EESIP Seminar

COLUMBIA UNIVERSITY
IN THE CITY OF NEW YORK

Friday December 7th, 2012 • 11:00-12:00 • **Room 414**, Schapiro CEPSR

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Machine learning approaches to music similarity

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The rise of digital music distribution has provided users with unprecedented access to vast song catalogs. In order to help users cope with large collections, music information retrieval systems have been developed to automatically analyze, index, and recommend music based on a user's preferences or search criteria. This talk covers machine learning approaches to content-based, query-by-example search, and investigates applications in music information retrieval. The proposed methods automatically infer and optimize content-based similarity, fuse heterogeneous feature modalities, efficiently index and search under the optimized distance metric, and finally, generate sequential playlists for a specified context or style. Robust evaluation procedures are proposed to counteract issues of subjectivity and lack of explicit ground truth in music similarity and playlist generation.

Brian McFee received the B.S. degree in Computer Science from the University of California, Santa Cruz in 2003, and the M.S. and Ph.D. degrees in Computer Science and Engineering from the University of California, San Diego in 2008 and 2012. He is currently a postdoctoral research scholar in the Center for Jazz Studies at Columbia University. His research focuses on applications of machine learning to music information retrieval and recommendation. In 2010, he was a recipient of the Qualcomm Innovation Fellowship.

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