

## EINLADUNG

Zeit: Mittwoch, 14. Dezember 2011, 17.00 Uhr

Ort: Raum 5055, Ahornstr. 55

Referent: Dipl.-Inform. Tobias Heer

Thema: Direct End-to-Middle Authentication in  
Cooperative Networks

Cooperative networks rely on user cooperation at the network layer to provide services, such as packet forwarding and shared access to other network resources like storage or Internet access. Examples of such networks are decentralized wireless mesh networks and wireless Internet access sharing networks. However, cooperation also creates new attack possibilities for malicious and selfish users. For example, wireless multi-hop networks are particularly susceptible to attacks based on flooding and the interception of, tampering with, and forging of packets. Thus, reliable communication in such networks often depends on mechanisms to allow on-path devices, such as middleboxes, to verify the authenticity of network traffic and the identity of the communicating end-hosts.

In this talk, we present, analyze, and evaluate novel end-to-middle authentication protocols. Thereby, we address the fundamental tension between security, performance, and lack of central control in cooperative networks. We show different design options that enable middleboxes to efficiently verify the source and/or the integrity of forwarded packets at different transmission speeds. With such a capability, middleboxes can shelter against resource misuse and protect end-hosts against DoS attacks that leverage the middleboxes as a weak spot.

Es laden ein: Die Dozenten der Informatik