Dr. Peng Ning, NCSU
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Room 213, Petty Science Building.
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"DoS-Resistant Broadcast Authentication in Wireless Sensor Networks"

Presented by Peng Ning, PhD, Associate Professor of Computer Science at North Carolina State University. URL: http://discovery.csc.ncsu.edu/~pning/

## Abstract

Recent technological advances have made it possible to develop distributed sensor networks consisting of a large number of low-cost, low-power, and multi-functional sensor nodes that communicate in short distances through wireless links. Such sensor networks are ideal candidates for a wide range of applications such as monitoring of critical infrastructures and military operations. In hostile environments, the security and resiliency of such sensor networks becomes a critical issue. However, it is very challenging to build secure and resilient sensor networks due to several unique features of sensor networks, such as the resource constraints on sensor nodes and exposure to node captures and physical attacks. In this talk, I will present some recent results on mitigating Denial of Service (DoS) attacks against broadcast authentication in wireless sensor networks, as well as secure and DoS-resistant code dissemination, an application that requires broadcast authentication.

## Biography

Peng Ning is an Associate Professor of Computer Science at NC State University, located in Raleigh, NC, USA, where he also serves as the Technical Director for Secure Open Systems Initiative (SOSI) in College of Engineering at NC State University. He is a recipient of National Science Foundation (NSF) CAREER Award. His research has been supported by the NSF, the US Army Research Office (ARO), the Advanced Research and Development Activity (ARDA), SRI International, and the NCSU/Duke Center for Advanced Computing and Communication (CACC). He is on the editorial boards of ACM Transactions on Sensor Networks, Journal of Computer Security, Ad-Hoc Networks, Ad-Hoc & Sensor Networks: an International Journal, and IET Proceedings Information Security. Peng Ning served (or is serving) as the Program (Co-)Chairs of ACM SASN '05, ICICS '06 and ESORICS '09, the General Chair of ACM CCS '07 & '08, and Program Vice Chair for ICDCS '09 -- Security and Privacy Track. He is a Steering Committee member of ACM CCS and a founding Steering Committee member of ACM WiSec. He has served on the organizing committees or program committees for over fifty technical conferences or workshops related to computer and network security.