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LOOKING TO A GREENER FUTURE
Kameron King's quest for sustainable landfills
HAPPY NEW YEAR!
Dr. Khan Iftekharuddin, Interim Dean

As we welcome back our students on campus and continue to make progress into the 2022 spring semester, it is a good time to reflect on the past year.

After a challenging, yet successful, online-only 2021 spring semester, it was refreshing to have students, faculty and staff back full time in person for the fall 2021 semester.

Adjusting to teaching and learning with the “new normal” of wearing masks and social distancing was a learning experience. However, it is wonderful to have students back in the classroom and participating in the many activities around the college.

I am happy to report the Batten College of Engineering and Technology family continued to excel with many achievements. The College has been in the news throughout 2021. I invite you to read a few of the selected stories about our students, faculty and staff over the past year.

Austin Tapp, a biomedical engineering doctoral student, advanced to the national 3-Minute Thesis competition with his research on adolescent idiopathic scoliosis.

Electrical engineering majors Justin Heisterkamp, Rita Meraz and Sofia Tequida were selected for research internships with the Virginia Microelectronics Consortium.

Thomas Alberts, professor of mechanical and aerospace engineering, was part of an interdisciplinary team mapping local shorelines with the ODU Hydrone.

Engineering technology professor and interim chair Vukica Jovanović oversaw the donation of 50 laptops - 10 for each of Norfolk’s five high schools.

Hongyi Wu, director of ODU’s School of Cybersecurity, and Chunsheng Xin, professor of electrical and computer engineering, were principal investigators for a $1.3 million grant awarded by the National Science Foundation.

The School of Cybersecurity will also oversee a $1.45 million GO Virginia grant, which is expected to fill 1,300 new cybersecurity jobs in Virginia within five years.

In college news, a new undergraduate major in modeling and simulation engineering was launched in the fall of 2021.

For all the news stories published about BCET in 2021, visit our news archive.

KRISTIN EDEN has been named director of Student Success for the College of Engineering.

Eden joins us from ODU Athletics – where, as director of Student-Athlete Academic Services – she oversaw the day-to-day operations for the Jacobson Student-Athlete Academic Center, all tutoring efforts for the Monarchs, advised the women’s volleyball, women’s basketball, men’s and women’s swimming teams, and the Student-Athlete Advisory Committee.

DR. STACIE RINGLEB, professor in the Department of Mechanical and Aerospace Engineering, was named director of Diversity, Equity and Inclusion Initiatives for the Batten College of Engineering and Technology.

The role was created to support the college’s commitment to “a diverse, equitable, and inclusive environment for students, faculty and staff and to educate our students on the need for diversity and inclusion in the engineering profession.”

Ringleb has served on the President’s Task Force for Inclusive Excellence and as the co-chair of the BCET Diversity, Equity, and Inclusion Committee.

SUSAN CRAIG, the new office manager for the Department of Engineering Technology, joins us from ODU Human Movement Sciences where she worked as an office manager and fiscal technician.

Craig started her ODU career at the Virginia Modeling Analysis and Simulation Center in 2004 and transitioned to the Career Management Center, working in both the Strome College of Business and Batten College of Engineering and Technology.
IN HER ELEMENT

Kameron King, doctoral graduate • #blackgirlscientist

By Sherry DiBari

For Kameron King, “lab life” came naturally. As a young girl, she once took a piece of cheese out the refrigerator and left it in her backpack - just to see what would happen. “I thought it was supposed to get moldy,” she said. “Unfortunately, it was Velveeta cheese, so nothing actually happened.”

The experiment didn’t deter King, however. After a collegiate career spent in science labs, she graduated in fall ‘21 with her doctorate in civil and environmental engineering from Old Dominion University.

King dual majored in chemistry and environmental science and policy at the College of William & Mary. At W&M, she investigated mercury levels in fish in the Chesapeake Bay.

King earned her masters in geography and environmental engineering at Johns Hopkins University. At JHU, she studied algae cultivation, biofuels and renewable energy.

It was a natural transition to engineering for her Ph.D. “I started from chemistry and jumped into engineering to think about how we can make changes for the environment on a larger scale,” she said.

King chose ODU not only for the focus in biofuels and waste management, but also for the support system. “When you apply for a Ph.D., it’s really about the professor and the advisor, and who’s going to support you the most,” she said. “I really found that in Dr. Kumar. That is really what influenced my decision to come to ODU.”

King’s doctoral research focused on a holistic way to treat landfill waste to be both pre-processed to mitigate harmful methane from reaching the atmosphere and also converted to energy as a biomass fuel. Her dissertation targeted the integration of two processes: hydrothermal carbonization, a water-based process that breaks down landfill waste, and anaerobic digestion, a method of converting waste to biogas energy.

“This could be a more environmentally sustainable way to treat our waste,” she said. “Because the methane or the biogas is going to be produced anyway, why can’t we control it and actually use it for energy?”

Sandeep Kumar, professor in the Department of Civil and Environmental Engineering and director of the Biomass Research Laboratory and ODU’s Energy Cluster, noted King’s dedication. “Kameron aims to serve the community and contribute toward a sustainable future,” he said. “I am really proud of her research work and achievements during her doctoral studies.”

