Paris Smaragdis is an assistant professor in the Computer Science and the Electrical and Computer Science departments at the University of Illinois at Urbana-Champaign. He completed his graduate and postdoctoral studies at MIT, where he conducted research on computational perception and audio processing. Prior to the University of Illinois he was a senior research scientist at Adobe Systems and 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.

"Exemplary" Machine Listening

The pursuit for machines that are able to listen like humans is a long standing one that steadily keeps finding its way in our everyday lives. In this talk I'll introduce the field and present some of the ways that listening machines have entered our lives. I'll talk about new trends for dealing with complex audio signals and take a closer look at recent work on using exemplars and how more data and simple algorithms can trump elaborate models for complex audio scene analysis. In the process I'll talk about state of the art algorithms for source separation and acoustic scene understanding and I'll demonstrate how many audio problems involving mixtures can be easily visualized as simple geometric operations.