaborative effort by the Class of 2003, the Madison Society and the Alumni Association. “The Class of 2003 was inspired by other schools and universities that have similar traditions,” explained Ashley Privott ('15M), executive director of the Alumni Association. The senior class gift from the Class of 2003 started the initiative to make a seal for the Quad by raising money from classmates, most of the donations being in the amount of $20.03. After they raised approximately $14,000 for the project, the Madison Society stepped in to help.

The Madison Society is composed of students, faculty, staff and alumni who are dedicated to creating, fostering and enhancing traditions on campus. “We are extremely excited to have been a part of [placing] this historical landmark on campus,” says Madison Society student member Heidi Jenkins ('16).

Students have responded very well to this new tradition on campus. “Tons of prospective students use the tunnel, so in a way it’s their first glimpse into what values we stand for as a community. It’s also a daily reminder for present students [entering] campus [of] why we are here and why we’re proud to be Dukes,” said Leah Travers ('16).

The alma mater is most commonly heard before kickoff and at the end of home football games, at noon when the Wilson Hall bell tower plays the medley and at official university events such as commencement. This new tradition makes the alma mater a part of everyday campus life.
Biology professor Nortyn Bodkin's class examines deciduous trees and shrubs near the Quad in 1980.
Black and gold—and purple

JMU alum combines technology and spirit to give Pittsburgh Steelers fans the ultimate online experience

By Emily Tait ('15)

Oct. 13, 2011, opened the door to a new adventure for JMU alum Scott Graham ('09)—it was the day he began his career with the Pittsburgh Steelers as their digital media assistant.

A media arts and design and communication studies double major with a SMAD concentration in digital video, Graham’s time at JMU gave him the foundation and confidence to plunge head-first into the industry upon graduation.

Graham’s role with the Steelers is constantly changing. After running the production side of the Steelers.com live show that airs daily, he recently transitioned to focus more on web content. His responsibilities include developing content for Steelers.com and social media and heading up the technical side of new programs such as the “Weekly Huddle”—a live Q&A chat with Steelers players and coaches that gives fans the chance to interact directly with the team.

Graham has become a “super fan” himself by making the day-to-day experience on Steelers.com and other Steelers websites as good as it can be.

He always has the fans’ online experience in mind. “I’m trying to increase the number of unique visitors and have them consume as much content as possible and stay on the website for as long as possible. One way to do that is to give fans a good experience. If I’m not giving [them] information clearly in a way that is fun for the user, then I’m not doing my job.”

A large part of his success with the Steelers stems from his studies at JMU. “You almost have to put a little bit of yourself into creative work,” he says, “That’s something that JMU taught me, and specifically SMAD, and no other program can instill that kind of passion.

“It’s kind of bizarre to walk by six Superbowl trophies when you come to work. But there is nothing else I would rather be doing right now and that’s largely thanks to JMU.”

‘[Many of the SMAD professors] instilled so much passion. And adding the communications major halfway through my junior year turned out to be the best decision of my life.’

— SCOTT GRAHAM ('09)
education with us has been a big part in their desire to continue studying." Na’atik is multifaceted and also welcomes foreigners to study Spanish and Maya to encourage intercultural exchange. Niels Pemberton has been working seasonally for the Washington Nationals Baseball Club since April 2010. After each game, he makes sure the Marines up the street get the game scores. At Marine Barracks Washington, the Marines of Guard Company call him “Nationals Man.”

After serving for six years in the Virginia House of Delegates, Scott Surovell was elected to represent the 36th District in the Senate of Virginia.

Pamela D. Anthony has been named vice president for student affairs at Southern Methodist University. Anthony will oversee areas including the Office of the Dean of Student Life; Residence Life; women’s, LGBT, multicultural, volunteer and leadership programs; student activities; student conduct; campus ministries; health and wellness programs; career services; the Hughes-Trigg Student Center and the Dedman Center for Lifetime Sports.

Amanda Folcomer Haddaway has launched HR Answerbox, a boutique HR consultancy focused on helping organizations with their human resources and employee training challenges.

