The University of Chicago Computer Science Department

PRESENTS:

“Making Password Checking Systems Better”

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Abstract:

Most computing systems still rely on user-chosen passwords to authenticate access to data and systems. But passwords are hard to use, easy to guess, and tricky to securely store. In practice one sees high failure rates of (legitimate) password login attempts, as well as a never-ending stream of damaging password database compromises. I will present a sequence of new results that target making password authentication systems better. We will look at how to address concerns in two areas: (1) usability by way of easy-to-deploy typo-tolerant password authentication validated using experiments at Dropbox; and (2) hardening password storage against cracking attacks via our new Pythia crypto service. Joint work with Anish Athayle, Devdatta Akawhe, Adam Everspaugh, Sam Scott, Rahul Chatterjee, and Ari Juels.

Bio:

Thomas Ristenpart is an Associate Professor at Cornell Tech and a member of the Computer Science department at Cornell University. Before joining Cornell Tech in May, 2015, he spent four and a half years as an Assistant Professor at the University of Wisconsin-Madison. His research spans a wide range of computer security topics, with recent focuses on new threats to, and improved opportunities for, cloud computing security, as well as topics in applied and theoretical cryptography. His work has been featured in the New York Times, the MIT Technology Review, ABC News, U.S. News and World Report, and elsewhere. He completed his PhD at UC San Diego in 2010. His work has been recognized by the UC San Diego Computer Science and Engineering Department Dissertation Award, an NSF CAREER Award, Best Paper Award at USENIX Security 2014, Distinguished Student Paper Award at Oakland 2016, and a Sloan Research Fellowship.

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3:00 pm, Ryerson 251
(Refreshments to follow, Ry 255)
Host: Shan Lu

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