



***Electrical Engineering Seminar Series &  
Dallas Chapter of IEEE Signal Processing Society Present***

## **Analysis, Recognition and Synthesis of Human Behaviors: A Multimodal Approach**

**Dr. Carlos Busso  
University of Texas at Dallas**

**11:00am, Wed, Feb 23, 2011  
ECSS 2.102 (TI Auditorium)**

During interpersonal human interaction, speech and gestures are intricately coordinated to express and emphasize ideas, as well as provide suitable feedback to the listener. The tone and intensity of speech, spoken language patterns, facial expressions, head motion and hand movements are all weaved together in a nontrivial manner in order to convey intent and desires for natural human communication. A joint analysis of these modalities is necessary to fully decode human communication. Among other things, this is critically needed in designing next generation information technology that attempts to mimic and emulate how humans process and produce communication signals. This talk will summarize our ongoing research in recognizing and synthesizing paralinguistic information conveyed through multiple communication channels during human interaction, with emphasis on social emotional behaviors.

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Carlos Busso is an Assistant Professor at the Electrical Engineering Department of The University of Texas at Dallas (UTD). He received his BS (2000) and MS (2003) degrees with high honors in electrical engineering from University of Chile, Santiago, Chile, and his PhD (2008) in electrical engineering from University of Southern California (USC). Before joining UTD, He was a Postdoctoral Research Associate at the Signal Analysis and Interpretation Laboratory (SAIL), USC. He was selected by the School of Engineering of Chile as the best Electrical Engineer graduated in Chile in 2003. At USC, he received a Provost Doctoral Fellowship from 2003 to 2005 and a Fellowship in Digital Scholarship from 2007 to 2008. His research interests are in digital signal processing, speech and video processing, and multimodal interfaces. His current research includes modeling and understanding human communication and interaction, with applications to automated recognition and synthesis to enhance human-machine interfaces. He has worked on audio-visual emotion recognition, analysis of emotional modulation in gestures and speech, designing realistic human-like virtual characters, speech source detection using microphone arrays, speaker localization and identification in an intelligent environment, and sensing human interaction in multi-person meetings.

**For more information on the Dallas Chapter of IEEE Signal Processing Society and directions to UTD, see <http://www.utdallas.edu/~kehtar/ieee-sp>**