

# STUDENTS

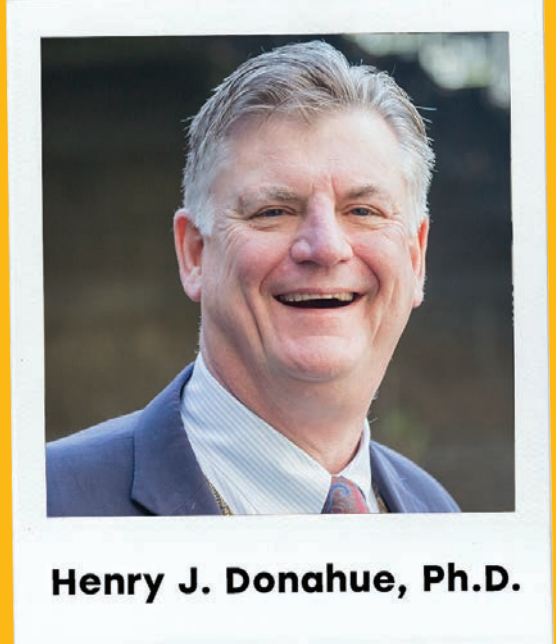


Photo courtesy of Steven Meas

## M.D.-Ph.D. student receives Canadian award

**Steven Meas**, a dual M.D.-Ph.D. student in biomedical engineering at VCU, will receive the prestigious Doctoral Foreign Study Award from the Canadian Institutes of Health Research. Meas, who has been studying at VCU School of Medicine, is joining the lab of **Henry J. Donahue, Ph.D.**

# FROM THE CHAIR



**Henry J. Donahue, Ph.D.**

Alice T. and William H. Goodwin, Jr. Endowed Chair and Professor  
Chair, Department of Biomedical Engineering  
Co-director, VCU Institute for Engineering and Medicine

From our home in the new Engineering Research Building, VCU's Department of Biomedical Engineering is fostering collaboration across the campuses of the university. Our department's ties to the VCU School of Medicine expand opportunities for undergraduate students to be exposed to clinical and pre-clinical research spanning molecules, cells and tissues.

Our graduate program has again been named a top-ranked graduate program by U.S. News & World Report. We offer a non-thesis M.S., and a dual M.D.-Ph.D. program in biomedical engineering.

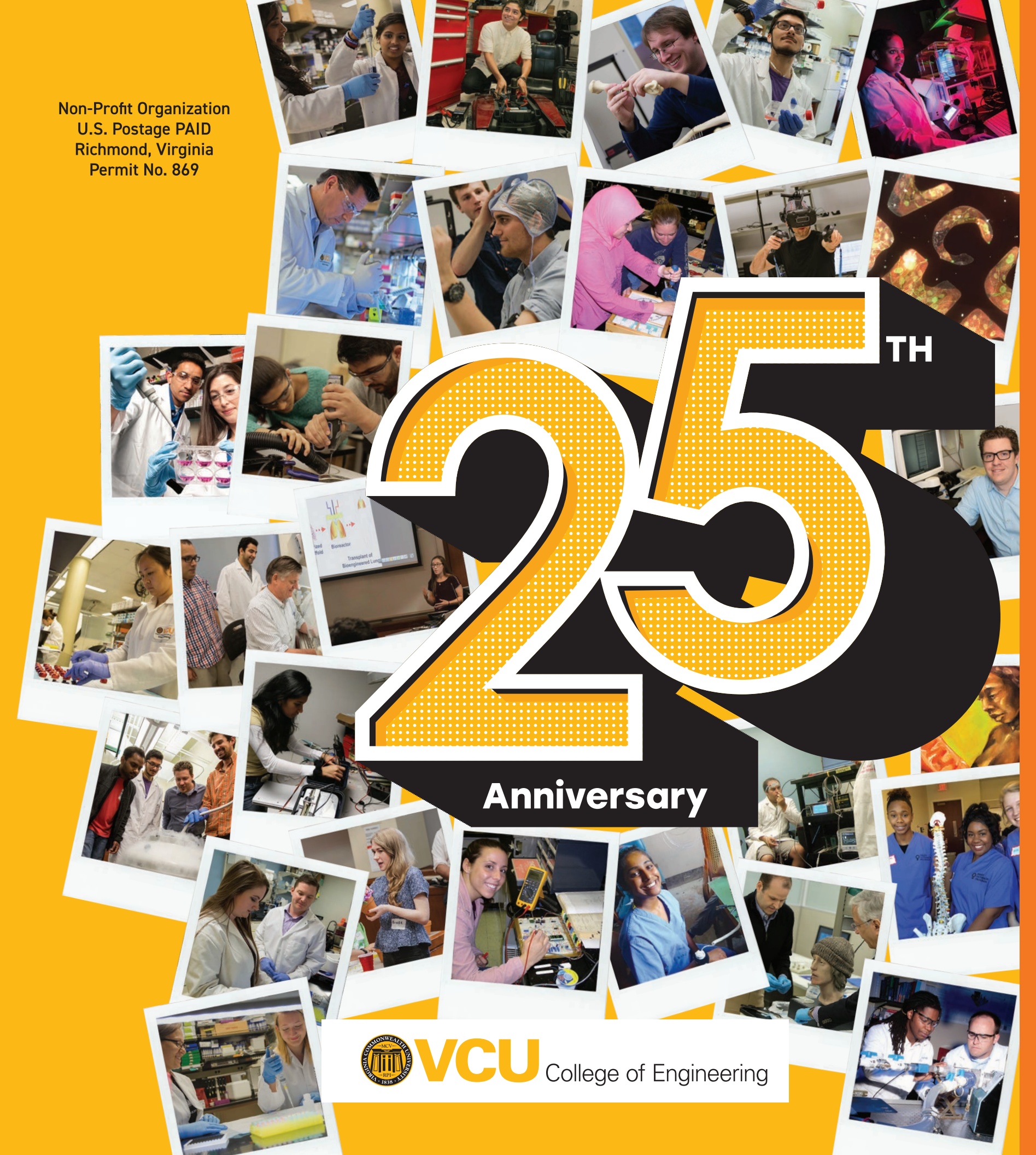
Our faculty members specialize in novel bioimaging, mechanobiology, regenerative medicine, the human-machine interface and rehabilitation engineering. With a convergent approach to science, engineering and medicine, we're working to transform Richmond, Virginia, into a premier hub for biomedical innovation and education.



