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University of Miami
Coral Gables, Florida, USA

Time: 10:00-11:00
Monday June 5, 2018
Chair: Bahram Shafai, USA
Venue: Stevenson Ballroom A



Internet of Things, Real-Time Decision Making and Artificial Intelligence



Abstract: In several earlier papers, the author defined and detailed the concept of a servgood, which can be thought of as a physical good or product enveloped by a services-oriented layer that makes the good smarter or more adaptable and customizable for a particular use. Adding another layer of physical sensors could

then enhance its smartness and intelligence, especially if it were to be connected with other servgoods – thus, constituting an Internet of Things (IoT) or servgoods. More importantly, real-time decision making (RTDM) is central to the Internet of Things; it is about decision informatics and embraces the advanced technologies of sensing (i.e., Big Data), processing (i.e., real-time analytics), reacting (i.e., real-time decision-making), and learning (i.e., deep learning). Indeed, RTDM is becoming an integral aspect of IoT and artificial intelligence (AI), including its improving abilities at voice and video recognition, speech and predictive synthesis, and language and social-media understanding. These three key and mutually supportive technologies – IoT, RTDM, and AI – are considered herein, including their progress to date.

Bio. James M. Tien received the BEE from Rensselaer Polytechnic Institute (RPI) and the SM, EE and PhD from the Massachusetts Institute of Technology. He has held leadership positions at Bell Telephone Laboratories, at the Rand Corporation, and at Structured Decisions Corporation. He joined the Department of Electrical, Computer and Systems Engineering at RPI in 1977, became Acting Chair of the department, joined a unique interdisciplinary Department of Decision Sciences and Engineering Systems as its founding Chair, and twice served as the Acting Dean of Engineering. In 2007, he was recruited by the University of Miami to be a Distinguished Professor and Dean of its College of Engineering; effective 2016, he stepped down from the Dean's position and remains a Distinguished Professor. He has been awarded the IEEE Joseph G. Wohl Outstanding Career Award, the IEEE Major Educational Innovation Award, the IEEE Norbert Wiener Award, and the IBM Faculty Award. He is also an elected member of the prestigious U. S. National Academy of Engineering.