UNIVERSITY OF CAMBRIDGE
Department of Engineering

Wong, A.C.L.
Trinity College

ENGINEERING TRIPOS, PART IIA, 2019
Class I

Qualified in:
Information and Computer Engineering
Instrumentation and Control

Examinations

3B5 Semiconductor engineering	42 out of 60 [40.5]
3C5 Dynamics	38 out of 60 [41.4]
3E3 Modelling risk	50 out of 60 [41.0]
3F1 Signals and systems	45 out of 60 [39.0]
3F2 Systems and control	52 out of 60 [40.4]
3F3 Statistical signal processing	40 out of 60 [39.0]
3F8 Inference	41 out of 60 [39.9]
3G3 Introduction to neuroscience	36 out of 60 [37.8]
3G4 Medical imaging and 3-D computer graphics	43 out of 60 [39.8]
3M1 Mathematical methods	45 out of 60 [40.7]

Coursework

Laboratory reports, Full Technical Reports, and Extension Activity	70 out of 80
Multidisciplinary design project	57 out of 80 [56.2]
Machine learning project	62 out of 80 [54.6]
Total	621 out of 840 (74%)

Rank in year group:
54 out of 271 19th percentile (1st percentile is the top rank; 100th percentile is the bottom rank)

Industrial Experience
Faculty Board Industrial Experience requirements satisfied

Class boundaries for 2019

Class	Mark (out of 840)	
I	606-840	(72-100%)
II.1	527-605	(63-72%)
II.2	448-526	(53-63%)
III	383-447	(46-53%)

Figures in square brackets indicate the average mark obtained by students taking that course component. The marks for examinations have been normalised so as to be directly comparable between papers. Percentages shown in round brackets are for guidance only.

This transcript is issued by the Department of Engineering, University of Cambridge for the convenience of staff and students. Copies used for other purposes should be stamped and signed by the student's College to verify that the marks shown are accurate.

University ID: aclw3

Dr Adam Boies
TUTOR

TRINITY COLLEGE CAMBRIDGE

Alfred Chiu Lok Wong

I can confirm that Mr Alfred Wong (date of birth, 28 July 1998) matriculated in Trinity College and the University of Cambridge on 01 October 2016 as a full-time undergraduate student to read for a four year degree course in Mathematics and Engineering. Mr Wong will complete his studies and graduate BA(hons)/MEng in June 2020. His academic record is as follows:

Undergraduate Academic Transcript

2016 - 2017

Mathematical Tripos, Part IA

Papers	**Mark**
1 : Paper 1	
2 : Paper 2	
3 : Paper 3	
4 : Paper 4	

Overall Result : Class II, division 2
Overall Mark : 50/100

2017 - 2018

Mathematical Tripos, Part IB

Papers	**Mark**
CP : Computational Project	
1 : Paper 1	
2 : Paper 2	
3 : Paper 3	
4 : Paper 4	

Overall Result : Class II, division 1
Overall Mark : 61/100

2018 - 2019

Engineering Tripos, Part IIA

Papers	**Mark**
CW : Course-work	Easter Term 2019
EGT2 : Candidate for the Engineering Tripos Part IIA	Easter Term 2019
3B5 : Semiconductor engineering (Exam)	Easter Term 2019
3C5 : Dynamics (Exam)	Easter Term 2019
3E3 : Modelling risk (Exam)	Easter Term 2019
3F1 : Signals and systems (Exam)	Easter Term 2019
3F2 : Systems and control (Exam)	Easter Term 2019
3F3 : Statistical Signal Processing (Exam)	Easter Term 2019
3F8 : Inference	Easter Term 2019
3G3 : Introduction to neuroscience (Exam)	Easter Term 2019
3G4 : Medical imaging and 3-D computer graphics (Exam)	Easter Term 2019
3M1 : Mathematical methods (Exam)	Easter Term 2019

Dr Adam Boies
Tutor and Fellow
15 May 2019

TRINITY COLLEGE CAMBRIDGE CB2 1TQ

University of Cambridge
Mathematical Tripos Part IA Examination Results, June 2017

