

Brian Coyle

Email: brian.coyle@ed.ac.uk

Phone No.: +447446565645

Education

Centre for Doctoral Training- Pervasive Parallelism (MSc (R) + PhD),

Useful Quantum Advantage with Quantum Circuit Born Machine, Supervisor – Prof. Elham Kashefi:

2017-2018 (MSc (R) - In Progress): University of Edinburgh, South Bridge, Edinburgh, EH8 9YL

2018-2021 (PhD -Upon successful completion of MSc Phase)

By the completion of this programme, I expect to be fully up to date with the major ideas in the field of quantum information, with a focus on the rapidly growing field of quantum machine learning and quantum advantage.

Master of Science Honours (MSc) - Distinction,

Theoretical Physics, Final Grade (85%):

2016-2017: University of Edinburgh, South Bridge, Edinburgh, EH8 9YL

Selection of courses:

Relativistic Quantum Field Theory (A1), Statistical Physics (A1), Symmetries of Particles of Fields (A2), Gauge Theories in Particle Physics (A2), Advanced Cosmology (A2).

Research Project - Grade (86%), Supervisors – Dr. Matty Hoban, Prof. Elham Kashefi:

I have completed a 3-month research project in Quantum Computing under supervisors Prof. Elham Kashefi and Dr. Matty Hoban: One-Sided Device Independent Certification of Random Numbers.

Bachelor of Science Honours (BSc),

Applied and Computational Mathematics:

2012-2016: University College Dublin (UCD), Belfield, Dublin, Ireland.

September 2014 – May 2015: McGill University, Montréal, Quebec, Canada.

Degree Classification: First Class Honours.

GPA: 4.2 (Out of a possible 4.2)

Experienced with LaTeX, MATLAB, C, C++, FORTRAN, F#.

Selection of Final Year Courses:

Advanced Computational Science (A+), Theoretical Astrophysics (A+), Stochastic Models (A+), General Relativity (A+), Differential Geometry (A+), Environmental Fluids (A+), Quantum Field Theory (A+), Survey of Applied and Computational Mathematics (A+), Classical Electrodynamics (A+), High Energy Particle Physics (A+).

Leaving Certificate, 2012.

St. Oliver Post Primary, Oldcastle, Co. Meath, Ireland.

Selection of Subjects:

Mathematics (A2), Physics (A2), Chemistry (A2), Construction Studies (A2), French (B1), Applied Mathematics (B1), Irish (B3), English (B2).

Total Points: 555 (out of a possible 625).

Work Experience

Shop assistant with leadership role, 2008 – 2015.

Hillside Stores, Drumbaragh, Kells, Co. Meath, Ireland.

Main responsibility was serving customers and assisting them in any way necessary.

Worked as part of a team to ensure all the shop processes ran smoothly at all times.

Worked in the delicatessen area which involved cooking and preparing both hot and cold food.

Key Skills:

- Interpersonal and communication skills in dealing with customers.
- Managerial skills in training new employees and ensuring the shop ran smoothly.
- Accounting skills in balancing account books and managing money intake.

Volunteer Work

Student-Staff Ambassador, 2015-2016.

University College Dublin

Worked as the Applied and Computational Mathematics stage 4 student-staff ambassador. My main responsibility was to liaise with the lecturers to rectify any problems with the modules that were brought to my attention by my peers i.e. lecture material, assignments, etc...

Key Skills:

- Interpersonal skills in enabling communication between the faculty and my peers.
- Problem solving skills in resolving issues the class had with faculty members.

Achievements

- Recipient of UK/EU Masters Scholarship for University of Edinburgh, 2016-2017.
- Recipient of Class Medal for highest mark in Theoretical Physics MSc, 2017.
- Recipient of Higgs Prize for highest mark in Theoretical Phys. & Mathematical Phys. MSc, 2017.
- Recipient of Conway Gold Medal for highest mark in ACM BSc, UCD 2015-2016.
- UCD BSc (Physics with Astronomy & Space Science) Stage 3 Scholarship, 2013-2014.
- UCD award in recognition of outstanding academic achievement, 2013-2014.
- UCD Entrance Scholar 2012.
- Awarded Cavan Crystal glass ornaments by the Meath VEC for excellent results in both the Junior Certificate and Leaving Certificate Examinations.
- Holder of a full Irish drivers licence.

Publications

- One-Sided Device Independent Certification of Unbounded Random Numbers – Brian Coyle, Matty J. Hoban, Elham Kashefi – Pre-Proceedings of 9th International Workshop on Physics and Computation.

Personal Interests

- Member of Loughcrew Archers archery club (affiliated to Irish Field Archery Federation), and have won various medals and a golden arrow. Interested in Boxing, Snowboarding and long-

distance running, having completed the 2015 Dublin Half-Marathon with a time of 2:09:00, and the 2018 Edinburgh Half-Marathon with a time of 1:55:39.

- OCM for UCD Mathematical Society 2013-2014 and took part in Mathematical Society intervarsity competition 2014.

References

References available on request.