Analog and Mixed-Signal Center
3128 TAMU
College Station, TX 77843-3128
Tel. (979) 862-4253
Fax. (979) 845-7161
E-mail: hoyos@tamu.edu

ELECTRICAL & COMPUTER ENGINEERING
TEXAS A&M UNIVERSITY

S E M I N A R

Room 1020 ETB

February 1, 2019, 1:50 – 2:50 P.M.

Information Theory Insights Into Energy Of Wireless Networks

by

Zixiang Xiong
ECE Texas A&M University

Abstract: As wireless communications contributes significantly to global energy consumption and CO2 emissions, energy conservation becomes an important issue in society. It is estimated that currently about 1% of global CO2 emissions is due directly to wireless communications, comparable to that of air traffic (2%). At the same time, the amount of wireless data traffic can be expected to increase dramatically as more and more devices become wireless and people expect more services wirelessly, in particular delay-sensitive (e.g., video) services. Additionally, most wireless devices rely on rechargeable or disposable batteries. Unless an effort is made to make wireless communications more energy efficient, the relative contribution of wireless communications to CO2 will increase rapidly. In this talk, I will present our information theory insights into energy of wireless networks.

Joint work with Anders Host-Madsen

Zixiang Xiong is a professor in the ECE department of Texas A&M University. His main research interest lies in image/video processing, computer vision, virtual/augmented reality, big data, and communications.