**VCU** College of Engineering

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# 25<sup>TH</sup> Anniversary

**VCU** College of Engineering

# GROWTH

## NOW OPEN: the Engineering Research Building

VCU Engineering held a different kind of grand opening for its new Engineering Research Building. To comply with restrictions because of the COVID-19 pandemic, a large audience of well-wishers gathered by Zoom Feb. 3 to see university officials, architects, builders and civic leaders cut the ribbon on the 133,000-square-foot research and workforce development hub.

The building facilitates expanded public-private partnerships in VCU Engineering research. Construction of the \$93 million facility was funded by taxable bonds, which allows VCU Engineering to work closely with industry to conduct translational research. These collaborations support the college's mission to train students in real-world engineering, often alongside industry professionals. The Engineering Research Building also includes a 9,000-square-foot makerspace and a fully wired courtyard for working outdoors.



The Department of Biomedical Engineering's graduate program is again top-ranked, according to U.S. News & World Report.

### FACULTY ACCOMPLISHMENTS

- 6 NIH R01 Principal Investigators
- 4 AIMBE Fellows
- 4 NSF CAREER Award recipients
- 1 NIH MIRA recipient
- 2 NAE members

### VCU BME GROWTH

(SINCE 2016)

- Black/African American undergraduate enrollment **more than doubled**
- Research funding **doubled**

### AREAS OF RESEARCH

- Mechanobiology
- Rehabilitation engineering
- Assistive technology
- Immunoengineering
- Computational mechanics and modeling
- Human/computer interfaces
- Musculoskeletal engineering
- Magnetic Resonance Imaging

[egr.vcu.edu/bme](http://egr.vcu.edu/bme)

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## Puetzer wins CAREER award and joins NIH consortium

**Jennifer Puetzer, Ph.D.**, has received the prestigious National Science Foundation CAREER award. Puetzer is also a National Institutes of Health Interdisciplinary Rehabilitation Engineering Career Development Program scholar. The program was created by a consortium of nine leading institutions with engineering and physical therapy programs. Puetzer's CAREER award will support her investigation into how the mechanical cues that occur during development further drive cells to create bigger and stronger collagen fibers for tendon and ligament repair.



## Seeking to improve health for spinal cord injury patients

**Carrie Peterson, Ph.D.**, is researching how to help individuals with spinal cord injury who use manual wheelchairs from childhood through adulthood. Peterson is generating computational simulations of musculoskeletal dynamics during wheelchair propulsion to quantify shoulder joint contact forces. She is part of a team that has received a \$2.5 million grant from the Eunice Kennedy Shriver National Institute of Child Health and Human Development at the National Institutes of Health.



