DARIUS J. VALEVICIUS

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EDUCATION

PhD, Université de Montréal 2023 – Present

Neuroscience, Faculty of Medicine

- Using generative AI and brain decoding to create affective stimuli for emotion research.

MSc, McGill University 2020 – 2021

Integrated Program in Neuroscience

- Studying the intersection of emotion, music, and pain perception.

BASc, McGill University 2017 – 2020

Cognitive Science, First-Class Honours

Minor in History and Philosophy of Science

PROFESSIONAL AND RESEARCH EXPERIENCE

Research Software Developer 2021 – 2023

McGill Centre for Integrative Neuroscience

- Integrating brain imaging tools with high-performance computing servers.
- Improving ease-of-use and reproducibility in functional brain imaging analyses.

Program Assistant 2022 – 2024

Building 21, McGill University

- Mentoring students and assisting with workshops and web presence for an interdisciplinary research hub.
- Developing computational art projects to showcase student work.

Research Assistant (Philosophy) 2019 – 2021

McGill Department of Philosophy

- Studying the epistemology and ethics of psychometrics in youth mental health.
- Conducting a training workshop for clinicians in the youth mental health sector.

AWARDS AND DISTINCTIONS

Bourse en intelligence artificielle 2024

Études supérieures et postdoctorales, Université de Montréal ($10,000)

Postgraduate Scholarship – Doctoral 2023

National Science and Engineering Research Council of Canada ($101,000)

Canada Graduate Scholarship – Master's 2020

National Science and Engineering Research Council of Canada ($17,500)

Graduate Excellence Award 2020

Faculty of Science, McGill University ($4,000)

Science Undergraduate Research Award 2019

Faculty of Science, McGill University ($7,500)

Faculty of Science Scholarship 2019

Faculty of Science, McGill University ($800)

SKILLS

Computational skills

- Languages: Python, C#, R, MATLAB.
- Software development pipelines and utilities – git, unix, docker, etc. (GitHub)
- Game development in Unity and Blender (Itch.io)

Languages

- Fluent in English, French, and Lithuanian

Arts

- Drawing, painting, digital art, and music performance (Instagram)

COMMUNITY INVOLVEMENT

Event Organizer (McGill's Building 21) 2022 – 2024

- Hosting events such as weekly Art Nights and Soup & PhD Nights at McGill's Building 21, open to students and youth from across Montréal.

Game Development Mentor (CÉGEP Game Jam) 2022 – 2024

- Aiding CÉGEP students in developing their first video game projects at yearly province-wide game jams, hosted by Vanier College.

Day Shelter Volunteer (Resilience Montreal) 2020 – 2022

- Preparing food, clothing, and essential items for homeless persons in downtown Montreal.

Student Association of Cognitive Science (McGill) 2018 – 2020

- Organized events and services for the student body.

PRESENTATIONS & PUBLICATIONS

Publications & Manuscripts

Valevicius, D., Haddad, C., Soghoyan, G., Cortese, A., & Taschereau-Dumouchel, V. (2026, under review) *Synthetic image evolution for affective science.* Psychiatry and Clinical Neurosciences.

Barbic, S., Celone, D., Dewsnap, K., Duque, S.R., Osiecki, S., Tal, E., & Valevicius, D. (2026, in press). *Mobilizing Measurement into Care: A Guidebook for Service Providers Working with Young Adults Aged 12–24 Years*. Manuscript in preparation.

Taschereau-Dumouchel, V., Côté, M., Manuel, S., Valevicius, D., Cushing, C. A., Cortese, A., Kawato, M., & Lau, H. (2024). *Interaction between the prefrontal and visual cortices supports subjective fear*. Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences, *379*(1908).

Valevicius, D., Lépine Lopez, A., Diushekeeva, A., Lee, A., & Roy, M. (2023) *Emotional responses to favorite and relaxing music predict music-induced hypoalgesia*. Frontiers in Pain Research.

Featured in The Guardian, CNN, The Times, CBC The Current, CBC Quirks and Quarks, and more.

Valevicius, D., Beck, N., Kasper, L., Boroday, S., Bayer, J., Rioux, P., Caron, B., Evans, A.C., & Khalili-Mahani, N. (2023) *Web-based processing of physiological noise in fMRI: Addition of the PhysIO toolbox to CBRAIN*. Frontiers in Neuroinformatics.

Conference Presentations

Valevicius, D., Haddad, C., Beaudoin, M., Buu Nyugen, R., Soghoyan, G., Cortese, A., Taschereau-Dumouchel, V., (2026, accepted) "Using Closed-Loop Image Evolution to Probe the Neural Correlates of Subjective Fear", Association for the Scientific Study of Consciousness, Santiago, Chile.

Valevicius, D., Beaudoin, M., Haddad, C., Côté, M., Taschereau-Dumouchel, V., (2025) "Real-Time Synthetic Image Evolution for Probing the Neural Correlates of Subjective Fear", Association for the Scientific Study of Consciousness, Heraklion, Greece.

Valevicius, D., Greenberg, D.M., Roy, M. (2020). "The effects of music attributes on pain perception", The Annual Pain Retreat of the Quebec Network of Junior Pain Investigators, Mont Sainte-Anne.

Invited Talks

Valevicius, D., Lépine Lopez, A., Diushekeeva, A., Greenberg, D.M., Roy, M. (2021). "Experiments on Music and Pain", Bicentennial STARS event, McGill University, Montreal.

Desjardins S., Diushekeeva D., Lépine Lopez A., Valevicius D. (2019, October 2nd). "Music and Pain: Emotion, Distraction, Reward", Media Health: Play the Pain, Concordia University, Montreal.

Posters

Valevicius, D., Haddad, C., & Taschereau-Dumouchel, V. (2025) *Synthetic image evolution for affective science*. SPR 2025, Montréal.

Valevicius, D., Haddad, C., & Taschereau-Dumouchel, V. (2024) *Evolving synthetic images for the control of affective experience*. CCN 2024, Boston.

Valevicius, D., Boroday, S., Beck, N., Rioux, P., Caron, B., Adalat, R., Evans, A.C., & Khalili-Mahani, N. (2022) *Integration of software tools in CBRAIN: A guide for user-led development*. OHBM 2023, Montreal.

Valevicius, D., Boroday, S., Beck, N., Rioux, P., Caron, B., Adalat, R., Evans, A.C., & Khalili-Mahani, N. (2022) *Introduction of the PhysIO noise modeling toolbox to CBRAIN*. OHBM 2022, Glasgow.

Valevicius, D., Greenberg, D.M., Roy, M. (2020). *The effects of music attributes on pain perception.* Annual Scientific Meeting of the Canadian Pain Society, Calgary.