Title: Next-Generation Security Technologies in a Connected and Intelligent World

Speaker: Dawn Song
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Venue: Video Conference Room, COM1-02-13

Chaired by: Dr Roychoudhury, Abhik, Professor, School of Computing
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Abstract:

The world is becoming more and more connected and intelligent. At the same time, malicious cyber attacks are wreaking havoc on the Internet and continue to increase in scale, sophistication, and severity. How can we combat the increasingly sophisticated threat landscape? How can we fundamentally break the cat-and-mouse game and change the attack-defense arms race dynamic? In this talk, I will explore different approaches to security and present new techniques to build secure systems. I will show examples from our recent projects that demonstrate the principle of Secure by Construction and Secure by Learning, and describe how these approaches provide better security than traditional approaches. Our approaches have helped improve security in real-world software systems including high-profile Google applications and FreeBSD. I will discuss future directions in next-generation security solutions.

Biodata:

Dawn Song is Professor of Computer Science at UC Berkeley. Prior to joining UC Berkeley, she was an Assistant Professor at Carnegie Mellon University from 2002 to 2007. Her research interest lies in security and privacy issues in computer systems and networks, including areas ranging from software security, networking security, database security, distributed systems security, to applied cryptography. She is the recipient of various awards including the MacArthur Fellowship, the Guggenheim Fellowship, the NSF CAREER Award, the Alfred P. Sloan Research Fellowship, the MIT Technology Review TR-35 Award, the IBM Faculty Award, the George Tallman Ladd Research Award, the Okawa Foundation Research Award, the Li Ka Shing Foundation Women in Science Distinguished

Lecture Series Award, and Best Paper Awards from top conferences.