

Rebekka Lagacé-Cusiac

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Education

Ph.D. in Psychology Supervised by Daniel Ansari and Jessica Grahn University of Western Ontario	2021-present
M.Sc. in Psychology University of Western Ontario	2019-2021
B.Sc. in Cognitive Neuroscience Université de Montréal	2016-2019
Double DCS (Diploma of College Studies) Natural sciences & Classical Music (Alto Saxophone) Lionel-Groulx College	2013-2016

Honors, Awards & Competitions

NSERC Post-Graduate Scholarship Doctoral Award (National, 25 000-40 000\$/year)	2023-2025
Ontario Graduate Scholarship Award (Provincial, 15 000\$, declined)	2023
G. Keith Humphrey Memorial Award (Institutional, 650\$)	2022
Dean's honor list, Université de Montréal	2017-2019
Mathematics competition, Association Mathématique du Québec (AMQ) <i>Results: 2nd out of 47 within college, 56th out of 244 within province</i>	2015
<i>Results: 57th out of 161 within province</i>	2014
Canadian Senior Mathematics Contest, Centre for Education in Math and Computing (CEMC) <i>Results: 876th out of 9609 (89th percentile)</i>	2014

Publications

Articles

Quan, I., **Lagace-Cusiac, R.**, Grahn, J. (Accepted). Psychometric assessment of the temporal bisection task with discrete and continuous response formats. *Timing & Time Perception*.

Nguyen, T., **Lagacé-Cusiac, R.**, Everling, J. C., Henry, M. J., Grahn, J. A. (2024). Audiovisual Integration of Rhythm in Musicians and Dancers. *Attention, Perception, & Psychophysics*.
<https://doi.org/10.3758/s13414-024-02874-x>

Lagacé-Cusiac, R., Tremblay, P. F., Ansari, D., Grahn, J. (2023). Investigating the relationships between temporal and spatial ratio estimation and magnitude discrimination using SEM: Evidence for a common ratio processing system. *Journal of Experimental Psychology: Human Perception and Performance*, 49(1), 108–128. <https://doi.org/10.1037/xhp0001062>

Lau, N. T. T., Wilkey, E. D., Soltanlou, M., **Lagacé Cusiac, R.**, Peters, L., Tremblay, P., ... Ansari, D. (2022). Numeracy and COVID-19: examining interrelationships between numeracy, health numeracy and behaviour. *Royal Society Open Science*, 9(3), 201303–201303. <https://doi.org/10.1098/rsos.201303>

Manuscripts in preparation (complete full draft) or submitted

Lagacé-Cusiac, R. (In preparation). Reliability assessment of cognitive-behavioral measures in developmental research.

Lagace-Cusiac, R., Kinghorn, E., Grahn, J., De Souza, J., Carter, C. E. (In preparation). The Effect of Blocked and Interleaved Practice on Musical Style Learning: A Multistudy Investigation.

Lagace-Cusiac, R., Kinghorn, E., Grahn, J., De Souza, J., Carter, C. E. (In preparation). The effect of combining interleaved practice with feedback to improve composer musical style recognition: Is Two the Sum of its Parts?

Lau, N., Wilkey, E., **Lagace-Cusiac, R.**, Ansari, D. (In preparation). Do Different Non-Symbolic Number Comparison Tasks Point to a Unified “Approximate Number System” Construct? A Measurement Study.

Talks

Kinghorn, E. *, **Lagacé Cusiac, R.***, Demirkaplan, O., Grahn, J. A., De Souza, J., Carter, C. (July, 2021). The effects of blocked and interleaved practice on musical style recognition. ICMPC-ESCOM. University of Nottingham, Nottingham, UK. [Online].

Posters

Lagacé-Cusiac, R., Grahn, J., Ansari, D. Neural representation of discrete and continuous ratios in the visual and parietal cortex: An fMRI study. *Mathematical Cognition and Learning Society*. June 6-8, 2023. Gallaudet University, Washington, DC, USA.

Lagacé-Cusiac, R. Grahn, J., Ansari, D. Neural representation of discrete and continuous ratios: An fMRI study. Cognitive Neuroscience Society, April 13-16, 2024, Toronto, Canada.

