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Systems Software

- Web and Internet applications
- Mobile applications
- Games
- Database applications
- Security, networking, embedded software...

Areas in Systems Software

- Operating systems
- Networking
- Distributed systems
- Security
- Mobile computing

Research

- System support for security

Motivation

- Software is hard to secure
    - Large, third-party, changing functionality
    - Attacks are common, for profit
    - Diagnosis and recovery is error-prone, expensive
- Technology trends
    - Computing is cheap
    - Network, disk capacities are increasing
- Use abundant computing to provide support for post-intrusion scenarios

Current Research Projects

- Intrusion analysis (computer forensics)
- Intrusion recovery
- Intrusion isolation

Graduate Students

- Solid software implementation skills

- Background and interests in
    - Operating systems
    - Computer security
    - Networking, distributed systems

Teaching

- Dependable Systems (ECE 1724)
    - Winter 2007

- Advanced seminar style course
    - Focus on security and reliability
    - Requires background in OS, networking

Thanks!

Taser Intrusion Recovery System

- Automates recovery after an intrusion
- Similar to rolling back a software upgrade
- Ideally, user doesn't even realize that an intrusion occurred!