Securing the Open Softphone

Kickoff Colloquium
September 1, 2010

A Unique Team

- All *nine* of the principal investigators are faculty members at Boston University
  - Very rare to have such a broad and deep collection of expertise under one roof
- Cross-cutting collaboration between
  - Computer Science,
  - Electrical and Computer Engineering, and
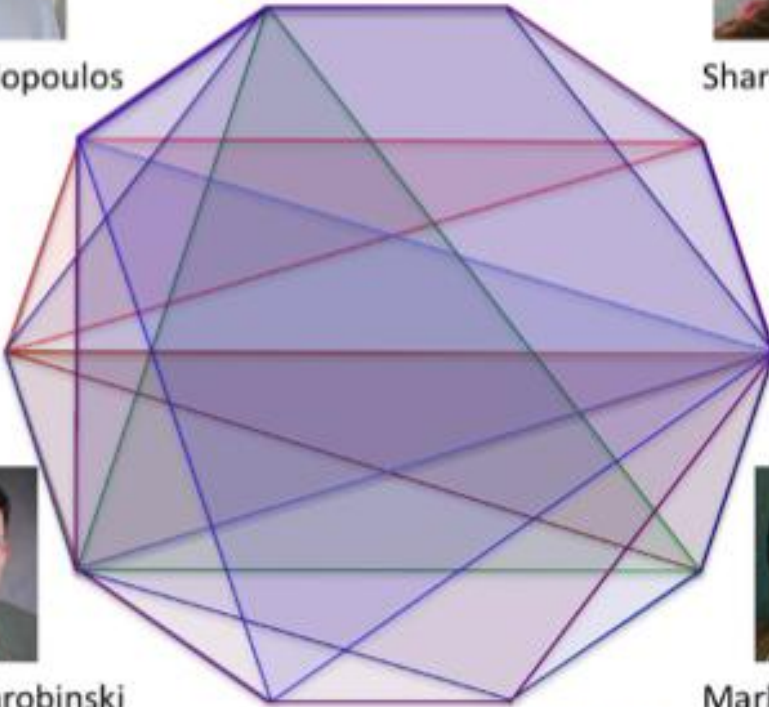 - Metropolitan College Computer Science

Mark Crovella

Steve Homer

Sharon Goldberg

Nikos Triandopoulos

Leonid Reyzin

Ari Trachtenberg

David Starobinski

Mark Karpovsky

Greg Troxel

Tanya Zlateva

Proposal Areas

§2.1.1 Hardware attacks
§2.1.2 User privacy
§2.1.3 Leveraging sensing

§2.2.1 Detecting attacks
§2.2.2 Preventing attacks
§2.2.3 Aligning incentives

§3.1 Curriculum development
§3.2 External collaboration

Collaborators

- **Raytheon BBN Technologies**
  - Experts in software defined radio
- **University of Warwick**
  - Digital forensics, malware propagation, formal modeling
- **Deutsche Telekom**
  - Major handset vendor (T-Mobile) and network service provider
 - Extensive security experience

Mark Crovella

Professor
Computer Science Department
College of Arts and Sciences
http://www.cs.bu.edu/fac/crovella

Research Interest

- Performance evaluation
- Parallel and networked computer systems
- Internet measurement and modeling
- Self-similarity and heavy-tailed distributions in network traffic

Steven Homer

Professor
Computer Science Department
College of Arts and Sciences
http://www.cs.bu.edu/fac/homer
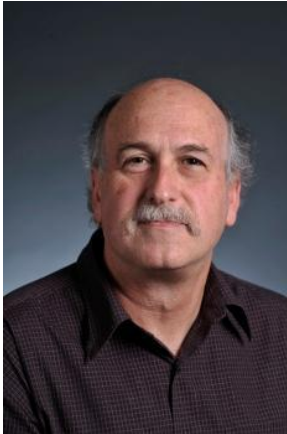
Research Interest

- Theoretical computer science
- Complexity theory
- Quantum computing
- Learning theory

- Parallel and probabilistic algorithms

Sharon Goldberg

Research Interest

- Network Security

Assistant Professor
Computer Science Department
College of Arts and Sciences
http://www.cs.bu.edu/fac/goldbe

Mark Karpovsky

Professor
Electrical and Computer Engineering
College of Engineering
http://mark.bu.edu

Research Interest

- Design of secure cryptographic devices and smart cards

- Routing in interconnection networks design and protection of cryptographic devices

- Fault-tolerant computing

- Error correcting codes

- Testing and diagnosis of computer hardware

Leonid Reyzin

Research Interest

- Cryptography

Associate Professor
Computer Science Department
College of Arts and Sciences
http://www.cs.bu.edu/fac/reyzin

David Starobinski

Associate Professor
Electrical and Computer Engineering
College of Engineering
http://people.bu.edu/staro

Research Interest

- Wireless networking and security
- Network economics
- Stochastic Processes
- Algorithms

Ari Trachtenberg

Associate Professor
Electrical and Computer Engineering
College of Engineering
http://people.bu.edu/trachten

Research Interest

- Error correcting codes
- Security and algorithms
- Data synchronization
- Location detection
- Sensors, PDAs, smartphones

Nikos Triandopoulos

Research Interest

- Information Security & Privacy
- Network Security
- Distributed System Security

- Secure Protocol Design

Research Assistant Professor
RISCS Center and Computer Science
http://www.cs.bu.edu/~nikos

Tanya Zlateva

Associate Professor
Computer Science Department
Metropolitan College
http://people.bu.edu/zlateva

Research Interest

- Computational Modeling of Visual Perception, Recognition, Three Dimensional

- Representations of Object Shape, Parallel and Distributed Processing