Division of Engineering Science – 4th year students only

Students must submit the following form, which includes the thesis topic and supervisor(s), for approval by the Division of Engineering Science. This is a mandatory component of the ESC499H/Y credit. Deadlines differ for students in the the fall, full year and winter thesis.

Deadlines to complete the form (see below):

- **Fall & Full Year Thesis – September 21, 2018**
- **Winter Thesis – November 16, 2018**

Late submissions: A 2% deduction will be applied to the final thesis course grade for late form submission.

Note: If there are any changes to your thesis supervisor(s) after the Division has approved your request you must inform the course coordinator, Professor Lisa Romkey (romkey@ecf.utoronto.ca), immediately.

Questions? Review Thesis Information section in the EngSci Info Hub, or email Professor Lisa Romkey (romkey@ecf.utoronto.ca).

Thesis Supervisor Request Form 2018-19

Name (as listed on Acorn). *

Ziyan

First

Middle

Song

Last

Student Number *

1001297786

UToronto email address *

ziyan.song@mail.utoronto.ca

Option (Major) of Study *

Robotics

Please enter your thesis course enrolment details as listed in your Acorn account. *

- [ ] ESC499H1F (Fall)
- [ ] ESC499H1S (Winter)

[X] ESC499Y1Y (Full Year)

Only check the thesis course you are enrolled in. If you have questions about switching thesis courses email Brendan Heath prior to [date TBD].

Please state your working title. This can be changed, as appropriate, for your final draft of your thesis. *

Improving Scalable Hybrid Planning with Tensorflow for nonlinear problems

Please describe your proposed topic (max 150 words). *

This research will focus on hybrid planning, a model which can solve nonlinear optimization problems. Literature review will include scholarly articles on different optimization models. The main investigation will be on the current model of hybrid planning provided by the supervisor. Then based on the existing issues, I will implement features including (1) Lagrangian function for solving optimization problems with action constraints and (2) integration of discrete planning into hybrid planning which then completes the whole model. An outcome analysis will also be conducted to evaluate the finished model from the aspects of efficiency and integrity in the end.

0 of 1110 max characters

Thesis Supervisor Name *

Scott

First

Sanner

Last

Thesis Supervisor Email Address *

ssanner@mie.utoronto.ca

Thesis Supervisor Department *

Mechanical and Industrial Engineering

Do you have a second thesis supervisor? *

[X] No - I only have one thesis supervisor. They are a UofT professor.

[ ] No - my only thesis supervisor is a non-UofT professor.

[ ] Yes - I have two thesis supervisors. One or both are a UofT professor.

Submit