## Understanding cell behavior in response to tissue mechanics

**Christopher A. Lemmon, Ph.D.**, has received a three-year grant of about \$440,000 from the Biomechanics and Mechanobiology program in Civil, Mechanical and Manufacturing Innovation at the National Science Foundation to advance understanding of cell behavior in response to tissue mechanics in disease. Lemmon is investigating how cells respond to viscoelastic properties of soft tissues in the human body, which could shed light on cell behavior in illnesses such as cancer and fibrotic diseases.



## Boyan, Donahue named Orthopaedic Research Society fellows

**Dean Barbara D. Boyan, Ph.D.**, and **Henry J. Donahue, Ph.D.**, have been named 2021 Orthopaedic Research Society Fellows. The fellows program honors longtime members for their professional and scientific contributions to the organization and to the field of orthopaedic and musculoskeletal research.

## Students honored by Koerner Family Foundation

**Franck Kamga Gninzeke, Neil Mittal, M.D., and Brooke Danielsson**, all doctoral students at VCU Engineering, will each receive a \$10,000 support award from the Koerner Family Foundation. The foundation seeks to help students earn doctoral degrees in engineering fields and retain them in the U.S. to ensure that the nation remains globally competitive.



Photo courtesy of Yas Maghdouri-White, Ph.D.

## Tendon repair through biomanufacturing

After earning her doctoral degree in biomedical engineering, **Yas Maghdouri-White, Ph.D. (Ph.D., '14)**, went on to become one of the first employees at a medical device company with deep roots in VCU medicine and engineering. Maghdouri-White is a senior research and development scientist at Embody Inc., based in Norfolk, Virginia, which is developing electrospun collagen-based products for the repair of tendon injuries.

— Erica Naone, VCU School of Medicine

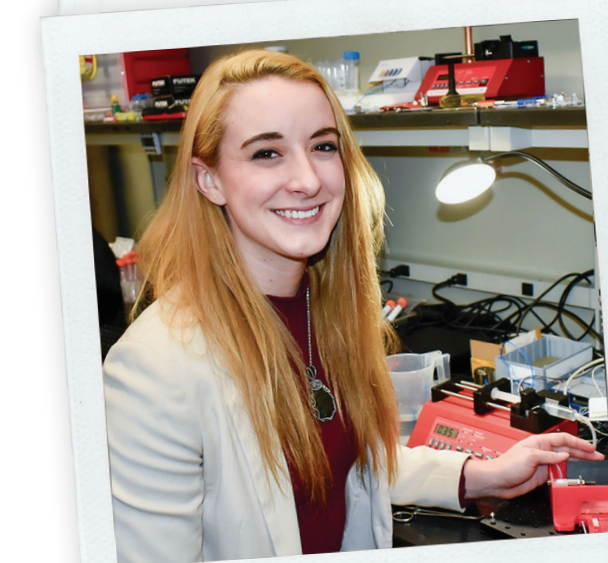


Photo courtesy of Sarah Saunders

## A lifesaving gift

As a biomedical engineering undergraduate, **Sarah Saunders (B.S.'17)** joined a bone marrow registry drive, adding her DNA to the National Marrow Donor Program. Now a doctoral student and in the height of the pandemic, she learned she was the best match for a patient whose survival depended on a donation. Despite the personal risk involved, Saunders underwent the donation procedure at Georgetown University Hospital.

## An 'EPIC' win for innovative STEM education

Biomedical engineering doctoral student **Brooke Danielsson** has received funding from the American Society for Cell Biology to support a community outreach program aimed at middle school students with learning disabilities. Danielsson's Engineering Practices in Color (EPIC) program uses multisensory activities to teach STEM concepts to students living with dyslexia.



Photo courtesy of Brooke Danielsson

## Student earns scholarship to study in Croatia

Biomedical engineering major **Lise Mychaleckyj**, a member of the VCU Honors College, is a recipient of the 2020-21 Boren Scholarship. She will use her Boren Scholarship to study Croatian at the University of Zagreb in Zagreb, Croatia. She hopes the experience will support her on a path toward studying sustainable design in graduate school and later working for the U.S. Agency for International Development.



Photo courtesy of Lise Mychaleckyj

## "Why Not Me?"

Undergraduate **Juan Mickel-Jones** is the subject of a new documentary called "Why Not Me?" that chronicles the emergency heart transplant he received at age 16. Mickel-Jones said he started thinking about studying engineering when he was in high school. "I didn't know what kind, though," he said. "Then I went through this and I was like, biomedical engineering it is!"



Photo courtesy of Juan Mickel-Jones