The Electrical and Computer Engineering Program presents
ECEN Seminar Series

Communication Security: PHY meets Information Theory

Wael Halbawi
California Institute of Technology (Caltech)

Tuesday, 3 July 2012, 12 – 1 p.m.

Lecture Hall 144

Light lunch will be served

The goal of this talk is to present to the audience a quick survey on security in communication systems. The first part of the presentation will give an overview of classical results that achieve certain security metrics, i.e. perfect secrecy in the Shannon sense.

The second part of the talk will focus on modern security techniques inspired by channel coding, namely Low Density Parity-Check (LDPC) codes and Polar Codes. The notion of physical layer security is introduced and recent results that achieve security requirements in this sense are presented.

Wael Halbawi received the Bachelor of Science (Summa Cum Laude) from Texas A&M University at Qatar in 2011, and the Master of Science from California Institute of Technology (Caltech) in 2012, both in Electrical Engineering. He is currently working towards a Ph.D. also at Caltech. His research interests lie in the intersection of communications, coding theory and network security. He is a member of Tau Beta Pi, the Engineering Honor Society.

FOR MORE INFORMATION:

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