Seth Dymond released his first book, Exonerated, on Feb. 1, 2016. Christopher Roberts was named a principal in the law firm of Lerch, Early & Brewer in Bethesda, Maryland. Roberts is a family law attorney who represents clients in Maryland in all aspects of family law, including separation, divorce, custody, property, support and domestic violence matters.

Jeffrey Cretz earned a Master of Business Administration from the Uni-
Eight of Alyssa Bosley’s (’07M) students in the Hart School of Hospitality, Sport and Recreation Management were involved with the behind-the-scenes efforts of ESPN’s College GameDay.

University of North Carolina at Chapel Hill (Kenan-Flagler Business School).

Jason Fatz (’07M) was selected as the 2015 Outstanding Educator for Radford High School in Aiea, Hawaii. His peers also elected Fatz as the 2015 Hawaii State Teachers Association Teacher of Excellence. He is currently teaching in Monterey, California.

Meagan Allen is working for Exponential Education in Ghana, an organization that runs peer-to-peer tutoring programs for youth in English and math, as well as programs related to science and technology, and girls’ leadership. Cameron Miller is co-captain of the JMU Duke Club in Hampton Roads. The club hosts the annual JMU Rockfish Shootout. Miller has been the tournament director for three years. “It has been the single largest off-campus JMU Duke Club fundraiser for the last few years. Last year we donated $10,000 to JMU Athletics,” says Miller.

Sydney Carver started her career as an entrepreneur with a fashion blog, Summer Wind, that she created during her freshman year at JMU. The blog is going on its seventh year of publication.

Jessica Savoie is assistant director of alumni affairs at Shenandoah University.

Mo Greim is working as a graphic designer for idfive, an integrated marketing agency in Baltimore, Maryland.

Eight of Alyssa Bosley’s (’07M) students in the Hart School of Hospitality, Sport and Recreation Management were involved with the behind-the-scenes efforts of ESPN’s College GameDay.

Alumni represent JMU at inaugurations of university presidents in 2015

Dr. Stephen P. Huffman (’83, ’85M) represented President Alger and JMU at the installation of Chancellor Andrew Leavitt at the University of Wisconsin Oshkosh on Sept. 18, 2015.

Elizabeth “Betsy” Marshall Blose (’84, ’91M) represented President Alger and JMU at the UNC-Asheville installation of Chancellor Mary K. Grant on Sept. 19, 2015. Blose is currently a special assistant to the director of athletics for advancement and alumni engagement for UNC-Asheville.

Glenn W. Forman (’82) represented President Alger and JMU at Alger’s alma mater, Swarthmore College, on Oct. 2, 2015, at the inauguration of Valerie Smith as Swarthmore’s 15th president.

Susan B. Brown (’84) represented President Alger and the Madison community at the inauguration ceremony for Gene C. Couch Jr., the sixth President of Virginia Highlands Community College in Abingdon, Virginia, on Oct. 23. “Since I have lived in Abingdon since 1987 (not long after graduating from JMU), I feel very honored to be able to represent JMU at Dr. Couch’s inauguration. … I felt pretty important in my purple and gold regalia processing into the auditorium alongside representatives from other colleges and universities across Virginia. I am so thankful to have been able to participate in an event tied to two of my favorite institutions of higher learning.”

Visit www.alumni.jmu.edu to sign up and start sharing your news.

While space is limited in Madison print issues, the Alumni Online Community gives you a chance to tell your full story, share your photos and communicate with other alumni!
(Top): On Oct. 3, 2015, J.P. Kelley ('13) and Kelsey Rakes ('14) were married in Luray, Virginia. JMU nurses, ISAT majors, and other alumni helped celebrate. (Above, left): Fellow Dukes helped Katie Culligan ('07) and Derek Boyd ('07) celebrate their nuptials on Oct. 3, 2015, in Berryville, Virginia, at the historic Rosemont Manor. (Above, right): Emily Holloway ('11) and David Conley ('10) decided to make JMU part of their nuptials with their "first look" in front of Wilson Hall. (Right): Road Dawg joined in the wedding celebration as Amy Jo Sullivan ('11) and Eric Schramm ('10) were married July 3, 2015, in Alexandria, Virginia.
You’re invited to the Alumni Online Community.

