

The Chancellor's Report

February 2020**Rankings**

The 2020 Princeton Review has recognized NC State University's dedication and investment to entrepreneurship, ranking the University as 10th in the country for undergraduate entrepreneurship and 21st for graduate programs. The *US News & World Report* ranked NC State's Engineering Online program seventh on the list of Best Online Master's in Engineering Programs in the nation. Additionally, the Engineering Online Program was ranked 15th on the list of Best Master's in Computer Information Technology Programs and 6th on a list of Best Online Graduate Engineering Programs for Veterans. Our online MBA also ranked 15th in the nation. Overall, we earned 12 rankings of #15 or better out of more than 1,600 online programs ranked this year.

Alumni Success

NC State College of Engineering alumna and NASA astronaut, Christina Koch, has broken another record in our history books. Back in October, Koch participated in NASA's first ever all-female spacewalk. On December 28, 2019, Koch broke the record for the longest single spaceflight by a woman in history, surpassing former Station Commander Peggy Whitson's record in 2016-2017. Christina broke the record at 288 days in space, but the number has and will continue to add up until her scheduled return to earth on February 6, 2020. Koch will have spent a total of 328 days, nearly 11 months, on board the International Space Station.

NC State Research and Entrepreneurial Grants

The U.S. Department of Energy (DOE) has awarded NC State with a five year, \$9 million grant for the development of new rooftop solar systems and installation procedures, in order to make solar energy more affordable and efficient to install. Dr. Alex Huang, a distinguished Professor of Electrical and Computer Engineering at NC State, is the lead researcher on the project.

The new Plants for Human Health Institute at NC State has received a four year, \$6.4 million grant from the U.S. Department of Agriculture in order to improve fruit quality in the blueberry and cranberry industries. This project is expected to help the industry react to changing demands from consumers through genetic advancements and innovation.

National Academy of Inventors

Three NC State faculty members have also been named fellows of the National Academy of Inventors. Rodolphe Barrangou, Kenneth R. Swartzel, and Carlos Pignataro are all being recognized for their inventive contributions to their fields. Dr. Barrangou is a Todd R. Klaenhammer Distinguished Scholar in Probiotics Research and a Professor of Food Science, who is widely known for his groundbreaking work with CRISPR. Dr. Swartzel is a William Neal Reynolds Distinguished Professor Emeritus of Food Science, widely known for developing preservation processes that yield high quality, nutritious, safe and economical foods. Pignataro is an Adjunct Professor with the Department of Electrical and Computer Engineering and a distinguished engineer at Cisco – he has co-invented almost 200 US patents and co-authored three books on computer networking.

AAAS Fellows

NC State University has had two of its faculty members elected as fellows of the American Association for the Advancement of Science (AAAS). AAAS Fellows are members recognized for their extraordinary efforts on the behalf of the advancement of science and its applications across disciplines. The AAAS Council has elected Professor of Chemical and Biomolecular Engineering Carol Hall for her contributions to the field of thermodynamics and Professor of Physics Jaqueline Krim for her contributions to both atomic-scale friction and scientific outreach and diversity.

TED Faculty

Katie Mack, an assistant professor at NC State, was selected as a TED Fellow and will deliver a talk at the TED2020 conference in Canada this April. The TED Fellows program recruits young innovators across varying disciplines from around the globe who demonstrate outstanding achievement and exemplary character. Mack was awarded this honor for her skill as a scientific storyteller and her research on dark matter, black holes, distant cosmic explosions, and the formation of the first galaxies. Her book of theories about how the universe might end, *The End of Everything (Astrophysically Speaking)*, will be published in June.

Student Success

NC State Ph.D. student in industrial and systems engineering Hafizul Islam is developing a mathematical model that will help food banks distribute food more equitably. His model will determine the optimal amount of food that should be issued to each food bank in a specific region based on demand, storage capacity, available refrigeration and freezer space, and the cost of distribution. Islam took first place in the Graduate School's fifth annual Three Minute Thesis competition presenting on his research aimed at reducing food waste and addressing hunger in the U.S. and worldwide.

Belltower Project Progress

Following months of diligent and extensive labor, workers have finished the removal of the scaffolding around the Memorial Belltower, marking the end of the first phase of its restoration. Throughout the exterior renovations, research helped shed light on a possible time capsule buried in one of the cornerstones of the tower base. In fact, workers were able to identify a Freemason symbol on the northeast corner of the base and uncovered a lead time capsule from 1921, which is believed to contain a newspaper and Mason's coin. Furthermore, the Belltower project will continue as the interior renovations begin a process that is expected to finish in early 2021. The installation of the 55-bell carillon will mark the completion of the tower, the construction of which began more than a century ago.