THE
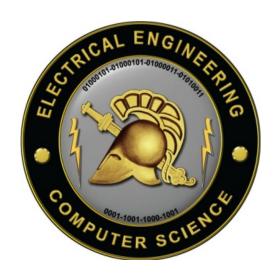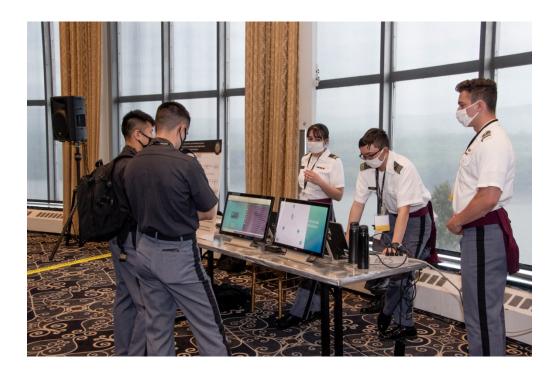# DR. GEORGE M. KREMBS
INNOVATION AWARD

Academic Year
2020 – 2021

The mission of EECS is to *educate and inspire cadets to be leaders of character, prepared to think critically, innovate, and apply engineering and technology expertise as Army Officers.* The senior design project inspires cadets to pursue academic excellence while attaining a Bachelor of Science Degree in Electrical Engineering, Computer Science, Cyber Science, or Information Technology. Innovation and creativity are critical to both engineering and the profession of arms.

In 2001, Dr. George Krembs provided a grant to EECS to fund an annual award for the most innovative senior design project. The Dr. George M. Krembs Innovation Award inspires cadets to go beyond what they have learned in the classroom to develop novel solutions to engineering problems.

The SDN for IoT Security Team at the EECS Projects Day on 29 April 2021.

The recipient of the 2021 Dr. George M. Krembs Award for Innovation is the Software-Defined Networking (SDN) for Internet-of-Things (IoT) Security Team. The Team's project was to create a software-defined network capable of detecting anomalies and then acting on this information in real time.

The team designed a system using open-source SDN controller software combined with their custom programs to monitor network traffic using machine learning. Their software was able to classify anomalous traffic for a set of Denial-of-Service (DoS) attacks and then alert the information technology security team of the compromised devices. With more research and development, their project would have enabled an automatically response to the attacks in real time.

The SDN for IoT Security team members are CDTs Taylor Bradley, Colin Kim, Elijah Parrot and Matthew Rusiniak.