BHARTI SCHOOL OF TELECOMMUNICATION TECHNOLOGY AND MANAGEMENT, IIT DELHI

AIRTEL LECTURE SERIES 2016

Date :MAY 31, 2016
Venue: Bharti School of Telecommunication Technology and Management, Room No. IIA-105, Ground Floor, IIT Delhi
Timing: 3:00 P.M. – 5:00 P.M

"Case Study of Big Data Analysis for Smart Grid"

By

Prof. Zhu Han

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Speaker's Profile

Prof. Zhu Han

Zhu Han received the B.S. degree in electronic engineering from Tsinghua University, in 1997, and the M.S. and Ph.D. degrees in electrical engineering from the University of Maryland, College Park, in 1999 and 2003, respectively. From 2000 to 2002, he was an R&D Engineer of JDSU, Germantown, Maryland. From 2003 to 2006, he was a Research Associate at the University of Maryland. From 2006 to 2008, he was an assistant professor in Boise State University, Idaho. Currently, he is a full Professor in Electrical and Computer Engineering Department as well as Computer Science Department at University of Houston, Texas. His research interests include security, wireless resource allocation and management, wireless communications and networking, game theory, and wireless multimedia. Dr. Han is an NSF CAREER award recipient 2010. Dr. Han has several IEEE conference best paper awards, and winner of 2001 IEEE Fred W. Ellersick Prize, 2015 EURASIP Best Paper Award for the Journal on Advances in Signal Processing and 2016 IEEE Leonard G. Abraham Prize in the field of Communications Systems (Best Paper Award for IEEE Journal on Selected Areas on Communications). Dr. Han has been IEEE fellow since 2014 and IEEE Distinguished Lecturer since 2015.

Abstract:

The advent of big data offers unprecedented opportunities for data-driven discovery and decision-making in virtually every area of human endeavor. In this talk, we zoom in to the applications of smart grid, which refers to the next generation electrical power grid that aims to provide reliable, efficient, secure, and quality energy generation/distribution/consumption using modern information, communications, and electronics technology. We further zoom in to study two specific cases. First, supported by local utility companies through electric power analytics consortium, we analyze real smart meter big data for load profiling and smart pricing. We employ techniques such as Bayesian nonparametric learning, sublinear algorithm, and deep learning. Second, we investigate how to solve Security-constrained Optimal Power Flow (SCOPF) Problem, through sparse optimization and alternating direction method of multipliers (ADMM). Finally, other research activities of our group will also be briefly described.

About Airtel Lecture Series

This lecture series is being held with the objective of providing students of Bharti School an environment to learn from the leaders, insight into the best practices of the industry as well as an opportunity to interact with telecom leaders.

We look forward to your participation. Please be seated by 2.45 p.m .