Spring 2015 Colloquium
Temple University
Computer and Information Sciences
From Computing Industry to Academic

Dr. Charles Wang
Temple University

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SERC 306 | Temple University
1925 N. 12th Street | Philadelphia, PA 19122

Abstract: Having being trained as an engineer and grown into management roles, I have been focusing on mainly two directions in my career development: product development and innovative research, at the same time, keeping a balance between the two. In the past 20+ year working for various companies, I have gained unique insights from developed and managed a number of new products from concepts into product lines and markets. Now I have an interest in academia.

Why would I like to make such a transition? I believe my industrial experiences can lend a hand in computer science education. College students need real-world industrial and working experiences so they would become relevant when they graduate.

Even though my teaching experience is far short of my industrial experiences, I did have to train people often. In my limited experiences teaching at Temple University as an Adjunct Professor, I have learned that I could become effective in transforming students’ lives by allowing them creative solutions for solving real world problems. Companies like to employ innovative people with memorization-to-generalization skills. In this talk, I will share my thoughts and experiences after I have taught two courses in Department of Computer information and Science. I will also present my humble visions for Computer Science undergraduate education.

Speaker Bio: Dr. Charles Wang received B.S. from Shanghai Science and Technology University, China, in 1982 and Ph.D. from Wayne State University, Michigan, in 1991. He has published more than 20 technical journal and conference papers and is the inventor or co-inventor of 30+ US granted patents. His experience and research interests include Artificial Neural Networks, Video Processing and Compression, Networks and Communication, Embedded Multi-tasking Programming and Project Management.

Charles has taken various key positions in a number of high-tech companies for past 20+ years. As an pioneering industrial application, he applied neural network theory to coin pattern recognition problem and optimized the algorithm for a real-time product in 1992 at Coin Acceptors.
Then he was with General Instrument (now Motorola Broadband Communication Division) and later its startup company WorldGate from 1995 to 2001, where he worked on MPEG-2 video compression, cable network capability and scalability, and Internet applications over cable networks.

Jointed Thomson Corporate Research in 2001, he was responsible for delivery of 3G protocol stack and multimedia delivery over networks. Since 2004, he had managed Thomson Corporate Research Center in Beijing, China, establishing a new R&D facility and ramping-up. During that period of time, his research interests included network architectures and QoS provisioning for video delivery, 3G/WLAN interworking, video processing and compression, digital media contribution and distribution system integration and optimization.

From 2008 to 2013, Charles was Director of Corporate Technology Group of Harman International in Shanghai, China, responsible for corporate research and advanced engineering project initialization and management. He proposed and managed research projects in technologies of networking (Ethernet AVB), computer vision (Driver Assistance Systems), and internet applications (telematics, cloud-based navigation, Internet radio, LTE IPTV for connected car and user-generated content for embedded devices). He is also responsible for managing Harman's software Offshore Development Center in China and deploying project management processes to meet customer's requirements and project schedule.

Currently, Charles is an Adjunct Assistant Professor in the CIS Department.