## **CARLETON UNIVERSITY**

## Department of Mechanical and Aerospace Engineering PhD Comprehensive Exam and Thesis Proposal Defense

**CANDIDATE:** Arnav Rana

**DATE:** Tuesday, April 18, 2023, 11:00 a.m. Room 4124 Mackenzie Building

THESIS TITLE: Studies of Anisotropic Ductile Fracture Behaviour in Pipeline Steels

## **EXAMINATION BOARD:**

Member of Department O. Petel, Dept. of Mechanical & Aerospace Engineering

Member of Department I. Garces, Dept. of Mechanical & Aerospace Engineering

**Thesis Supervisor** X. Wang, Dept. of Mechanical & Aerospace Engineering

**Thesis Supervisor** R. Miller, Dept. of Mechanical & Aerospace Engineering

Chair of Defence R. Liu, Dept. of Mechanical & Aersopace Engineering

**Chair of Department** R. Miller, Chair, Dept. of Mechanical & Aerospace Engineering (*Ex-officio*)

**Dean of Faculty**L. Kostiuk, Dean, Faculty of Engineering (*Ex-officio*)

Dean, Faculty of Graduate &

**Postdoctoral Affairs** 

P. Smith, Dean, Faculty of Graduate Studies and Research (Ex-officio)