

February 16, 2016

2016 NSF CAREER Award Recipient

Yao Liu received an NSF CAREER award for 5 years totaling \$499,950. The grant is titled: “CAREER: A Pathway towards Channel Camouflage and Manipulation Techniques for Wireless Security”.



This project will focus on two important directions of research: (i) it will investigate methods that can enable a receiver to effectively detect the existence of an attack where an attacker can bypass authentication or camouflage location changes by creating an artificial wireless channel similar to the real one; and (ii) it will also explore how the creation of artificial wireless channels, on the other hand, paves the way for significant advancement in wireless security techniques, such as key establishment and anonymous communication. The project has the potential to substantially improve the security of existing channel based authentication and location distinction approaches, and accordingly impacts wireless security research due to the wide adoption of these approaches in the design of wireless systems. The project also creates a new research direction on creating artificial wireless channels to solve practical wireless security problems. All research results will be freely distributed. This research will be coupled with education and training for introducing students to wireless security research, as well as broadening security education to non-specialists.

For more information see:

https://www.nsf.gov/awardsearch/showAward?AWD_ID=1553304&HistoricalAwards=false