Invited Speaker **Prof. Gene Tsudik**, University of California, Irvine, USA.

Title: "Secure and Private Proximity-Based Discovery of Common Factors in Social Networks"

Abstract: The recent decade has witnessed a rapid increase in popularity of mobile personal devices (notably, smartphones) that function as all-purpose personal communication portals. Concurrently, On-line Social Networks (OSNs) have continued their impressive proliferation. Meanwhile, the notion of "OSN privacy" remains elusive and even self-contradictory. Centralized nature of prominent OSNs is unlikely to change, which does not bode well for OSN users' privacy. However, some user privacy can be gained from making certain OSN functionality available off-line, such as discovering common contacts and other features, as well as establishing affinity-based connections. OSNs stand to gain from this, since users could avail themselves of OSN functionality in scenarios where none currently exists, e.g., whenever Internet connectivity is unavailable, expensive or insufficient. At the same time, OSN users benefit from increased privacy because off-line interactions are invisible to OSN providers.

This talk will explore off-line private proximity-based use of OSNs and will present a working system (called UnLinked) that is grafted atop a popular OSN -- LinkedIn. One key challenge is how to ensure integrity, authenticity and privacy of users' profile information when they engage in off-line interactions. This can be addressed via specialized privacy-agile cryptographic protocols. This talk will overview the design, architecture and functionality of UnLinked and will highlight important outstanding issues.

Biography: Gene Tsudik is a Chancellor's Professor of Computer Science at the University of California, Irvine (UCI). He obtained his PhD in Computer Science from USC in 1991. Before coming to UCI in 2000, he was at IBM Zurich Research Laboratory (1991-1996) and USC/ISI (1996-2000). Over the years, his research interests included many topics in security and applied cryptography. He is the Director of Secure Computing and Networking Center (SCONCE) at UCI. Gene Tsudik is a former Fulbright Scholar and a fellow of the ACM and the IEEE. From 2009 he served as the Editor-in-Chief of ACM Transactions on Information and Systems Security (TISSEC).