

# HALLEE SHEARER

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BOSTON, MA

## EDUCATION

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<b>NORTHEASTERN UNIVERSITY</b>	<b>Boston, MA</b>
<b>Doctor of Philosophy, Psychology</b>	<b>2025-Present</b>
• Supervisor: Dr. Stephanie Noble	
<b>UNIVERSITY OF BRITISH COLUMBIA</b>	<b>Vancouver, BC</b>
<b>Master of Science, Neuroscience</b>	<b>2021-2023</b>
GPA: 89%; Thesis grade: 95%	
• Supervisor: Dr. Tamara Vanderwal	
• Thesis: Movie-fMRI as an acquisition state for functional connectivity-based precision psychiatry	
<b>UNIVERSITY OF BRITISH COLUMBIA</b>	<b>Vancouver, BC</b>
<b>Bachelor of Science, Behavioural Neuroscience (Co-operative Education Program)</b>	<b>2016-2021</b>
GPA: 83%	

## FUNDING & AWARDS

<b>Canadian Graduate Scholarship - Doctoral</b> - Canadian Institute of Health Research (\$120,000) - <i>Declined</i>	<b>2025</b>
<b>Faculty of Medicine Graduate Award</b> - UBC (\$300)	<b>2023</b>
<b>Best Lightning Talk Award</b> – UBC Psychiatry Research Day (\$500)	<b>2023</b>
<b>Canadian Graduate Scholarship – Master's</b> - Canadian Institute of Health Research (\$17,500)	<b>2022</b>
<b>UBC Graduate Student Travel Award</b> (\$500)	<b>2022</b>
<b>UBC Graduate Program in Neuroscience Travel Award</b> (\$500)	<b>2022</b>
<b>Faculty of Medicine Graduate Award</b> - UBC (\$4,500)	<b>2021</b>
<b>Faculty of Medicine Summer Student Research Award</b> - UBC (\$2,800)	<b>2021</b>
<b>Virtual Knowledge Exchange Grant</b> - BC Children's Hospital Research Institute (\$250)	<b>2021</b>
<b>BioTalent Canada's Student Work Placement Program</b> (\$7,000)	<b>2020</b>
<b>Dean's Honour List</b> - UBC	<b>2016-2021</b>

## PUBLICATIONS

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### PEER-REVIEWED PUBLISHED MANUSCRIPTS

- Shearer, H., Eilbott, J., Vila-Rodriguez, F., Vanderwal, T. (2026) Considering brain state for individualized functional connectivity-based rTMS. *Imaging Neuroscience*, 4, imag\_a\_1096.
- Shearer, H., Rosenblatt, M., Ye, J., Jiang, R., Tejavibulya, L., Liang, Q., Dadashkarimi, J., Westwater, M., Cheng, I., Fischbach, A., Humphries, A., Rolison, M., Peterson, H., Atkinson, B., Mehta, S., Camp, C., Nichols, T., Curtiss, J., Scheinost, D., Noble, S. (2025) BrainEffeX: A Web App for Exploring fMRI Effect Sizes. *Aperture Neuro*.
- Shearer, H., Eilbott, J., Vila-Rodriguez, F., Noble, S., Xu, T., & Vanderwal, T. (2025) Comparing reliability-based measures of functional connectivity between movie and rest: An ROI-based approach. *Imaging Neuroscience*, 3, imag\_a\_00411.
- Frew, S., Samara, A., Shearer, H., Eilbott, J., & Vanderwal, T. (2022) Getting the nod: Pediatric head motion in a transdiagnostic sample during movie-and resting-state fMRI. *PloS one*, 17(4), e0265112.

### MANUSCRIPTS SUBMITTED AND UNDER REVIEW

- Ge, R., Gregory, L., Samara, A., Shearer, H., Humaira, A., MacMillan, E., Barlow, E., Frangou, S., Vanderwal, T., Vila-Rodriguez, F. Acute network-based functional connectivity perturbations induced during 1Hz TMS for Treatment Refractory Depression

**PREPRINTS**

1. Cravo, F, Fischbach, A, **Shearer, H**, Rosenblatt, M, Schienost, D, Noble, S. (2026) PRISME: A MATLAB toolbox for large data-driven multimodal power benchmarking. *bioRxiv*.
2. Smith, M, Samara, M, Cabalo DG, Ngo, A, **Shearer, H**, Vanderwal, T, Bernhardt, B. (2025) *bioRxiv*.

**RESEARCH EXPERIENCE****NORTHEASTERN UNIVERSITY****Center for Cognitive and Brain Health,****Neuroscience Precision Research & Idiographic Statistical Methods (NeuroPRISM) Laboratory****Boston, MA**  
**2023-2025**

- Research Technician
- Supervisor: Dr. Stephanie Noble
- Leveraged large existing fMRI datasets to define typical study effects and developing an interactive web app (R Shiny) to explore the results
- Lead a project to develop recommendations for the statistical comparison of test-retest reliability estimates

**UNIVERSITY OF BRITISH COLUMBIA****Department of Psychiatry, Naturalistic Neuroimaging Lab****Vancouver, BC**  
**2021-2023**

- Master's Student
- Supervisor: Dr. Tamara Vanderwal
- Compared test-retest reliability estimates of functional connectivity across movie-watching and resting-state for psychiatric applications

**UNIVERSITY OF BRITISH COLUMBIA****Department of Psychiatry, Naturalistic Neuroimaging Lab****Vancouver, BC**  
**2020-2021**

- Research Assistant, Co-operative education position
- Supervisor: Dr. Tamara Vanderwal
- Investigated graph theory metrics of functional connectivity in childhood-onset OCD

