FARMINGDALE, NEW YORK: Fourteen Ph.D. students in the Computer Science and Engineering program attended the 10th Annual IEEE Long Island Systems, Applications and Technology conference in May. The students were advised by Associate Vice President for Graduate Studies and Research and Associate Dean of the School of Engineering, Dr. Khaled Elleithy.

Five of the Ph.D. students presented papers at a special session on advances of quantum computing, chaired by Dr. Elleithy. Hamoud Alshammari, Muneer Alshowkan, Varun Pande, Abdulrahman Aldhaheri and Munif Alotaibi presented papers focused on security issues in quantum computing. The specific topics of their papers are as follows:

1. Group Signature Entanglement in E-voting Systems
2. Secret Key Sharing Using Entanglement Swapping and Remote Preparation of Quantum State
3. A New Hardware Quantum-based Encryption Algorithm
4. Quantum Security Using Property of a Quantum Wave Function
5. A Novel Secure Quantum Key Distribution Algorithm

Ammar Odeh and Mastafa Ramadhan, both CS&E Ph.D. candidates presented papers on their work with hardware and software to hide information inside webpages and video files during the Steganography group. The specific titles of their papers are as follows:

1. A Reliable and Fast Real-Time Hardware Engine for Text Steganography
2. A Highly Secure Video Steganography using Hamming Code (7, 4)
3. Fast Real Hardware Engine for Multipoint Text Steganography
The other seven students presented papers on the following issues:

Also, 7 Ph.D. students have participated in the conference including Khalid A. I. Aboalayon, Zyad Nossire, Hamoud Alshammari: “Hadoop Based Enhanced Cloud Architecture”
- Omar Abuzaghleh: “Automated Skin Lesion Analysis Based on Color and Shape Geometry Feature Set for Melanoma Early Detection and Prevention”
- Tariq Alshugran: “Extracting and Modeling Privacy Requirements from HIPAA for Healthcare”
- Amer Al-Rahayfeh: “Classifiers Comparison for a New Eye Gaze Direction Classification System”
- Ashkan Vakil: “Energy Harvesting Using Graphene Based Antenna for UV Spectrum”
- “New Algorithm to Enhance Radio Wave Propagation Strength in Dead Spots for Cellular Mobile WiFi Downloads Using Cloud Network”
- “Neuron-MOSFET Junction with Sodium Potassium Voltage Gate Channel”

The conference participants were very impressed by the quality of research UB Ph.D. students have presented in advanced areas of quantum computing, steganography, antenna design, and cloud architecture. We look forward to returning with new ideas and innovative research for the 2015 conference in May.