Northeastern’s use-inspired approach to research is particularly powerful when it comes to addressing national security, one of the most daunting challenges of our time. Our researchers’ trailblazing innovations—in cybersecurity, weapons and explosives detection, and Big Data analysis—are setting new standards in information assurance and the creation of sophisticated tools for keeping our world secure.

Carey Rappaport, professor of electrical and computer engineering

Rappaport is developing improved scanning technology that’s better—and faster—at detecting potential weapons hidden within the contours of the human body. He and his team are combining multiple sensors with advanced processing algorithms to make traveling safer and security checks smoother for the public.

Recent Grants

- **$33.6 million** from the National Science Foundation for Gordon-CenSSIS (co-principal investigator)
- **$2.5 million** from the Department of Homeland Security for ALERT (co-principal investigator)
- **$467,000** from the National Science Foundation
Stephen Flynn, professor of political science; co-director, Kostas Research Institute for Homeland Security

Flynn was among the first to promote an approach to national security based on resilience: We can never eliminate disasters, so we need to recover from them quickly. He and his team are collaborating with policymakers to assess how to minimize damage—and impact—to critical points in critical systems.

Recent Grants

- $575,000 from the Alfred P. Sloan Foundation
- $500,000 from the Rogers Corporation
- $294,670 from the City of Boston

William Robertson, assistant professor of computer and information science and electrical and computer engineering

Robertson is focused on thinking like computer hackers, putting him at the forefront of cybersecurity research. He studies the construction and behavior of malicious software, enabling his team to create robust tools and systems that cripple the ability of cybercriminals worldwide to operate.

Recent Grants

- $207,307 from the Department of Defense

A More Secure Internet

Cybercriminals are becoming increasingly sophisticated, targeting everything from mobile devices to complex infrastructures. Education is one critical component in dealing with cyberthreats.

Recently, Northeastern was designated a National Center of Academic Excellence in Cyber Operations by the National Security Agency (NSA). The program, in which students can pursue a new specialty in cyberoperations, aims to provide them with the advanced technical training and skills to tackle emerging cyberthreats in their professional careers. The program will be led by Agnes Chan, associate dean and director of graduate education at Northeastern’s College of Computer and Information Science.

Research is another way to counter cyberthreats. Engin Kirda, Northeastern's Sy and Laurie Sternberg Interdisciplinary Associate Professor, is finding ways to manage these increasingly serious threats by studying Internet security issues and looking for vulnerabilities in websites and Internet applications. With this knowledge, he’s creating more secure applications and better virus-detection techniques.

For more information, contact Tim Leshan, vice president for government relations, 617.373.8528, t.leshan@neu.edu, or visit northeastern.edu/governmentrelations.