## Supervisor & Project Information Form

Please complete and return via email ONLY to gdip.hres@utoronto.ca by **Tuesday, October 13, 2020**

### Supervisor Information

*MUST have unrestricted University of Toronto School of Graduate Studies (SGS) appointment* (to independently supervise graduate students)

<table>
<thead>
<tr>
<th>Name: Mojgan Hodaie</th>
<th>Email: <a href="mailto:Mojgan.hodaie@uhn.ca">Mojgan.hodaie@uhn.ca</a></th>
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<tr>
<td><strong>SGS Department:</strong> Institute of Medical Science (IMS)</td>
<td><strong>Field of Research:</strong> Global Surgery</td>
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<td><strong>Research Institution affiliation (if applicable):</strong> Krembil Research Institute</td>
<td><strong>Location of Work:</strong> Toronto Western Hospital</td>
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<td><strong>Student contact time (number of hours per week YOU are available to the student for any concerns or to review progress):</strong> 5 hours/week</td>
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Gradient Diploma in Health Research Program – 2021/2022

Project Information (will be posted on GDipHR website for student access)

TITLE: Effective procedural and technical training using microlearning modules

DESCRIPTION (MAX 500 WORDS):

Microlearning is an emerging e-learning technique which is highly suitable for procedural training. Despite its increasing applications, microlearning has not been applied or assessed in the context of surgical training. Key elements that define microlearning modules include mobile-based learning modules that are short in duration, highly (but not strictly) visual, and include learning assessments. These characteristics suggest that microlearning would be highly suitable for the new Royal College requirement of competency by design (CBD). A key element of CBD relies on the learning journey being driven by the learner, and introduces the element of flexibility in surgical education, without being strict on the timeline to reach competency. Microlearning appears to be highly suitable in this regard. While microlearning a specific task, a machine learning module is able to detect the level of competence and expertise of the learner, and design questions to augment areas of weakness and speed up areas of competence, thereby permitting the learner to focus on key areas and reach competence, autonomy and excellence.

The aim of this project is to evaluate microlearning as a training strategy in neurosurgery. The student would be responsible for designing the modules in collaboration with surgical staff and residents. The microlearning modules will be designed with specific consideration of the entrusted professional activity components of CBD. Both quantitative and qualitative assessment tools will be used to evaluate the impact of microlearning on surgical training, as well as readiness for implementation.
If human subjects are involved, have the appropriate Research Ethics Board approvals been obtained?

☐ Yes  ☐ No  ☒ Application Submitted (Date: __In process____________)

Do you expect this work will be published within the 20 months?

☒ Yes  ☐ No  ☐ Uncertain / Other

**Student Roles & Responsibilities (please be as specific as possible)**

*Indicate who will serve as the student’s direct report for daily oversight (PI, PhD student, technician, etc...)*

PI

*Indicate to what extent the student’s research activities could, if necessary, be completed remotely.*

This project can be completed remotely.