



Code: Jasinska-A

APD 1210 RESEARCH PRACTICUM COURSE

PROJECT DESCRIPTIONS 2023-24 FALL/WINTER

Name and Title: *Kaja Jasinska, Assistant Professor*

Lab Website: <https://www.oise.utoronto.ca/boldlab/>

TITLE OF RESEARCH PROJECT: *Impact of interrupted schooling on the development of neural systems for reading in resettled refugee children*

NUMBER OF STUDENT PLACES AVAILABLE: 1

PRIMARY MODE OF RESEARCH PLACEMENT PARTICIPATION (circle one option and describe):

☒ *IN PERSON*

☐ *REMOTE (ONLINE)*

☐ *HYBRID/FLEXIBLE*

Please describe: Research placement will involve in-person data collection (including evenings and weekends) and in-person (lab-based research). 8-10 hrs weekly must be completed in the laboratory. All meetings with PI and other students will be in person in the lab.

OBJECTIVES AND METHODOLOGY: *For refugee children, displacement and migration often corresponds to a period of interrupted schooling and limited literacy instruction. As refugee children resettle in Canada, they resume learning to read at school. However, refugee children significantly lag behind their peers, both native English speaking students as well as other newcomers to Canada and English language learners (ELLs), in reading. While interrupted schooling clearly has a negative impact on literacy, little is known about the specific effects of interrupted schooling across the developmental trajectory for reading, and even less is known about the neurobiological mechanisms by which interrupted schooling impacts the neural systems that support reading. By leveraging the latest tools of educational neuroscience (functional neuroimaging tools, specifically functional Near Infrared Spectroscopy; fNIRS)—this project examine the neural systems that support reading development for children who have experienced periods of interrupted schooling at different ages and who have resumed schooling, and learning to read, at an older age.*

DESCRIPTION OF STUDENT PARTICIPATION: *Student will work within a team of undergraduate and graduate students and postdoctoral fellow to recruit participants and collect data for an fNIRS neuroimaging study of reading development. Student will receive training in fNIRS data collection and data analysis, as well as human research ethics training. Student's activities will include data analysis using R and MATLAB of collected behavioural and neuroimaging data that includes assessments of children's language and literacy skills and neural activity during fNIRS tasks. Student's duties will also*



include literature reviews, abstract and conference submissions, and manuscript preparation. Student should be prepared to contribute significantly to a manuscript with the aim of a journal-ready manuscript that will be submitted at the end of the practicum.

DESCRIPTION OF PREFERRED SKILLS/BACKGROUND (OPTIONAL): REQUIRED:

Student must have completed or be concurrently enrolled in JOI1288. Student must be willing to learn data analysis using R over the course of the Research Practicum. The student will receive support from the faculty advisor, but must be prepared to work independently as well.

PREFERRED:

Strong preference for student who has previous neuroimaging data collection experience and previous experience using MATLAB and R.

Strong preference for student who speaks Arabic, Pashto, and/or Dari.

DAY AND TIMES OF LAB MEETINGS: *Lab meetings are held for 1 hour each week (time TBD). Student will also have a 1 hour meeting with the faculty advisor every other week between September and April.*