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Intelligent Systems for Music Recommendations

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Ching-Hua Chuan is Assistant Professor of Computing at University of North Florida. She received her PhD in computer science at University of Southern California (USC) Viterbi School of Engineering in 2008. At USC, she worked as a graduate research assistant in the Music Computation and Cognition (MuCoaCo) Lab and won the USC Digital Dissertation Fellowship Award for her work in automatic style-specific accompaniment. She joined the School of Computing at University of North Florida in 2010. Dr. Chuan's research interests include audio signal processing, music content analysis, expressive performance study, automated style-specific accompaniment and artificial intelligence. Her article on automated style-specific accompaniment won the Best New Investigator paper in 2010 Grace Hopper Celebration for Women in Computing. Dr. Chuan received her BS and MS in electrical engineering from National Taiwan University. In Taiwan, she was the lead guitarist of several all-female rock bands.

Recent technology advances have dramatically re-defined our everyday musical experiences. With compact-sized mobile devices, people can carry thousands of their favorite songs and listen to them anytime and anywhere. But the technology is much more than just building a music player; Nowadays we have intelligent systems that can create a playlist for a user with songs that match his or her current mood, and systems that can accompany a melody while mimicking an artist's style.

This presentation reveals the secrets behind those intelligent music systems by examining how to define music recommendations as a scientific problem, and how to use computers to analyze and recommend music.