Abstract Submitted
for the 4CF14 Meeting of
The American Physical Society

On the use of a real-time convolution system to study perception of and response to self-generated speech and music in variable acoustical environments[1] JENNIFER WHITING, TIMOTHY LEISHMAN, Brigham Young University, ERIC HUNTER, Michigan State University — A real-time convolution system has been developed to quickly manipulate the auditory room-acoustical experiences of human subjects. This system is used to study the perception of self-generated speech and music, and the responses of talkers and musicians to varying conditions. Simulated and measured oral-binaural room impulse responses are used within the convolution system. Subjects in an anechoic environment experience room responses excited by their own voices or instruments via the convolution system. Direct sound travels directly to the ear, but the convolved room response is heard through specialized headphones spaced away from the head. The development of the convolution system and future research regarding its use are discussed.

[1]Research reported in this publication was supported by the National Institute On Deafness And Other Communication Disorders of the National Institutes of Health under Award Number R01DC012315.

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Date submitted: 12 Sep 2014 Electronic form version 1.4