IEEE Ottawa Section

'Brainspeak': Listening in on Auditory Processing of Complex Sounds

Dr. Hilmi Dajani

Assistant Professor, School of Information Technology, University of Ottawa

Hearing impairment is an important public health problem, which is expected to become more acute as the population ages. However, user satisfaction with hearing aids remains low with only 40-60% reporting substantial benefit from their use, thereby indicating a pressing need to develop better diagnostic and rehabilitation tools. One particular difficulty is that hearing assessment is limited by currently used diagnostic tests, which usually employ artificial signals like tones or clicks that do not allow a clear assessment of auditory function for speech communication. In this talk, recently developed techniques to measure brain electrical activity in response to complex sounds such as speech will be described. These techniques allow us to "listen in" on the auditory processing of speech and other complex sounds, which may permit the development of improved diagnostic tests of hearing impairment and better hearing aids.

March 26, 2009

admission is free

17:30 – 19:00 pm

Mackenzie Building 4359

Carleton University

Light refreshment will be served

Hilmi Dajani is an Assistant Professor at the School of Information Technology and Engineering, University of Ottawa. He has conducted research on auditory-inspired speech processing, speech-evoked potentials, and speech production with modified auditory feedback. He has also developed hospital-based systems for the analysis of various physiological signals. His interests include the development of instrumentation for the assessment and treatment of speech and hearing impairments, and the development of new methods for the analysis of cardio-respiratory function.

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