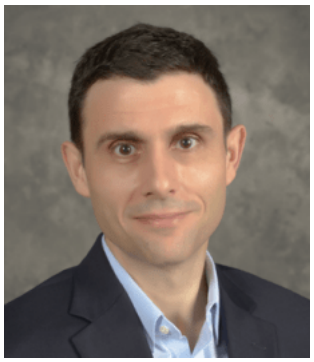
ELECTRICAL & COMPUTER ENGINEERING BIO-SEMINAR Spring 2018

When: **Friday 13:50 – 14:50**
Where: **ETB 1035**



Speaker: **Prof. Ricardo Gutierrez-Osuna**

Professor
Department of Computer & Science Engineering
Texas A&M University

Title: **Signal Processing Methods for Accent Conversion**

Date: **4-6-2018**

Abstract: Despite years or decades of immersion in a new culture, older second-language (L2) learners typically speak with a so-called ‘‘foreign accent,” sometimes despite concerted efforts at improving pronunciation. A number of studies have suggested that it would be beneficial for such learners to be able to listen to their own voices producing native-accented speech. As a step towards this goal, we are developing speech processing methods to modify the perceived accent of utterances from L2 speakers of English. Our approach consists of decomposing the speech signal of a learner and a teacher into two components: one that carries the speakers’ voice quality and a second one that contains their linguistic gestures. By combining the voice quality of the learner with the linguistic gestures of the teacher, we can then generate a “morphed” voice that is perceived to be like that of the L2 speaker but has the accent of the native speaker.

In this talk, I will introduce our signal processing methods for accent conversion, including probabilistic and sparse methods in the acoustic domain and articulatory synthesis techniques in the articulatory domain.

Biography: Ricardo Gutierrez-Osuna received a B.S. degree in Electrical Engineering from the Polytechnic University of Madrid (Spain) in 1992, and M.S. and Ph.D. degrees in Computer Engineering from North Carolina State University in 1995 and 1998, respectively. He is currently a Professor in the Department of Computer Science and Engineering at Texas A&M University. He has broad research interests in speech processing, machine learning, and models of human perception.