UTD   **Electrical Engineering Colloquium**
Dallas Chapter of IEEE Signal Processing Society Presents

Convolutive Blind Source Separation for Speech Enhancement

Dr. Scott Douglas
Department of Electrical Engineering
Southern Methodist University

Monday, Nov. 14, 2005
ECSS 2.102 (TI Auditorium), 11:00am

In this talk, we outline and present procedures for the separation of multiple speech signals from multi-microphone recorded mixtures of speech. The techniques can be considered as time-domain extensions of well-known procedures for independent component analysis of instantaneous mixtures to the case of time-dispersive mixing channels. An emphasis is placed on adaptive procedures for lossless paraunitary systems and their role in contrast-based blind separation and signal reconstruction. Examples involving acoustic signal mixtures are given.

Biography - Scott C. Douglas is an associate professor in the Department of Electrical Engineering at Southern Methodist University, Dallas, Texas and the Associate Director for the Institute for Engineering Education at SMU. He received his B.S., M.S., and Ph.D. degrees from Stanford University. Dr. Douglas is a recognized expert in the fields of adaptive filters, blind source separation, and active noise control, having authored or co-authored six book chapters and more than 140 articles in journals and conference proceedings in these fields. He was the recipient of an NSF CAREER (Young Investigator) Award in 1995 and the recipient of the IEEE Signal Processing Society's Best Paper Award in Audio and Electroacoustics in 2002. He has been an Associate Editor for both the IEEE Transactions on Signal Processing and the IEEE Signal Processing Letters and has served as Chair of the Neural Networks for Signal Processing Technical Committee and Secretary of the Signal Processing Education Technical Committee of the IEEE Signal Processing Society. Dr. Douglas is a senior member of the IEEE.

For more information on the Dallas Chapter and directions to UTD, please refer to
http://www.utdallas.edu/~kehtar/ieee-sp/ieee-sp-index.htm