

Stephanie Cheung

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Research Interests

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

Education

University of Toronto

Doctoral Student (Biomedical Engineering & Collaborative Program in Neuroscience)

Toronto, ON

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

PEARL Lab, Bloorview Research Institute

Toronto, ON

Dec, 2015 – present

- E. Yin (December, 2015 - present)
- S. Seerala (January, 2016 - present)

Teaching Assistant, “Cellular Bioelectricity”

Dept. of Electrical & Computer Engineering, McMaster University

Hamilton, ON

Jan, 2013 – April, 2014

- Topics include: bioelectricity; ionic transport in cellular membranes; cardiac and neural physiology; electrical stimulation.

Teaching Assistant, “Structure of Biological Materials”

Dept. of Electrical & Computer Engineering, McMaster University

Hamilton, ON

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. (March, 2016). “MusicMaster: Movement through Music” at *CP-NET Workshop 2016, Toronto, ON.*

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.*

Extracurricular Service

Co-Director/Coordinator

CPIN/NAUS Neuroscience Mentorship Program

Toronto, ON

Feb, 2016 – present

Rounds Coordinator

Bloorview Research Institute Trainee Executive

Toronto, ON

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 Mar 4th, 2016.