

Time	Public Lecture 19:30 – 20:30
Name	Professor Andreas G. Andreou
Title	Mind from Matter: A Journey Through Sound
Address	Electrical and Computer Engineering, Computer Science, Whitaker Biomedical Engineering Institute and Center for Language and Speech Processing, Johns Hopkins University, USA
Email	andreou@jhu.edu
Abstract	<p>The physicist turned biologist and Nobel laureate, Max Delbruck in his essay, Mind from Matter writes: “human language is a means of communication and interaction (a social affair) as well as a vehicle for knowledge representation and analytical thinking (a private affair) ... to get to the biological function of language we dearly like to know how and when it evolved, but here we draw a total blank.”</p> <p>In this presentation I will speculate on the evolution of language (structured knowledge) and its relationship to the sounds of actions and simple interactions between agents and objects. This journey takes us through scientific and engineering questions that are central to the project.</p> <p><i>Andreas G. Andreou is a professor of electrical and computer engineering, computer science and the Whitaker Biomedical Engineering Institute, at Johns Hopkins University. Andreou is the co-founder of the Johns Hopkins University Center for Language and Speech Processing. Research in the Andreou lab is aimed at brain inspired microsystems for sensory information and human language processing. Notable microsystems achievements over the last 25 years, include a contrast sensitive silicon retina, the first CMOS polarization sensitive imager, silicon rods in standard foundry CMOS for single photon detection; a large scale mixed analog/digital associative processor for character recognition; acoustic micro-Doppler sensor for sensing articulated moving structures; an ultra-low power CMOS sensor for retinal prosthesis. Significant algorithmic research contributions for speech recognition include the vocal tract normalization technique and heteroscedastic linear discriminant analysis. In 1996 Andreou was elected as an IEEE Fellow, “for his contribution in energy efficient sensory Microsystems”</i></p>