Mechanical & Industrial Engineering
UNIVERSITY OF TORONTO

MIE498H1: Research Thesis 2025-2026

Supervisor	Birsen Donmez
Supervisor email	donmez@mie.utoronto.ca
Number of Positions	1
Open to	Mechanical and Industrial Engineering Students
Term Offered	Full-year
Research Area	Human Factors
Research Topic	Telematics Based Driver Behaviour Intervention for Fleet Safety

Project Description

The project's objectives are to further reduce preventable collisions within the light-duty vehicle fleet by: (1) identifying the root causes of these collisions, such as intentional rule violations, attentional lapses from fatigue, and mobile phone use while driving, along with underlying risk factors like driver perceptions and safety climate; (2) identifying potential intervention opportunities to mitigate these risk factors; and (3) conducting a pilot test of a promising intervention. Employing a mixed-methods approach, the project have completed review archival data (e.g. incidence reports) and policy documents, as well as other quantitative data (e.g. telematics), followed by new qualitative and/or quantitative data collection with fleet personnel. Cumulatively, these efforts lead to the development of a tailored intervention which will be implemented and evaluated. The intervention will be focusing on utilizing telematics based data to provide regular driver feedbacks. The student will collaborate closely with a postdoctoral researcher, and a PhD student. The student will assist with tasks related to objective 3, including extracting telematics data from the Geotab system, automating data analysis process, developing relevant app or web page interfaces for providing feedback and assisting other tasks related with the implementation of the intervention and preparing relevant publications and reports.

Additional Information	N/A
Application Instructions	Please submit a cover letter, CV and unofficial transcript to b.demir@utoronto.ca and dina.kanaan@mail.utoronto.ca