Pauline Tranchant

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Research Interests:
Music Cognition, Movement Synchronization, Rhythm/Beat Perception, Brain Signals Analysis

Academic Training

Present Ph.D, Psychology, Université de Montréal, Canada. Advisor: Prof. Isabelle Peretz
2013 M.Sc., Psychology, Université de Montréal, Canada
2013 Research Internship (3 months), Center for Complex Systems and Brain Sciences, Florida Atlantic University, USA
2011 Agrégation de l'Enseignement Secondaire Supérieur (Teaching Diploma), Université Libre de Bruxelles, Belgium
2010 M.Sc., Mathematics, Université Catholique de Louvain, Belgium
2008 B.Sc. , Mathematics (minor in Physics), Université Catholique de Louvain, Belgium

Awards and Scholarships

2015 Quebec Merit Scholarship For Foreign Students, FRQNT (44 000 CAD)
2014 Doctoral Scholarship, Quebec Bio-Imaging Network (7000 CAD)
2014 Exemption of extra tuition fees (international students), Wallonie-Bruxelles-International
2013 Doctoral Graduate Award, Natural Sciences and Engineering Research Council of Canada (21 000 CAD)
2013 Graduate Award, Center for Research on Music, Media and Technology, McGill University (5000 CAD)
2013 Graduate Student Stipend, Center for Research on Brain, Language and Music (3000 CAD)
2013 Internship Stipend, Natural Sciences and Engineering Research Council of Canada (2700 CAD)
2013 Exemption of of extra tuition fees (international students), Wallonie-Bruxelles-International
2012 Master's Graduate Award, Natural Sciences and Engineering Research Council of Canada (17 000 CAD)
2011 Exemption of extra tuition fees (international students), Université de Montréal
2010 Travel Award, Wallonie-Bruxelles-International (800 EUR)
2005 Médaille d'Or de la Ville de Tournai. Award for best performance (in flute). Music Conservatory of Tournai, Belgium

Teaching

2017 MUS6117 - Analyser le Geste Musicien, guest lecture on rhythm perception/synchronization, Université de Montréal
2014 PSY1004 - Analyses Quantitatives en Psychologie 1, teaching assistant, Université de Montréal
2013 Undergraduate Student Mentoring: Camille Rivard on Synchronization in Dancers and Drummers project
2012 PSY2055 - Psychologie de la Perception, teaching assistant, Université de Montréal
2010 MATH-F-201 - Calcul Différentiel et Intégral 2, teaching assistant, Université Libre de Bruxelles
2010 MATH-F-204 - Mécanique Analytique, teaching assistant, Université Libre de Bruxelles
2010 MATH-F-108 - Mathématiques, teaching assistant, Université Libre de Bruxelles

Peer-reviewed Journal Publications

Keeping the Beat: A Large Sample Study of Bouncing and Clapping to Music
Tranchant, P., Vuvan, D., Peretz, I. (2016) **Plos One** DOI: 10.1371/journal.pone.0160178

Current Conceptual Challenges in the Study of Rhythm Processing Deficits
Tranchant, P., Vuvan, D. (2015) **Frontiers in Neuroscience** DOI: 10.3389/fnins.2015.00197

Forthcoming:

Decoding Rhythm Perception in the Brain from Electro-encephalographic Signals
Tranchant, P., Chemin, B., Lajnef, T., Peretz, I., Jerbi, K. (in preparation)

Vibro-tactile Synchronization to Music in Hearing and Deaf People
Tranchant, P., Shiell, M. M., Giordano, M., Nadeau, A., Peretz, I., Zatorre, R. (in preparation)

Presentations

Posters (International Conferences)

2017 Disrupted Timing Mechanisms in Poor Music Synchronizers. The Neuroscience and Music VI - Boston, **USA**
2016 Bouncing Synchronization to Music in Hearing and Early Deaf People. ICMPC14, San Francisco, **USA**
2015 Micro-timing Deviations Modulate Groove and Pleasure in Electronic Dance Music. ICME4, Geneva, **Switzerland**
2014 Rhythm is a Dancer: Electrophysiological Evidance for Sensory-driven Synchronization Deficits in Beat Deafness. Hamburg, **Germany**
2014 Screening for Beat Synchronization Deficits Using Bouncing and Clapping Movements. The Neuroscience and Music - V, Dijon, **France**
2013 Dancing in the Deaf: beat entrainment through vibrotactile stimuli. SMPC, Toronto, **Canada**
2012 Clapping, Bouncing and Tapping with music in a normal population. Neuromusic Conference, Hamilton, **Canada**

Talks

2017 Investigation of timing mechanisms in poor music synchronizers. Symposium on Timing and Rhythm, McMaster University
2017 Single-trial decoding of rhythm perception from EEG signals. Symposium on Decoding Brain Signals using machine learning, Université de Montréal
2014 Bouncing and Clapping to a Beat: A comparison between Dancers, Drummers, and Non-musicians. Workshop on Dance, Movement, Cognition and the Brain, Université de Montréal
2013 Beat Deafness: New Cases and Diagnostic Critera. Auditory Neuroscience Workshop, McMaster University
2012 A New Case of Beat Deafness. CIRMMT Music Perception and Cognition Student Colloquium, McGill University

Outreach

2017 Journal Reviewer, Nature Scientific Reports
2016 Educational Designer, BRAMS
I created and designed contents for the Music Cognition part of a (free) Massive Open Online Class on Neuroscience (OPEN edX platform).
2008 Maths and Physics Tutoring, La Chaloupe ASBL (Belgium)
I helped high school students from disadvantaged socio-economic backgrounds to level up their grades in maths and physics classes.
2007 Scientific Communicator, Royal Observatory of Belgium
I created posters intended to a general public and research sections for the internet website of the Department of Referent Systems and Geodynamics.

Relevant Skills

Computer Matlab, R, Python, LaTeX
Music Flute (classical), Chamber Music, Orchestra
Languages French (native), English (fluent), Dutch (oral and written basic level)