PREM S SEETHARAMAN

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EDUCATION

Northwestern University, Evanston, IL
PhD Candidate, Computer Science - in progress
MS, Computer Science - 2015
BS, Computer Science, Music Composition - 2013

RESEARCH INTERESTS

audio source separation, human computer interaction, creativity support tools, multimedia information retrieval, music structure and theory, machine learning

WORK

Northwestern University, Evanston, IL
Doctoral Student in Interactive Audio Lab — 2013 - Present
Working with Professor Bryan Pardo on problems in audio source separation, music information retrieval, semantic audio processing, and human computer interaction.

Northwestern University, Evanston, IL
Teaching Assistant — 2014 - Present

Gracenote, Emeryville, CA
Applied Research - Intern — 2016
Worked on problems in media recognition and retrieval, specifically cover song identification.

Northwestern University, Evanston, IL
Researcher — 2011 - 2012
Worked with Professor Peter Dinda, and Stephen Tarzia on problems in acoustics. Developed this acoustics research as a mobile application for Android and iOS.

PROJECTS

Audealize — 2015
Developed and evaluated a novel interface for controlling an audio production tool such as an equalizer (which controls the strengths of frequencies in audio) or a reverberator (which adds echo effects to audio). We found that novice users preferred Audealize (http://audealize.appspot.com) over traditional audio production interfaces for audio production tasks.

SocialReverb and Reverbalize — 2014
Developed a crowdsourcing methodology to collect words that describe the effect of reverberation. Leveraged this data to create a novel reverberation controller:

Reverbalize (http://reverbalize.appspot.com), which is controlled through simply describing the effect (make it sound like it's in a "church").

ClapIR 2011 - 2012
Developing automated acoustics software, based on the recording of an impulse in a room (a clap or balloon pop). The recording of a clap is used to compute reverberation time, frequency decay, and frequency response of any given room. Available for iPhone and Android.

GRANTS

CIRA grant 2016-2017
Center for Interdisciplinary Research in the Arts at Northwestern University.

"Deep learning, artificial intelligence, and the composition and performance of new vocal music". Amount: $4000

HONORS

Todd M. and Ruth Warren Fellowship

PAPERS

Seetharaman, Prem, and Zafar Rafii. "Cover Song Identification with 2D Fourier Transform Sequences." *42nd International Conference on Acoustics, Speech, and Signal Processing*, New Orleans, USA, March 5 - 9, 2017.

Zheng, Taylor, **Prem Seetharaman**, and Bryan Pardo. "SocialFX: Studying a Crowdsourced Folksonomy of Audio Effects Terms." *Proceedings of the ACM International Conference on Multimedia.* ACM, 2016.

Seetharaman, Prem, and Bryan Pardo. "Simultaneous separation and segmentation in layered music" *Proc. of the 17th International Society for Music Information Retrieval Conference (ISMIR).* New York City, NY, USA, 2016

Seetharaman, Prem, and Bryan Pardo. "Audealize: Crowdsourcing Audio Production Tools" *Journal of the Audio Engineering Society.* 2016

Seetharaman, Prem, and Bryan Pardo. "Reverbalize: a crowdsourced reverberation controller." *Proceedings of the ACM International Conference on Multimedia.* ACM, 2014. (Technical Demo Abstract)

Seetharaman, Prem, and Bryan Pardo. "Crowdsourcing a reverberation descriptor map." *Proceedings of the ACM International Conference on Multimedia.* ACM, 2014.

Seetharaman, Prem, and Stephen P. Tarzia. "The Hand Clap as an Impulse Source for Measuring Room Acoustics." *Audio Engineering Society Convention 132.* Audio Engineering Society, 2012.

EXTERNAL SERVICE

Conference Reviewer
ICASSP 2017

	Conference Reviewer ACM Multimedia	2016
	Conference Reviewer ISMIR	2016
	Conference Reviewer ICASSP	2016
	Conference Reviewer ISMIR	2015
	Conference Reviewer WASPAA	2015
	Journal Reviewer IEEE Transactions on Multimedia	2015
References	Prof. Bryan Pardo	pardo@northwestern.edu
	Prof. Zhiyao Duan	zhiyao.duan@rochester.edu