MODELS FOR MIXED SIGNALS

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2405 SIEBEL CENTER

Dealing with superimposed signals is one of the most challenging problems we face today in audio and speech processing. In this talk I'll present a new way to approach this problem and some state-of-the-art methods for working with mixed signals. When suitably abstracted, mixed signals exhibit a unique geometry which points to a combinatorially hard solution. Using probabilistic modeling we can derive a family of efficient sparse learning approaches that obtain superior results in a variety of mixed signal tasks. In this talk I'll present some of these algorithms and how they found their way to real-life applications.

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Paris Smaragdis is a senior research scientist at Adobe Systems. He completed his graduate and postdoctoral studies at MIT, where he conducted research on computational perception. Prior to Adobe he was a research scientist at Mitsubishi Electric Research Labs, during which time he was selected by the MIT Technology Review as one of the top 35 young innovators of 2006. Paris' research interests lie in the intersection of machine learning and signal processing.

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