

<b>LURA/USRA Posting Information</b>	
<b>Position Type:</b>	<input checked="" type="checkbox"/> Lassonde Undergraduate Research Award- summer research <input checked="" type="checkbox"/> NSERC USRA <input type="checkbox"/> Other (please specify)
<b>Position Title:</b>	Research Assistant/summer researcher
<b>Location:</b>	BCEE 328
<b>Professor:</b>	<b>Hossein Kassiri</b>
<b>Department:</b>	<b>Electrical Engineering and Computer Science</b>
<b>Contact for Professor (Email, phone):</b>	<b>Email: Hossein@eecs.yorku.ca</b>
<b># of positions available:</b>	<b>2</b>
<b>Project Description (200-500 words maximum)</b>	<p>Accurate detection and efficient control of neurological disorders require sophisticated algorithms that can adjust themselves from patient to patient and from time to time. Machine learning allows us to accurately classify neural activity data recorded from the brain and decide whether it can be counted as an abnormal activity for a specific patient.</p> <p>In Integrated Circuits and Systems Lab, we are collaborating with Machine Learning experts to efficiently implement ML algorithms on general-purpose or application-specific integrated circuits. This interdisciplinary research requires students who can be involved in either design and implementation of the ML-based signal processing algorithm, or hardware implementation of such algorithms.</p>
<b>Duties and Responsibilities of the student:</b>	<p>There are two positions for this project. The successful candidates will be responsible for either of the following, depending on their experience and interest:</p> <ol style="list-style-type: none"> <li>1. Design and development of an ML-based algorithm for neural data classification</li> <li>2. Resource-efficient implementation of a previously developed algorithm using hardware description language.</li> </ol>
<b>Skills and Qualifications:</b>	<ul style="list-style-type: none"> <li>- Both positions require basic programming skills and familiarity with MATLAB.</li> <li>- Position 1 requires students with background and experience in Machine Learning.</li> <li>- Position 2 requires students with Verilog/VHDL coding experience.</li> </ul>

Summer 2018: LURA/USRA Projects

<b>Degrees, courses and Disciplines prerequisite*:</b>	
<b>Stipend</b>	TBD
<b>Are you willing to host external students? (There is an additional cost.)</b>	Yes
<b>Duration:</b>	16 weeks minimum
<b>Start Date:</b>	05/01/2018 (estimated)
<b>End Date:</b>	08/31/2018 (estimated)
<b>Materials required for application:</b>	TBC

*\*The projects will be available for viewing to students outside of Lassonde School of Engineering; please be clear what type of programs/pre-requisites are required for the projects.*