Thanks to its STEM-related activities, UB continues to gain greater visibility as one of New England's most robust centers for research and innovation.

Work on the project was underwritten by the Connecticut Space Grant Consortium. Its investment affirms that when it comes to new ideas, UB always aims high.

Engineering Possibility

White House officials were curious: how can engineers help solve some of the world's most pressing challenges?

To find out, they invited School of Engineering Dean Dr. Tarek Sobh and other top engineering school deans to brief them on the Grand Challenges of Engineering. The national campaign was initiated by the National Academy of Engineers (NAE) to identify innovative engineering solutions for key issues in the areas of health, alternative energy, sustainability, infrastructure, virtual reality, personalized learning, scientific discovery, and cyber security.

Sobh's advice was based on his experience at UB, where he and other faculty have successfully helped countless students establish themselves as pioneering researchers, thinkers, and problem-solvers. In the past year alone, teams of engineering students won 17 awards, scholarships, or grants from the American Society of Engineering Education, the Institute of Electrical and Electronics Engineers, Upsilon Pi Upsilon, Connecticut Space Grant Consortium, National Action Council for Minorities in Engineering, NASA, and other world-renown engineering institutions.

So as Sobh advised Washington's thought leaders, students back at campus pushed engineering boundaries in fields like data analytics and robotics, nanotechnology, and more. They included graduate students Kishore Thota and Almat Raskaliyev, who this year conducted research to enhance the use and performance of robots.

Guided by Sobh and Professor Sarosh Patel, Thota and Raskaliyev developed a mathematical model to determine the orientation of a robotic arm using three GPS sensors. Because of this research, the student duo won second place out of more than 550 entries at the Northeast ASEE Conference in May 2016. The prize was one of several awards that were presented to UB student research teams. UB Professor Dr. Christian Bach won the ASEE Outstanding Teaching Award for his commitment to engineering education, research, and teaching.

Robotics also presented opportunities for the Engineering Department to collaborate with the Shintaro Akatsu School of Design. In a highly unusual project, a multidisciplinary design-and-engineering team developed plans for a remote-controlled robotic monkey named Ham. In an inaugural test flight held in August, the monkey was launched 24 miles into space from New Mexico. It will now be launched in Connecticut to allow students at Bridgeport's Discovery Museum to engage with it and learn more about space. Work on the project was underwritten by the Connecticut Space Grant Consortium. Its investment in the campaign affirms that when it comes to new ideas, UB always aims high.