

Charles S. Wasserman

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Education

M.S. in Psychological Sciences: University of Connecticut, Storrs, CT (2018)
Graduate Certificate in the Neurobiology of Language: University of Connecticut, Storrs, CT (2018)

University of Hartford, West Hartford, CT Graduated May, 2013

B.A. In Psychology Summa Cum Laude (Honors Program)

Overall GPA: 3.82 (4.0 scale)

Research Projects

Neural Resonance Theory: Investigating Beat-Perception Using Missing Pulse Rhythms (M.S. Thesis)

This thesis used EEG and behavioral synchronization tasks to look at beat-perception in the context of rhythms designed to have no spectral power at the perceived pulse frequency. Data showed that behavioral and electrophysiological entrainment can be observed at a pulse frequency that has no power in the rhythms envelope spectrum (missing pulse rhythm). This finding supports Neural Resonance Theory and shows evidence for beat-perception as the result of an endogenous population oscillation due to mode-locking rather than as the transient responses to individual auditory events.

Audio-Environment's Impact on Attention (B.A. Independent Honors Thesis)

This Independent Honors thesis looked at the myriad ways in which a person's audio-environment can affect his or her ability to pay attention. The general assumption had been that background noise is purely a distracting factor when it comes to paying attention to a specific item or task; however, this experiment looked into the plausibility that a certain amount of a specific type of noise might actually cause an increase in the brain's ability to pay attention.

Academic Honors (Undergraduate)

President's List, Dean's List, President's Scholarship, Undergraduate Research Award.

Academic Honors (Graduate)

CT Institute for the Brain and Cognitive Sciences Summer Fellow (2018)

NSF IGERT Fellow (2014-2018)

Awards

International Society for Neurofeedback and Research: Student Paper Award (2016)

University of Hartford Dept of Psychology: Undergraduate Research Award (2013)

Publications

Wasserman, C. S., & Large, E. W. (2018, in Prep). Neural resonance theory: Investigating beat-perception using missing pulse rhythms.

Wasserman, C., & Segool, N. (2013). Working in and with noise: The impact of audio environment on attention. *Journal of Neurotherapy*, 17(4), 203-212.

Presentations

Wasserman, C., & Segool, N. (2013). Working in and with noise: The impact of audio environment on attention. In Proceedings of the 21st Annual International Society for Neurofeedback and Research, in press, Dallas, TX.

Wasserman, C. S., Kim, J. N., Large, E. W., & Skoe, E. (2016). Finding the Beat: Investigating Neural Resonance using Simultaneously-recorded Cortical and Subcortical Steady-State Responses. In Proceedings of the Second Annual FFR Workshop, in press, Boston, MA.

Wasserman, C. S., Kim, J. N., Large, E. W., & Skoe, E. (2016). Finding the Beat: Neural Responses to Missing Pulse Rhythms. In Proceedings of the 14th Annual International Conference for Music Perception and Cognition, in press, San Fransisco, CA.

Wasserman, C. S., Kim, J. N., Large, E. W., & Skoe, E. (2016). Neural Resonance Theory: Entrainment to Missing Pulse Rhythms. In Proceedings of the 38th Annual Meeting of the Cognitive Science Society, in press, Philadelphia, PA.

Wasserman, C. S., Kim, J. N., Wei, Y., Skoe, E., Read, H. L., & Large, E. W. (2017, June). Finding the beat: Neural entrainment to missing pulse rhythms. In Proceedings of the 6th Neurosciences and Music Conference, in press, Boston, MA.

Wasserman, C. S., Kim, J. N., Wei, Y., Large, E. W., Skoe, E., & Read, H. L. (2017, July). Finding the beat: Electrophysiological entrainment to missing pulse rhythms. In Proceedings of the Society for Music Perception and Cognition, San Diego, CA.

Wasserman, C. S., Wei, Y., Kim, J. N., Skoe, E., Read, H. L., & Large, E. W. (2018, February). Neural resonance theory: Testing dynamical predictions using missing pulse rhythms. In Proceedings of the 42nd Annual Mid-Winter Meeting of the Association for Research in Otolaryngology, in press, San Diego, CA.

Wasserman, C. S., Wei, Y., Kim, J. N., Skoe, E., Read, H. L., & Large, E. W. (2018, July). Finding the beat: Testing dynamical predictions of neural resonance theory using missing pulse rhythms. In Proceedings of the 15th Annual International Conference for Music Perception and Cognition, in press, Montreal, QC, Canada.

Professional Organizations

Alpha Phi Omega: National Community Service Fraternity: Alumni Volunteer

Alpha Phi Omega is a co-ed community service fraternity through which I have participated in events such as; CT Special Olympics, Out of the Darkness (Suicide Prevention Walk) and Autism Speaks.

International Society for Neurofeedback and Research (ISNR): Student Affiliate

The ISNR is a group of researchers and clinicians in the field of applied neurotherapy. They hold an annual conference at which I have presented, and attended for the last three years; Carefree, AZ (2011), Orlando, FL (2012) and Dallas, TX (2013).

American Psychological Association (APA): Student Affiliate**Psi Chi: The International Psychology Honors Society: Member****Work Experience****University of Connecticut (UCONN)****September '14 – Present**

I serve two roles at UCONN, both as a TA for the department of Psychological Sciences, and as an RA for the same. As a TA I have taught sections (both regular and honors) of Introductory Psychology Lab covering topics including basic statistics, experimental design, and scientific literacy. As a RA I serve as one of the co-managers of the Cognitive Sciences Shared Electrophysiology Research Laboratory (CSSERL.uconn.edu) where I am responsible for equipment repair, EEG training, and managing the facilities scheduling and general upkeep.

Thought Technology Ltd.**September '13 – May '14**

Worked as an Application Developer designing and building application interfaces for biofeedback software (Biograph Infiniti). This included designing and programming for modalities such as Heart Rate Variability, Neurofeedback, Evoked-related Potential feedback, Slow Cortical Potentials, and Quantitative EEG analysis.

CT Department of Mental Health and Addiction Services**September '12 – December '12**

Worked as an intern on a 16-bed psychiatric inpatient treatment unit. Involved in day-to-day patient interaction and treatment. Helped facilitate and run group sessions on topics such as Cognitive Skills and Anger Management.

The Hospital of Central Connecticut**June '10 – August '10**

Worked as a Patient Aide, responsible for transporting patients of all ages and conditions to and from different departments of the hospital for many reasons including procedures, or tests. I also transported specimens to the lab, and was responsible for responding to emergency situations in the hospital. Also performed a similar function as a volunteer from November '07 – May '10.

Computer/Technological Skills**MATLAB**

Familiar with using and writing MATLAB code for stimulus presentation, physiological data collection/analysis, and analysis of data from human subjects research.

Physiological Signal Processing & Analysis

Familiar with collecting, artifacting, and analyzing data from EEG, EMG, HRV, BVP, GSR and temperature measurements in the context of psychophysiological testing and research. Special focus on EEG responses to auditory stimuli.