On the side, King runs a business called The Black Girl Scientist, an organization established “for the encouragement, uplifting, presence and knowledge of young women and girls.” “I think anyone can identify with being a scientist,” she said. “You don’t necessarily have to be in a scientific lab to carry out your purpose in life. Whether you are a stylist, or a cook or chef...as long as you are doing your God-given purpose in life.”

Down the road she has bigger plans. “My big goal is to own my own state-of-the art laboratory testing facility where people who look like me can say, ‘I can do this as well,’ and I can offer people advice and support based off my experiences as an African-American woman in these fields,” she said.

King recently started a new job in the food waste reduction office at the Environmental Protection Agency in Washington, D.C. “I’ll be helping to divert the food waste that we have going to the landfill, which is actually even more detrimental than the mixed waste in our environment,” she said.

“I’m super blessed,” King said. “It really is the perfect position.”

RANDY C. HADDOCK, a senior lecturer in Old Dominion University’s Engineering program, was recently appointed to the state’s Board for Contractors by Governor Ralph Northam. The board awards licenses to businesses involved in “construction, removal, repair or improvement of facilities on property owned by others,” according to its website. The board also licenses individuals and firms engaged in “residential building energy analysis, which involves evaluation of energy consumption and recommendations to improve energy efficiency.”

Haddock started teaching at ODU in 2000 after he received his BA and MA degrees in civil engineering from the University. He began his career in construction as a project manager and estimator before starting his own residential construction company.

DID YOU KNOW? The first Engineering Open House was held in February of 1972 in Kaufman Hall.

SCHOLARSHIP RENAMED FOR DR. WILLIAM DREWRY

The “CEE Graduate Enhancement Award” has been renamed in memory of longtime engineering faculty member, Dr. William Drewry. Drewry, who passed away in 2020, came to the University in 1976 as a professor in the fledgling Civil Engineering Department and taught at ODU for 32 years. He served as the first chair of the department (1976-84) and as acting chair (1992-93). He returned as chair of the Civil and Environmental Engineering Department from 1993 to 1997. Drewry also served as the college’s associate dean from 1988 to 1993.

The award is presented twice a year to qualifying master’s and Ph.D. students in the CEE Department, providing additional support to graduate research and teaching assistants who are working with CEE Faculty.
High school students from the Governor’s STEM and Technology Academy (GSTA) at Landstown High School are one step closer to a degree at Old Dominion University.

The Batten College of Engineering and Technology and Virginia Beach City Public Schools (VBCPS) recently entered an agreement to accept credit for GSTA’s Introduction to Engineering Design course.

Engineering-track students who pass the course can waive Explore Engineering and Technology, a two-credit-hour introductory course offered at ODU.

The engineering agreement is a first-of-its-kind for both academic institutions.

“This new partnership strengthens our regional connections and benefits both the GSTA students and the University,” said Khan Iftekharuddin, interim dean of the Batten College. “The goal is to build a long-lasting partnership with the partner high school and also replicate this program with other area schools.”

The memorandum of understanding (MOU) was developed by Rachel Sparks White, GTSA coordinator, and Rafael Landaeta, associate professor and associate dean at the Batten College. It was signed by VBCPS representatives and Brian Payne, ODU’s vice provost of academic affairs.

A total of 450 of Landstown’s 2,200 students are enrolled in GSTA’s three programs of study: engineering and technology, information technology and STEMarketing communications. Engineering students make up about 45% of the program.

Engineering-track students are required to take Introduction to Engineering Design, a Project Lead the Way-designed course before choosing one of four focus areas: aerospace technology, engineering drawing and design, biomedical or robotics.

“We learned the basics of engineering drawings, and what an engineer has to do before they have to create a design - what goes into the planning process of making that design and solving a problem and identifying a problem,” said Tyrel Rivers, a GTSA student enrolled in the course.

Karina Arcaute, senior lecturer and director of first-year engineering programs, worked with White and Landaeta to evaluate the two courses.

“It was great to be involved in this partnership,” Arcaute said. “Although I have not met Rachel, or the LHS staff in person as we worked on this during COVID and all the work was done virtually, it was an awesome collaboration.”

White believes the MOU gives the high school students an incentive to stay on the engineering path. “This opens doors to students that financially might not think that they can afford college,” she said. “This might give them a little push to continue on.”

Students like Lily Snook are happy to have their hard work validated. “We have to apply and get accepted to this academy,” she said. “We are going through rigorous courses on top of our already advanced courses. “For that to be acknowledged by ODU, it’s just wonderful.”
VirtualLab@OpenCity

MURAT KUZLU, assistant professor of engineering technology, will work with Vukica Jovanović, associate professor and interim chair of engineering technology, and researchers from Virginia Commonwealth University, to develop a smart city lab environment, called VirtualLab@OpenCity, which will engage researchers, students and companies with smart city challenges, such as automation, data analysis, service reliability and sustainability.

The project, funded by the Center Coastal Virginia Center for Cyber Innovation, will allow the VirtualLab@OpenCity team to build Virginia’s cyber-physical systems workforce with hands-on-experience on new technologies that ultimately lead to innovative smart city solutions.