TOPIC

ORGANIZERS	Student Leadership Council and Faculty of ACIT Institute and TECHLAV Center
AREA	Secure Cyber Identity Framework
SPEAKER	Kaushik Roy, Ph.D.
DATE	Friday May 5, 2017
TIME	3:00 – 4:00 P.M. (EST)
VENUE	Fort IRC 410, North Carolina A&T State University
FEES	No Charge

SYNOPSIS

The digitization of life has increased the need for safer and more secure ways to provide accurate identification for all kinds of online transactions. Identification of theft intimidates the growth of e-commerce, online financial services as well as government services, hence a more comprehensive approach is required to protect personal information. The state-of-the-art approaches used to manage online identities cannot endure the increasing number of cyber-attacks from expert criminals. Further research is required to secure control of online identity, enhance interoperability, and provide end users more direct control over their digital identity. Cyber identity is an emerging research field that focuses on secure, efficient, easy-to-use, and interoperable identity solutions to access online services in a way that stimulates confidence, privacy, choice, and innovation. Multi-Factor Authentication (MFA) is the current trend in identifying authorized users through active authentication (noting passwords, biometrics, cognitive behavior, and so on). New authentication modalities provide researchers opportunities to facilitate continuous authentication for online systems. Using biometric information to gain access to resources, however, leaves one vulnerable to biometric-based replay attacks: a hacker intercepts packets with someone else's biometric information and resends these packets, masquerading as the other person. Finally, it is clearly important to secure the privacy of cloud data. Securing cloud data, processing large volumes of it, and the associated services remain challenging issues. This talk will focus on a trustworthy, privacy-preserving and secure cyber identity framework that (1) provides continuous multi-factor authentication; (2) alleviates replay attacks; and (3) secures cloud data using biometric based authentication.

ABOUT THE SPEAKER

Kaushik Roy received his PhD from Concordia University, Montreal, QC, Canada in 2011 in Computer Science. He completed his MS degree in Computer Science from the Concordia University in 2006 and B.Sc. degree in Computer Science and Technology from University of Rajshahi, Bangladesh in 2000. Kaushik Roy is currently an Assistant Professor at the Department of Computer Science and Director of the Cyber Identity and Biometric (CIB) lab, North Carolina A&T State University, USA. Previously, he worked as a postdoctoral fellow in the Department of Electrical and Computer Engineering, University of Waterloo, ON, Canada during 2011-2012. He also taught at Rajshahi University of Engineering and Technology (RUET), Bangladesh as a lecturer in the Department of Computer Science and Engineering during 2001-2004. His research interests include cyber identity, authentication, behavioral biometrics, cyber security, game theory, and machine learning. Dr. Roy is the author or co-author of over 75 articles in journals, book chapters and conference proceedings. He has been the lead PI on $1.8M in research grants funded by the National Science Foundation (NSF) and Department of Defense (DoD). Recent grants are for research on cyber identity framework, active authentication, large data network, and cloud identity.