

## **Project #1**

**Title:** Libraries for Tire Data and Flow Device Cold Temperature

**Performance Objectives:** Combine and organize information from various sources on tire data and flow device cold temperature performance, for ease of reference and continuous development.

**Description:** During gear design phase, tire data and flow device cold temperature performance have been addressed, either through obtaining experimental data or performing calculations. Several sources of data and calculation approaches exist. The student will be responsible for combining and organizing this information, into both report and Excel format. This will facilitate cross-project learning, continuous improvement, and adoption of standardized methods. The student will need to communicate heavily with several staff to get an understanding of the approach used on each gear, so strong communication and organizational skills are required. Time permitting, the student shall generate new empirical models to improve data fit. Progress meetings and support: The projects will be supported by the UTAS Performance Engineering staff. Regular meetings will take place with staff members to discuss status and remaining tasks.

**Prerequisite and Skill Required:** -communication skills -organizational skills -- understanding of relevant fundamentals (fluid mechanics is required, tire mechanics is an asset)

### **Eligibility**

- In good academic standing
- Enrolled in MIE MEng program
- M. Eng. majored in Mechanical or Industrial Engineering
- Strong English communication skills, oral and written
- Students must maintain their student status throughout the project
- Students must be Canadian citizen or Permanent Resident

**Start Date and duration of the project: May 2021 (~4 months)**

**Application Instructions:** Please combine (1) application form, cover letter and resume and unofficial transcripts (undergrad and grad) as one PDF file and email it to: [imdi@mie.utoronto.ca](mailto:imdi@mie.utoronto.ca).

Please name your file as: Collins-first name initial,last name, project number e.g. Collins -J.Smith, #1).

**Application Deadline:** \*Applications to be submitted to [imdi@mie.utoronto.ca](mailto:imdi@mie.utoronto.ca) by Wed Jan 13 @ 5PM.\*

Questions to be directed to the UT-IMDI Office [imdi@mie.utoronto.ca](mailto:imdi@mie.utoronto.ca)