**UNIVERSITY OF BRITISH COLUMBIA****Department of Psychiatry, Non-Invasive Neurostimulation Therapies Lab****Vancouver, BC**  
**2019-2020**

- Research Assistant, Co-operative education position
- Supervisor: Dr. Fidel Vila-Rodriguez
- Administered Transcranial Magnetic Stimulation treatments in the context of clinical trials

**UNIVERSITY OF BRITISH COLUMBIA****Department of Psychology, Evolutionary Social Cognition Lab****Vancouver, BC**  
**2018-2019**

- Research Assistant
- Supervisor: Dr. Mark Schaller
- Investigated the evolutionary basis of political conservatism

**INVITED TALKS****University of Melbourne (virtual) - Systems Lab****2024**

Movie-fMRI as an acquisition state for FC-based precision psychiatry

**Northeastern University - Social Development and Wellbeing Lab****2024**

Introduction to movie-fMRI



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## CONFERENCE POSTERS

**Shearer H**, Rosenblatt M, Ye J, Jiang R, Tejavibulya L, Liang Q , Dadashkarimi J, Foster M, Westwater M, Cheng I, Fischbach A, Humphries A, Baskaran AK, Rolison M, Peterson H, Adkinson B, Mehta S, Camp C, Nichols T, Curtiss J, Scheinost D, Noble S. (2025) BrainEffeX: A web app for exploring typical fMRI effect sizes. *OHBM 2025*.

**Shearer H**, Eilbott J, Vila-Rodriguez F, Vanderwal T. (2025) What if rest is not best? Considering brain state for individualized FC-based rTMS. *OHBM 2025*.

Fischbach A, **Shearer H**, Quigley K, Theriault J, Feldman Barrett L, Satpute A, Noble S. (2025) Deconfounding subcortical signals in fMRI by modeling region-specific cerebrospinal fluid noise. *OHBM 2025*.

**Shearer H**, Rosenblatt M, Ye J, Jiang R, Tejavibulya L, Liang Q , Dadashkarimi J, Foster M, Westwater M, Cheng I, Fischbach A, Humphries A, Baskaran AK, Rolison M, Peterson H, Adkinson B, Mehta S, Camp C, Nichols T, Curtiss J, Scheinost D, Noble S. (2025) BrainEffeX: A web app for exploring typical fMRI effect sizes. *Cognitive Neuroscience Society 2025*.

Smith M, Samara A, Eilbott J, **Shearer H**, Vanderwal T, Bernhardt B. (2024) Hierarchical organization of intersubject correlations parallels functional gradients during naturalistic viewing. *OHBM 2024*.

**Shearer H**, Rosenblatt M, Ye J, Jiang R, Tejavibulya L, Liang Q , Dadashkarimi J, Westwater M, Cheng I, Rolison M, Peterson H, Adkinson B, Mehta S, Camp C, Curtiss J, Scheinost D, Noble S. (2024) BrainEffeX: A Shiny app to explore typical effect sizes in functional neuroimaging research. *Cognitive Neuroscience Society 2024*.

Fischbach A, **Shearer H**, Satpute A, Quigley K, Theriault J, Barrett L, Noble S. (2024) Assessing the impact of subject-specific masks on reliability of subcortical connectivity. *Cognitive Neuroscience Society 2024*.

**Shearer H**, Vila-Rodriguez F, Vanderwal T. (2023) Movie-fMRI as an alternative to rest for FC-based precision psychiatric research. *OHBM 2023*.

Samara A, Ge R, Gregory E, **Shearer H**, Vila-Rodriguez F, Vanderwal T. (2023) Acute FC changes during concurrent rTMS-fMRI for depression: a network-based approach. *OHBM 2023*.

**Shearer H**, Samara A, Eilbott J, Vila-Rodriguez F, Vanderwal T. (2022) On Location: Testing the use of movie-fMRI for individualized target localization for TMS. *OHBM 2022*.

Samara A, Eilbott J, **Shearer H**, Xu T, Vanderwal T. (2022) Gradients go to the movies: Macroscale cortical organization during naturalistic viewing. *OHBM 2022*.

**Shearer H**, Eilbott J, Steward SE, Vanderwal T. (2021) Graph theory analyses in childhood-onset OCD yield negative results. *OHBM 2021*.

Frew S, Samara A, **Shearer H**, Eilbott J, Vanderwal T. (2021) Getting the Nod: Characterizing pediatric head motion in movie- and resting-state fMRI. *OHBM 2021*.

**Shearer H**, Eilbott J, Stewart SE, Vanderwal T. (2021) Graph theory analysis of fMRI data in pediatric OCD. *UBC Multidisciplinary Undergraduate Research Conference 2021*.

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## PROFESSIONAL MEMBERSHIPS

Cognitive Neuroscience Society Member	2024 - Present
Organization for Human Brain Mapping	2020 - Present

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## SKILLS

Programming: R (*lme4, tidyverse, plotly, shiny*), Python (*Nilearn, Nipype*), MATLAB, Bash

**Data analysis:** Jupyter Notebooks, Git/GitHub, High-performance computing (*PBS, SLURM, parallel processing*)

**Data processing:** fMRIprep, FSL, FreeSurfer, Docker, Singularity

**Research management:** RedCap, RAVE

**Data Visualization:** Matplotlib, ggplot2, Graphpad Prism, Biorender, Tableau

**Systems:** Linux, MAC OS, Windows

**Software:** RStudio, Visual Studio Code, Quarto, FSLEyes, Connectome Workbench, Psychopy