

Isabelle Arseneau-Bruneau

6-218 St-Joseph Est • Montréal, QC H2T 1H6 • (581) 999-0286 • isabellearseneau@gmail.com

Education

- **Doctorate in Neuroscience (IPN)**, McGill University, (Montréal) Expected in 2022
- **Master's in Music and Human Learning**, The University of Texas (Austin) 2017
- **Master's in Music** (Performance - Trumpet), Université Laval, (Québec) 2015
- **Bachelor in Teaching**, Dean's Honours List, Université Laval, (Québec) 2014
- **Artist Diploma Program** (1st year graduate study), Glenn Gould School - Royal Conservatory of Music, (Toronto) 2009-2010
- **Diplôme d'Études supérieures I** (Undergraduate), Conservatoires de musique et d'art dramatique du Québec, (Gatineau) 2009

Notable Awards and Scholarships

- Professional Development Award, The University of Texas at Austin Graduate School 2017
- National Science Foundation's Traveling Award - International Conference on Music Perception & Cognition (declined) 2016
- International Students and Scholars Scholarship, University of Texas at Austin 2015-2017
- Excellence Scholarship, Université Laval 2013-2014
- Excellence Scholarship, Association des Diplômés de l'Université Laval (ADUL) 2012-2013
- Brain Injury Association of Canada - National Scholarship 2010
- Hugh Mappin Memorial Scholarship, Royal Conservatory of Music –Glenn Gould School 2009-2010
- Terry Fox Humanitarian Award (National) 2006-2009
- Provincial Excellence Millennium Scholarship 2004-2008

Language & Skills

Software: Matlab, FSL, Linux OS, BrainStorm, BrainSight, BrainVision, Presentation, Pratt, RedCap, Microsoft Office Suite

Languages: French (native), English (fluent), Spanish (basic)

Research Experience

Doctoral Researcher

Supervisor: Robert Zatorre, McGill University, Montréal, Canada

Since May 2017

Conducted an experiment combining transcranial magnetic stimulation (TMS) with simultaneous Electroencephalography (EEG) and Magnetoencephalography (MEG) recordings. Prepared anatomical targets on structural T1-MRI and TMS trajectories. Managed the recruiting, screening and scheduling of 45 participants. Compiled seventy 186-item questionnaires. Provided expense reports and data updates, coordinated four different equipment bookings necessary for 120 sessions held at the Montréal Neurological Institute. Currently conducting behavioral analysis and receiving training on MEG and EEG data analysis.

Research Assistant

Barat Chandrasekaran Laboratory, University of Texas at Austin, USA

2016-2017

Ran participants for behavioral experiments and verified experimental controls of Tone Categorization and Accent Categorization protocols. Collected and exported data into laboratory servers. Performed auditory/hearing screenings (Pure Tone & Bone Conduction). Collaborated to a project investigating older adults' ability to hear speech in noise, and the underlying cognitive and perceptual components. Part of my activities involved EEG methods and the administration of neuropsychological assessment tests.

Graduate Student Researcher (First Author - Independent Research)

Supervisor: Amy L. Simmons, Focus of Attention in Musical Performance, University of Texas at Austin, USA

2015-2017

Reviewed literature from human learning fields. Adapted published protocols and methodologies. Identified variables and designed auditory-motor tasks of 3 level of complexity. Recruited, interviewed participants, and conducted data collections. Piloted statistical analysis with 300 recordings and four independent raters. Adapted a Hidden Markov Model (Machine Learning) to evaluate music learning.

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Professional Experience

Administrative Assistant

Finances Office - Butler School of Music (BSOM), University of Texas at Austin, USA 2016-2017
University Interscholastic League (UIL) - Music Office, Texas State Solo and Ensemble Contest, Austin, Texas, USA 2016

(UIL): Labeled and distributed instruction packages destined to the 25,000 participants and the 200 juries of the Texas State Solo and Ensemble Contest. As part of a team, followed and reinforced pre-established organizational systems for the material repartition in 3 different venues. Monitored post-event awards distribution and collected Directors' contact information. (BSOM): Tracking and delivery of donations, checks, bills, deposits, and contracts between the BSOM, UT Austin Main Office, and Development Office.

Teaching Assistant

Université Laval (UL), Québec, Canada 2012-2015
The Glenn Gould School (GGS) - Royal Conservatory of Music, Toronto, Canada 2009-2010

(UL): Updated and developed curriculums and presented weekly workshops on brass didactical approaches to groups of undergraduate students in Music Education. Translated academic documents such as the MODAL Research Groups website, and collaborated on an upcoming publication by Professor Valerie Peters. (GGS): Assisted the Faculty of the GGS Brass Department in clerical tasks. Communicated information regarding courses and academic procedures to students. Compiled attendance.

Substitute Teacher

Commission scolaire de la Capitale (Québec's Schools Board), Québec, Canada 2013-2015

Prepared and taught music, courses, material and syllabi that followed the *Québec Education Program* norms, to Elementary and High School students in the *Commission scolaire de la Capitale*. Organized a Christmas concert, as well as musical performances, for the *Notre-Dame-du-Canada* and *Beau-Séjour Elementary Schools*. Taught occasional English and Spanish classes.

Free-Lance Trumpet Player

Musical Organizations in Canada, America, and Ecuador 2007 to present

Performed with symphony orchestras and various ensembles such as the *Quebec Ensemble à Vents et Percussions*, Quebec Symphony Orchestra (substitute), *Orchestre symphonique de l'Estuaire* (substitute), Rimouski Opéra, *Orchestre Philharmonique de la relève du Québec* (soloist), the Ottawa Chamber Orchestra, the Queen's Own Riffle of Canada and *El Ecuador Brass Band*. Participated in festivals including the Pacific Region International Summer Music Academy Orchestra, the Orford Academy Orchestra, the Curso Internacional de Musica de Bunol (Spain), the Domaine Forget Academy and the Nova Scotia Music Festival Orchestra.

Publications

Coffey, Emily B.J.; **Arseneau-Bruneau, Isabelle**; Lim, Ah Ryung & Zatorre, Robert J., The Music-In-Noise Task: a tool for dissecting complex auditory perception, (*in preparation*)

Coffey, Emily B.J.; **Arseneau-Bruneau, Isabelle**; Zhang, Xiaochen; Qin, Annie; Sylvain Baillet & Robert J. Zatorre, Modulation of the frequency-following response (FFR) via transcranial magnetic stimulation (TMS), (*in preparation*)

Arseneau-Bruneau, Isabelle & Simmons, Amy L., Focus of Attention in Musical Performance on the Trumpet, (*in preparation*)

Arseneau-Bruneau, Isabelle & Llanos Lucas, Fernando, Hidden-Markov Modeling to Measure Music Learning and Performance, (*in preparation*)

Other Certifications

- Brevet d'Enseignement du Ministère de l'Éducation du Québec (MELS)
- Test de certification en français écrit pour l'enseignement - TECFÉE (Québec)