Wong,A.C.L. T Class II, division ii

On Papers 1-4 Section I questions are marked out of 10 and Section II questions are marked out of 20. Alpha and beta quality marks are awarded as follows:

On Section I questions 1 beta is awarded for a mark in the range 7..10
On Section II questions 1 alpha is awarded for a mark in the range 15..20
1 beta is awarded for a mark in the range 10..14

A merit mark, common to all three parts of the undergraduate Tripos, was used as a guide to examiners and was calculated as follows:

Merit = marks + 30 x alphas + 5 x betas - 120
if Class I, or if Class II.1 and alphas >= 8
marks + 15 x alphas + 5 x betas otherwise

The merit mark is closely related to the primary classification criteria which are the main, but not the only, factors taken into account when awarding a class.

The transcript mark is obtained by piecewise linear scaling of the merit mark within each class; 70% is a First, 60% a II.1, 50% a II.2 and 40% a Third.

Total mark, alpha, beta = 207, 6, 5 Merit = 322 Transcript mark = 50%

	Topic total mark, a, b		Question	Mark
Analysis I	13, 0, 1	Paper 1	II 10	13
Differential Equations	48, 1, 2	Paper 2	I 1	10
			I 2	8
			II 5	7
			II 6	16
			II 7	7
Dynamics and Relativity	45, 2, 0	Paper 4	II 9	20
			II 11	6
			II 12	19
Groups	12, 0, 0	Paper 3	II 5	3
			II 8	9
Numbers and Sets	18, 0, 1	Paper 4	I 1	10
			II 5	8
Probability	15, 1, 0	Paper 2	II 10	15
Vector Calculus	14, 0, 1	Paper 3	II 10	14
Vectors and Matrices	42, 2, 0	Paper 1	II 5	18
			II 7	5
			II 8	19

University of Cambridge
Mathematical Tripos Part IB Examination Results, June 2018

Wong,A.C.L. T Class II, division i

On Papers 1-4 Section I questions are marked out of 10 and Section II questions are marked out of 20. Alpha and beta quality marks are awarded as follows:

On Section I questions 1 beta is awarded for a mark in the range 7..10
On Section II questions 1 alpha is awarded for a mark in the range 15..20
1 beta is awarded for a mark in the range 10..14

Each Computational Project is marked out of 40. Thus at most 160 marks are available. There are no alphas/betas.

A merit mark, common to all three parts of the undergraduate Tripos, was used as a guide to examiners and was calculated as follows:

Merit = marks + 30 x alphas + 5 x betas - 120
if Class I, or if Class II.1 and alphas >= 8
marks + 15 x alphas + 5 x betas otherwise

The merit mark is closely related to the primary classification criteria which are the main, but not the only, factors taken into account when awarding a class.

The transcript mark is obtained by piecewise linear scaling of the merit mark within each class; 70% is a First, 60% a II.1, 50% a II.2 and 40% a Third.

Total mark, alpha, beta = 385, 6, 11 Merit = 530 Transcript mark = 61%

Topic	total mark, a, b	Question	Mark
Complex Analysis or Complex Methods	8, 0, 1	Paper 1 I 2	8
Groups, Rings and Modules	54, 1, 3	Paper 1 II 10	12
		Paper 2 II 11	19
		Paper 3 I 1	9
		II 11	11
		Paper 4 I 2	3
Markov Chains	4, 0, 0	Paper 3 I 9	4
Methods	42, 1, 2	Paper 1 II 14	6
		Paper 2 II 16	16
		Paper 3 I 7	10
		Paper 4 I 5	10
Numerical Analysis	64, 2, 2	Paper 1 II 18	14
		Paper 2 II 19	20
		Paper 3 II 19	20
		Paper 4 I 8	10
Optimization	7, 0, 0	Paper 4 II 20	7
Quantum Mechanics	33, 1, 2	Paper 3 I 8	10
		II 16	15
		Paper 4 I 6	8
Statistics	34, 1, 1	Paper 1 I 7	6
		Paper 2 I 8	9
		Paper 4 II 19	19
Computational Projects (scaled total)	139		
Project Marks (unscaled) 1.1 34, 1.2 31, 2.1 36, 2.3 38