Lagacé-Cusiac, R. Grahn, J., Ansari, D. Reliability assessment of cognitive-behavioral measures in developmental research: A case of Simpson's paradox. *L.O.V.E. Conference*. February 7-8th, 2024, Niagara, Canada.

Lagacé-Cusiac, R., Kinghorn, E., Grahn, J. A., De Souza, J., Carter, C. Investigating Blocked vs Interleaved Practice for Composer Style Recognition in Musicians and Non-Musicians. *NeuroMusic Conference*. October 28th, 2023, McMaster University, Ontario, Ca.

Lagacé-Cusiac, R., Grahn, J., Ansari, D. Neural representation of discrete and continuous ratios in the visual and parietal cortex: A preregistered report. *Mathematical Cognition and Learning Society*. June 6-8, 2023. University of Loughborough, Loughborough, UK.

Lagacé-Cusiac, R., Tremblay, P. F., Ansari, D., Grahn, J. Investigating the relationships between absolute and relative magnitude processing in space and time: An SEM study. *Mathematical Cognition and Learning Society*. June 1-3, 2022. Thomas More, Antwerp, Belgium.

Lee S.H.*, **Lagacé-Cusiac R.**, Grahn J. The effect of contextual interference and feedback on learning composers' musical styles. *2021 Canadian Society for Brain, Behaviour and Cognitive Science Meeting*. June 17, 2021. [Online].

Nadon, E.*, **Lagacé-Cusiac, R.**, Pilon, J., Gosselin, N. The effect of the emotional characteristics of different sound environments on selective attention of adults. *CRBLM Scientific Day*. May 14, 2018. Université de Québec à Montréal, Montréal, Canada.

Oswald, V., **Lagacé-Cusiac, R.***, Létourneau, A.*, Trahan, H.*, Toupin, G., Younes, Z., Rabaey, P., Jerbi, K. À l'état de repos, la puissance spectrale des oscillations cérébrales prédit la performance de la vitesse de traitement. [The spectral power of neural oscillations during resting-state predicts speed of processing performance]. *12e Journée scientifique du Département de Psychologie*. April 6, 2018. Université de Montréal, Montréal, Canada.

Research experience

Research assistant Co-supervised by Jessica Grahn, Christine Carter, and Jonathan De Souza Western University	06/2020-12/2023
Research assistant (course based) Co-supervised by Fanny Barlaam and Sébastien Jacquemont CHU Sainte-Justine	01/2019-04/2019
Research assistant (course based) Co-supervised by Victor Oswald and Karim Jerbi Université de Montréal	01/2018-04/2018
Volunteer research assistant Supervised by Nathalie Gosselin BRAMS	04/2017-07/2017

Teaching experience

Teaching assistantship

Western University

Statistics for Psychology I (Undergraduate)	Winter 2024
Neuroimaging of cognition (Graduate)	Fall 2020, 2021, 2022, Winter 2025
Neuroimaging of cognition (Undergraduate)	Winter 2022
Data Science in Psychology (Undergraduate)	Winter 2021
Research Methods and Statistical Analysis in Psychology (Undergraduate)	2019-2020

Undergrad supervision (Western University)

Bhargav Kandlakuti (Honor's thesis) <i>Effect of multisession blocked and interleaved practice on learning of musical style recognition</i>	2024-2025
Xinjie (Jalor) Dong (Independent study) <i>Short and long-term effects of blocked and interleaved practice on musical style recognition</i>	2024-2025
Xinjie (Jalor) Dong (COUHR summer program) <i>Differences in cognitive processing of fractions in musicians and non-musicians</i>	Summer 2024
Joshua Williams (Honor's thesis) <i>Investigating the whole number bias in musicians with formal music theory training</i>	2023-2024
Ivan Quan (Honor's thesis) <i>Assessment of a modified temporal bisection task with responses on a continuous visual scale</i>	2022-2023
Alistair Cranmer (Honor's thesis, Co-supervised) <i>Effect of tDCS of the SMA on Groove Perception for High and Low Groove Music</i>	2022-2023
Crystal Lee (Honor's thesis) <i>Investigating the relationship between temporal ratio perception and beat perception</i>	2021-2022
Jaehyun (Jay) Hwang (Honor's thesis) <i>The effect of rhythmic context on temporal ratio perception</i>	2021-2022
Seung Hyeck (Alex) Lee (Honor's thesis) <i>The Effect of Feedback and Contextual Interference on Learning Composers' Musical Styles</i>	2020-2021
Other undergraduate supervision	
Ryan Wang (Volunteer)	
Jeel Pandya (Volunteer)	
Hanna Maekebay (Volunteer)	
Kaitlyn Blanchette (Volunteer)	
Oliver Zhou (Volunteer)	
Chu Yi Yu (Volunteer)	
Other supervisions	
Emma Schuele (High school student)	
Online resource	
Neuroimaging Web-Based Instruction (NEWBI) for fMRI (http://www.newbi4fmri.com/) Contributed to design and implementation of interactive widgets	2020-2024

