

CARLETON UNIVERSITY
Department of Mechanical and Aerospace Engineering
MASTER'S THESIS EXAMINATION

CANDIDATE: Mohamed Khalifa

DATE: Wednesday April 29, 2026, 11:00 4124 Mackenzie Building

THESIS TITLE: Advanced State Estimation For Robotics Systems Using Dual Quaternion Unscented Kalman Filter

EXAMINATION BOARD:

Internal Examiner	Chao Shen, Systems & Computer Engineering	(In Person)
Member of Department	Mostafa El Sayed, Mechanical & Aerospace Engineering	(In Person)
Thesis Supervisor	Hashim Mohamed, Mechanical & Aerospace Engineering	(In Person)
Chair of Defence	Hamza Abo El Ella, Mechanical & Aerospace Engineering	(In Person)
Chair/Director of Department or Designate	Edgar Matida	(Ex-officio)
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