Stephanie Cheung

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Research Interests

- paediatric rehabilitation; music-supported rehabilitation; interactive computer play; auditory neuroscience.

Education

Doctoral Student (Biomedical Engineering & Collaborative Program in Neuroscience) **Toronto, ON**
University of Toronto *Sept, 2015 - present*
Dissertation: Movement through Music: Video Games for Music-Supported Motor Rehabilitation.
Supervisors: Dr. Elaine A. Biddiss and Dr. Joyce L. Chen.

Master's of Applied Science (Electrical & Computer Engineering) **Hamilton, ON**
McMaster University *Sept, 2012 – Sept, 2014*
Thesis: Modelling the Neural Representation of Interaural Level Differences for Linked and Unlinked Bilateral Hearing Aids.
Supervisor: Dr. Ian C. Bruce.

Bachelor of Engineering (Electrical & Biomedical Engineering) **Hamilton, ON**
McMaster University *Sept, 2008 – April, 2012*
Capstone: "MACBot": A Robotic Toy for Children with Autism Spectrum Disorders.
Thesis: A Comparison of Wavelet and Short-Time Fourier Transform Techniques for Analysis of Auditory Cortex Beta-Band Activity.
Supervisors: Dr. Hubert de Bruin; Dr. Laurel Trainor; Dr. Takako Fujioka

Associate of The Royal Conservatory of Music (Piano Performance), First Class Honours **Toronto, ON**
The Royal Conservatory of Music *Conferred Jan, 2009*
Studied with Tanya Tkachenko and Boris Zarankin.

Awards & Scholarships

2015 – present: Wildcat Graduate Scholarship

2015 – present: Bloorview Research Institute Student Fellowship

2014: Certificate of Excellence for Outstanding Thesis

2014: International Hearing Aid Research Conference Student Scholarship

2012 – 2014: McMaster University Graduate Scholarship

2011: Ward Family Summer Student Scholarship

2008: The General Motors Entrance Scholarship

Research Experience

Research Assistant **Toronto, ON**
PEARL Lab, Bloorview Research Institute *Nov, 2014 – Aug, 2015*
- Developed sound processing algorithms and protocols for the design and evaluation of music-supported therapy video games.

Ward Family Research Summer Student **Toronto, ON**
PEARL Lab, Bloorview Research Institute *May, 2011 – Aug, 2011*
- Worked on a communication interface which converts physiological signals to music for anxiety detection (84% accuracy).

Research Assistant (Volunteer) & Database Developer **Hamilton, ON**
Infant Studies Group & McMaster Institute for Music and the Mind *May, 2010 – Jan, 2011*
- Conducted infant and adult EEG studies in music cognition. Developed a digital database for participant recruitment.

Teaching / Supervising Experience

Volunteer Supervisor **Toronto, ON**
PEARL Lab, Bloorview Research Institute *Dec, 2015 – present*
- E. Yin (December, 2015 - present)
- S. Seerala (January, 2016 - present)

Teaching Assistant, "Cellular Bioelectricity" **Hamilton, ON**
Dept. of Electrical & Computer Engineering, McMaster University *Jan, 2013 – April, 2014*
- Topics include: bioelectricity; ionic transport in cellular membranes; cardiac and neural physiology; electrical stimulation.

Teaching Assistant, "Structure of Biological Materials" **Hamilton, ON**
Dept. of Electrical & Computer Engineering, McMaster University *Sept, 2012 – Dec, 2013*
- Topics include: biomaterials; biocompatibility; biomechanics; physiological fluid mechanics; artificial organs; medical imaging.

Invited Talks

Cheung, S.T. (Feb, 2016"Merging music and technology for paediatric rehabilitation." at *Science of Music Seminar Series, Vanderbilt University*, Nashville, TN.

Contributed Conference Presentations

Cheung, S.T. & Bruce, I.C. (May, 2015). "Can auditory brainstem and midbrain processing of interaural level difference cues really explain perceptual performance?" at *169th Meeting of the Acoustical Society of America*, Pittsburgh, PA.

Cheung, S.T. & Bruce, I.C. (Aug, 2014). "Modeling the neural representation of interaural level differences for linked and unlinked bilateral hearing aids." at *International Hearing Aid Research Conference*, Lake Tahoe, CA.

Other Presentations

Cheung, S.T. (Sept, 2015). "PEARL Lab: Interactive media for the home, clinic, and beyond." at *Bloorview Research Trainee Rounds, Bloorview Research Institute*, Toronto, ON.

Cheung, S.T. & Bruce, I.C. (April, 2014). "Modelling the lateral superior olive response to sound localization cues in impaired and aided hearing." at *Dept. of Electrical & Computer Engineering Seminar Series, McMaster University*, Hamilton, ON.

Extracurricular Service

Co-Director/Coordinator **Toronto, ON**
CPIN/NAUS Neuroscience Mentorship Program *Feb, 2016 – present*

Rounds Coordinator **Toronto, ON**
Bloorview Research Institute Trainee Executive *October, 2015 – present*

Memberships

- Society for Music Perception and Cognition (student member)
- Canadian Partnership for Stroke Recovery National Trainee Association
- NeuroDevNet (associate trainee)

Last updated Feb 16th, 2016.