Join the Alumni Online Community, an exclusive benefit for JMU alumni. Sign up to gain access to the alumni directory, make registering for events even easier, keep your contact information current and share your news and accomplishments with Class Notes.

It’s easy to sign up. Go to alumni.jmu.edu/howtosignup to learn more.

ANNOUNCEMENTS

Future Dukes

1990s
- Chris Greame ('92) and Michelle, a son, Seamus Walter, 8/22/15
- Jason Powell ('92) and Karsten, a son, Daniel Madsen, 1/3/16
- Tom Frazier ('95) and Kelly, a daughter, Alexandra Morgan, 11/23/15

2000s
- Elizabeth Veltri

Engagements

2000s
- Brian Robinson Twiddy, Jr. ('09) and Darley Marie Richard ('09) got engaged on the steps of their freshman dorm, Spotswood Hall, during Homecoming Weekend and College GameDay, Oct. 24, 2015.

Diamond ('00) and Pete, a son, Hollis James, 5/15/14
- Rebecca Campbell Guzowski ('01, '03M) and John, a son, Jack Adler, 9/25/15
- Denise Rembis ('01) and Ron, a daughter, Emily Jane, 11/17/2015
- Jennifer Castilleja ('06) and David ('07), a daughter, Emma Rose, 7/23/2015
- Jennifer Castilleja ('06) and David ('07), a daughter, Emily Jane, 11/17/2015

In Memoriam

Mary Ann Boone Hash ('50), of Nashville, Tennessee, 12/27/15.

Hello to the Class of 1959!
Just wanted to update you on our Endowed Scholarship.
Madison Class of 1959 Endowed Scholarship has given approximately $40,000 to 29 recipients. As of July 2015 donations to the principal totaled $106,093 with a market value of $132,348.
It has been my pleasure to meet many of our scholarship recipients. We can be proud of all of them. My only regret is that we couldn’t have given them more assistance.
Classmates, remember that you can always give to the scholarship fund. The larger the principal, the more money each recipient will receive.

Kay Daggy Neff, Class Representative
The Take Your Professor to Lunch or Coffee program is just one of the many ways JMU professors engage with their students. Above, Hak-Seon Lee, associate professor of political science, and his students enjoy lunch at Madison Grill. Studies show that students who have an educational relationship with a faculty member outside of the classroom are more successful in their overall collegiate experience.

What does engagement look like?

The Take Your Professor to Lunch or Coffee program is just one of the many ways JMU professors engage with their students. Above, Hak-Seon Lee, associate professor of political science, and his students enjoy lunch at Madison Grill. Studies show that students who have an educational relationship with a faculty member outside of the classroom are more successful in their overall collegiate experience.
It's easy to sign up. Go to alumni.jmu.edu/howtosignup to learn more.

Join the Alumni Online Community, an exclusive benefit for JMU alumni. Sign up to gain access to the alumni directory, make registering for events even easier, keep your contact information current and share your news and accomplishments with Class Notes.

You'll need your alumni identification code to register. The code is the 10-digit number located above your name on the mailing label. Or, check your email inbox for an email invitation from JMU to join the online community that includes the code. You can also email alumni@jmu.edu or call 540-568-6234 for more information.

Madison students and alumni routinely rave about their professors. Here's why:

TECHNOLOGY
PRESENTED BY JAMES MADISON UNIVERSITY

STEPHANIE STOCKWELL

‘The beauty of the mobile lab is that it can be used for a wide variety of lessons and contexts—from an isolated two-hour DNA fingerprinting activity to a semester-long collaborative biotechnology research project.’

To nominate a faculty member to be featured, contact Eric Gorton at gortonej@jmu.edu.

Follow the series at www.jmu.edu/madisonscholar/
Too often there is a perception that STEM is only for “gifted students,”” writes Heather Watson, associate professor of engineering at JMU and AAAS Science & Technology Policy Fellow. But Heather knows that an appreciation for science, technology, engineering and mathematics is important for all. Currently serving with the National Science Foundation in the Directorate for Education and Human Resources, Heather contributes her expertise to help improve STEM education.

‘Even if a young person does not go on to study in one of these fields, they need the basic knowledge to make informed opinions or decisions on issues related to these topics later in life.’

– HEATHER WATSON, JMU associate professor of engineering