

## EVENT SCHEDULE

8:30-9:15	Breakfast & Registration
9:15-9:30	Welcome
9:30-10:30	Seth Proctor Sun Microsystems
10:30-10:45	Break
10:45-11:45	David Croston IAM Technology
11:45-1:00	Buffet Lunch
1:00-2:00	Steve Weis Google
2:00-2:15	Break
2:15-3:15	Moti Yung Columbia University & Google
3:15-3:30	Break
3:30-4:30	Blair Semple, NetApp
4:30-5:30	Reception

### EMAIL REGISTRATION

To: [ipp@cs.brown.edu](mailto:ipp@cs.brown.edu)

By: Monday, November 12, 2007

Please provide name, company, and mailing address.

### DIRECTIONS TO THE CIT BUILDING

\*From I-95, take Exit 20 to I195E

\*Take Exit 2, Wickenden Street

\*Take a left on Wickenden and a left at the second light onto Brook Street

\*Continue on Brook several blocks to a traffic light at Brook and Waterman.

\*The CIT – a large red and tan brick building – is on the left at the intersection; the entrance is on the other side, facing the quadrangle.

\*Event registration is on the third floor.

### PARKING

Brown has a Visitor Parking Lot across the street from the CIT on Brook Street; this lot charges an hourly fee. You may get your parking ticket validated by the Department receptionist on the fourth floor to get a lower parking rate. On-street parking can also be found in the vicinity.

The primary goals of the Industrial Partners Program (IPP) are to exceed the expectations of our partner companies in terms of recruiting and outreach; to allow our faculty to engage in challenging and meaningful research collaborations and to provide resources and employment opportunities for our students. The Department wishes to thank our industrial partners:

#### Collaborators

Cisco Systems

#### Premier Partners

Adobe

Network Appliance

Sun Microsystems

#### Affiliates

Apple

Google

GTECH

ITA Software

Microsoft

Oracle

VMware

#### Small Business Supporters

IAM Technology

Linkage Systems

#### Individuals

Jim Baker, Zyasoft

Paul Edelman, Edelman & Associates

To learn more about the Industrial Partners Program, contact:

John Hughes or Ugur Cetintemel,  
Faculty Co-Directors

Telephone: 401-863-7600

[ipp@cs.brown.edu](mailto:ipp@cs.brown.edu)

Amy Tarbox, Program Manager

Telephone: 401-863-7610

[abt@cs.brown.edu](mailto:abt@cs.brown.edu)

Thursday, November 15, 2007

8:30 AM – 5:30 PM

Room 368

Watson Center for  
Information Technology

# SECURITY & PRIVACY



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BROWN UNIVERSITY  
DEPARTMENT OF COMPUTER SCIENCE  
INDUSTRIAL PARTNERS PROGRAM  
39<sup>TH</sup> BIENNIAL SYMPOSIUM

**SETH PROCTOR**  
**Sun Microsystems**  
***Making Security Scale***

As systems have become more complex and increasingly distributed, one of the great challenges has been maintaining security, providing privacy, and protecting users who often know little or nothing about the ways in which their systems and data are managed. In short, the security of our systems hasn't scaled along with the systems themselves. One question is why, given that we have very strong building blocks in the form of robust ciphers and hash algorithms, good cryptographic protocols, and solid theory for many aspects of information flow. This talk cites several projects, both internal explorations and external collaborations, that I have worked on over many years in Sun's research labs. These examples are used to argue that scalability comes not just from the technical design of a system, but also its comprehensibility, usability, and manageability. It is often failings in these criteria that lead to the security and privacy break-downs that have become so widespread.

**DAVID CROSTON**  
**IAM Technology**  
***Authentication of Outsourced Storage***

This talk will present a collaborative project between Brown's Center for Geometric Computing and IAM Technology that is aimed at developing a general method and a practical

application for maintaining authenticated files in an untrusted network storage service. The authentication process is managed by an application external to the storage service and can work with a variety of online storage services since it is independent from the specific storage technology used. Experimental results show that our integrity verification method is efficient and that the overhead due to authentication is negligible.

**STEVE WEIS**  
**Google**  
***Competition & Fraud in Online Advertising Markets***

Advertising fraud, particularly "click fraud," is a growing concern to the online advertising industry. This talk will present an economic model of the online advertising market, with a focus on the effect of ad fraud. The central question is whether advertising networks have an incentive to combat fraud. The main outcome of the model presented in this talk is to answer this question in the affirmative. The economic model predicts that ad networks have an interest in fighting fraud and can obtain a competitive advantage with better filtering technology.

**MOTI YUNG**  
**Columbia University & Google**  
***On the Evolution of Authentication Factors***

The talk will describe how the modern computing environment, its capabilities on the one hand and threats associated with it on the other hand, influence the basic notion of end-user authentication.

**BLAIR SEMPLE**  
**Network Appliance**  
***New Techniques to Address Computer Security Threats***

With data breaches making headlines and with new and growing threats coming from disgruntled insiders, viruses/worms, corporate espionage, cyber-terrorism, and information warfare, there is a heightened concern over information assurance. Today, largely invisible enemies launch daily attacks on nearly every major corporation and government agency, and rapidly adapt their tactics to address countermeasures. As the threat model evolves, traditional "perimeter" security measures are no longer adequate to protect sensitive information. It's time for enterprises to consider a number of time-tested techniques and principles to prepare for such electronic warfare. This session will present the newest techniques that help address evolving computer security threats.

**SECURITY & PRIVACY**  
**HOST: PROFESSOR ROBERTO TAMASSIA**