Guest lectures

CoNCH Lab

Issues related to reliability, incremental validity and reliability assessment in cognitive-behavioral research 13/03/2024

Cognitive Neuroscience of Music, Western University

Talk: Dissociation between Musical and Monetary Reward Responses in Specific Music Anhedonia 03/10/2023
25/02/2020

Introduction to Sensation and Perception, Western University

Debate: Expert judge on the effects of music training on cognitive abilities 07/12/2023
02/12/2019

Other

Youth Competitive Team Climbing Coach 2023-present
Head Coach (E/D/C age groups) 2024-present

Trampoline and gymnastics coach, Viagym 2012-2019
Head Coach (recreational) 2017-2019

Tutor, Kumon Ste-Thérèse 2010-2017
Math (Pre-K to calculus)
English as a first and second language

Tutor, Collège Lionel-Groulx
Music theory and ear training 2015-2016
Pre-Calculus & Calculus 2014-2015

Service & Other Employment

Committees

University of Western Ontario
Co-founder and organizer, Coding Social Series 2021-2022
Member, Research methods and statistics taskforce 2020-2021
Member, Psychology Colloquium Series 2019-2020

Polytechnique de Montréal
Consultant, Polycortex 2018-2019

Reviewer

Journal of Interpersonal Relations, Intergroup relations and Identity (JIRIRI) 2018-2023
Applied and Clinical Neuropsychology (NCACN) 2018-2023
Developmental Science (Co-reviewer)
Journal of Personality and Social Psychology (1x)
Psychomusicology: Music, Mind, and Brain (1x)
Psychonomic Bulletin & Review (Co-reviewer)

Public engagement/Volunteering

Science Rendez-vous, London, Ontario	
Booth organizer	2023
Booth volunteer	2022
COUHR London's Research Symposium (Judge)	10/2022
COUHR Montreal's Research Symposium (Judge)	08/2021
Trampoline and tumbling regional judge	2018-2019
Armand-Corbeil High School Concert Band (volunteer, musician)	2011-2019
Saxophone (2011-2013, high school student)	
Percussion (2013-2018, post-graduate volunteer)	
Trombone (2018-2019, post-graduate volunteer)	
Harmonie Laval (Saxophonist, Community Orchestra)	2016-2017

Training & Other Skills

Statistical training and workshops

Project Management: Essential Elements	26-27/03/2024
Western-Fields summer school in computational neuroscience, Western University	
	09/2022
Brainhack, Western University	12/2021
Mixture modeling workshop, CenterStat	01/2022
Structural equation modeling workshop, CenterStat	05/2020

Teaching training

Climbing Wall Instructor Course	01/2023
Teaching Assistant Training Program, Western University	09/2019
National Coaching Certification Program (NCCP) level 2 training in trampoline	2018
NCCP level 1 training in trampoline (certified in 2017)	2012

Programming Experience

Languages: R/RStudio, Python, Matlab, Javascript, HTML
Other research platforms: PsychoPy/Pavlovia, Qualtrics

Languages

English (Native/Bilingual)
French (Native/Bilingual)

Musical experience

Instruments (in decreasing order of proficiency): Saxophone (most proficient), flute, mallet percussion, electric bass, acoustic and electric guitar, trombone (least proficient)

Sports

Bouldering and lead climbing (competing at regional and provincial level)	2022-present
Trampoline (competed at provincial and national levels)	2004-2014