

Invited Overview Session

Session: TP1-1.1
Time: Thursday, December 17, 14:00 - 14:30
Place: Room Y301
Chair: Kenneth K.M. Lam, The Hong Kong Polytechnic University (Hong Kong)

Recent Advances in Energy Harvesting Communications

Speakers: M.L. Willy Ku, Yan Chen, K.J. Ray Liu University of Maryland, College Park, U.S.A.

Abstract

Energy harvesting from ambient energy sources can potentially reduce the dependence on the supply of grid or battery energy, providing many attractive benefits to the environment and deployment. However, unlike the conventional stable energy, the intermittent and random nature of the renewable energy makes it challenging in the realization of energy harvesting transmission schemes. Extensive research studies have been carried out in recent years to address this inherent challenge from several aspects. In this talk, we present an overview of the recent developments in energy harvesting communications.

Biographies

K. J. Ray Liu was named a Distinguished Scholar-Teacher of University of Maryland, College Park, in 2007, where he is Christine Kim Eminent Professor of Information Technology. He leads the Maryland Signals and Information Group conducting research encompassing broad areas of information and communications technology with recent focus on future wireless technologies, network science, and information forensics and security.

Dr. Liu was a recipient of the 2016 IEEE Leon K. Kirchmayer Technical Field Award on graduate teaching and mentoring, IEEE Signal Processing Society 2014 Society Award, and IEEE Signal Processing Society 2009 Technical Achievement Award. Recognized by Thomson Reuters as a Highly Cited Researcher, he is a Fellow of IEEE and AAAS.

Dr. Liu is a BoG member of APSIPA and a Director-Elect of IEEE Board of Director. He was President of IEEE Signal Processing Society, where he has served as Vice President - Publications and Board of Governor. He has also served as the Editor-in-Chief of IEEE Signal Processing Magazine.

He also received teaching and research recognitions from University of Maryland including university-level Invention of the Year Award; and college-level Poole and Kent Senior Faculty Teaching Award, Outstanding Faculty Research Award, and Outstanding Faculty Service Award, all from A. James Clark School of Engineering.