



1 | the graduate

Name: Marat Sadykov

Student Number: 9312706

2 | the award

Name of Award: Master of Philosophy

Detail:

The Master of Philosophy is a postgraduate degree normally completed in one and a half years of full-time study or the equivalent part-time study. Admission requirements include completion of a bachelor degree, with or without Honours, with a specific level of achievement, or equivalent. Students complete a research thesis that is independently assessed by one internal and one external examiner. The language of instruction is English.

The Master of Philosophy is located at Level 9 of the Australian Qualification Framework.

The Australian Higher Education Graduation Statement is provided by Australian higher education institutions to graduating students on completion of the requirements for a particular higher education award. It provides a description of the nature, level, context and status of studies that were pursued by the individual named. Its purpose is to assist in both national and international recognition of Australian qualifications and to promote international mobility and professional recognition of graduates.

certification

Date: 17 December 2023

LEANNE HARVEY

Vice-President (Administration)
and University Registrar

3 | awarding institution

Queensland University of Technology (QUT) focuses on being 'the university for the real world'. It maintains close links with industry, and delivers professionally relevant courses with a balanced mix of theory and practical experience. Where appropriate, courses are accredited and reviewed by external professional bodies and industry associations. QUT was established by an Act of the Queensland Parliament in 1989 and is listed as an Australian University on the Tertiary Education Quality and Standards Agency's National Register of Higher Education Providers. The University's Commonwealth Register of Institutions and Courses for Overseas Students number is 00213J.

Additional information can be found at www.qut.edu.au

4 | graduate's academic achievements

Master of Philosophy

IF80 Version 1

Thesis Title:

Time-Series Machine Learning in Electrical Vehicles: Smart Battery Management through Neural-Network-Based State of Charge Prediction

Thesis Abstract:

This research was a step towards a new Battery Management System inside electric vehicles. It is based on using Machine Learning techniques and powerful Tensor capable devices to use Neural Networks to predict the accurate State of Charge of Lithium-Ion cells rather than applying traditional methods of battery capacity measurement. It is meant to prolong the utilisation of energy inside a vehicle by relying on the history of efficient driving behaviours and employing that information to model the capabilities of similar cells. This thesis investigated several published methods and proposed a novel approach, bringing higher accuracy results.

Units of Study

Unit Code	Unit Title	Grade	Description	Credit Points
Research Period 2, 2019				
IFT632.1	Thesis	S	Satisfactory	
6 Week Teaching Period - 6, 2019				
IFN001.5	Advanced Information Research Skills	5	Credit	4

Master of Philosophy

Course requirements completed on **03 November 2023**

Conferred on **17 December 2023**

Key to grading:

Grade	From Semester 1, 2009	From Semester 1, 1985
7	High Distinction	
6	Distinction	
5	Credit	
S	Satisfactory	
4	Pass	
3	Fail	Low Pass
S3	Not Applicable	Pass Supplementary
U	Unsatisfactory	
2	Fail	
S2	Not Applicable	Fail Supplementary
1	Low Fail	
K	Withdrawn - Failure	
A	Result Unfinalised	
SA	Supplementary Assessment	
DA	Deferred Assessment	
T	Assessment Continues	

Grade Point Average (GPA) is calculated from the grades obtained from semester one 1985 onwards and weighted by the credit points of the unit using the formula and assumption as described in the Manual of Policies and Procedures (MOPP) www.mopp.qut.edu.au