

Dr Ian McLoughlin

DEPT OF COMPUTER SCIENCE AND APPLIED PHYSICS, GALWAY-MAYO INSTITUTE OF TECHNOLOGY, IRELAND

☎ +353 86 3846854 | ✉ ian.mcloughlin@gmit.ie | 📱 [ianmcloughlin](#) | 🌐 [mcloughlinian](#)

Experience

Lecturer

DEPARTMENT OF COMPUTER SCIENCE AND APPLIED PHYSICS, GMIT

- Example modules: Theory of Algorithms, Graph Theory, Emerging Technologies.

Oct 2015–present

GMIT, Ireland

Assistant Lecturer

DEPARTMENT OF COMPUTER SCIENCE AND APPLIED PHYSICS, GMIT

- Example modules: Mobile Applications Development, Visual C# Programming.

Sept 2014–Sept 2015

GMIT, Ireland

Fulbright Scholar

HELSELINK GROUP, SCHOOL OF ENGINEERING, STANFORD UNIVERSITY

- Fulbright TechImpact Scholar investigating Scalable Online Laboratories.

July 2014–Aug 2014

Stanford University, CA, USA

Assistant Lecturer

DEPARTMENT OF LIFE SCIENCES, IT SLIGO

- Example modules: Mathematics, Statistics, Research Methods.

Oct 2012–Aug 2014

IT Sligo, Ireland

Postdoctoral Researcher

DIGITAL ENTERPRISE RESEARCH INSTITUTE (DERI), NUIG

- Enterprise Ireland Commercialisation Fund project.

May 2012–Sept 2012

NUIG, Ireland

Postdoctoral Researcher

CLIQUE RESEARCH CLUSTER, UCD

- Enterprise Ireland Commercialisation Fund project.

May 2011–Apr 2012

UCD, Ireland

Pricing Analyst

AON CENTRE FOR INNOVATION AND ANALYTICS

- Extensive interaction with C-level executives in Dublin, Chicago, Australia, and worldwide.

Aug 2010–Apr 2011

ACIA, Dublin, Ireland

Statistician

AON CENTRE FOR INNOVATION AND ANALYTICS

- Promoted to Pricing Analyst based on performance.

Oct 2009–Aug 2010

ACIA, Dublin, Ireland

Tutor

DEPARTMENT OF MATHEMATICS, NUIG

- Variety of level 6, 7 and 8 modules in Computing and Mathematics.

Jan 2006–Dec 2008

NUIG, Ireland

Postgraduate Intern

IBM ZURICH RESEARCH LABORATORY

- World-leading private research laboratory in Switzerland.

June 2005–Nov 2005

IBM Research, Zurich, Switzerland

Lab Demonstrator

DEPARTMENT OF MATHEMATICS, NUIG

- Level 6 and 7 modules in Computing and Mathematics.

Oct 2003–May 2005

NUIG, Ireland

IT Consultant

FREELANCE

- By contract to small businesses in Galway.

Dec 2005–Dec 2008

Galway, Ireland

Education

Ph.D. (Mathematics)

Oct 2005–June 2009

NATIONAL UNIVERSITY OF IRELAND, GALWAY

NUIG, Ireland

- *Dihedral Codes*, supervised by Professor Ted Hurley. Funded by the IRCSET (now IRC).

B.Sc. (Hons) in Mathematical and Computer Science

Sept 2001–May 2005

NATIONAL UNIVERSITY OF IRELAND, GALWAY

NUIG, Ireland

- My first year was, in fact, spent at UCD after which I transferred to second year at NUIG.

Awards

President's Award for Teaching Excellence

Nov 2018

GALWAY-MAYO INSTITUTE OF TECHNOLOGY

Galway, Ireland

- Award for teaching excellence at my home institute.

Fulbright Scholarship

July 2014

STANFORD UNIVERSITY

CA, USA

- Invited to Stanford University as a Visiting Scholar under Fulbright's TechImpact Scholarship scheme.

Embark Postgraduate Research Scholarship

Oct 2005–Mar 2009

IRISH RESEARCH COUNCIL (FOR SCIENCE, ENGINEERING AND TECHNOLOGY)

NUIG, Ireland

- Postgraduate scholarship to pursue a PhD in Mathematics.

University Scholarship

Oct 2004

NATIONAL UNIVERSITY OF IRELAND, GALWAY

NUIG, Ireland

- Based on performance in university examinations.

Exam Results Prize

Oct 2003

NATIONAL UNIVERSITY OF IRELAND, GALWAY

NUIG, Ireland

- Based on performance in university examinations.

Engagement

Advisory Group on High-Performance Computing

December 2020

DEPT OF FURTHER AND HIGHER EDUCATION, RESEARCH, INNOVATION AND SCIENCE

Irish Government

- Nominated by the Technological Higher Education Association.
- Focus on high-performance computing, quantum technologies, and artificial intelligence.

External Examiner

2018–present

M.SC. IN ARTIFICIAL INTELLIGENCE

CIT, Ireland

- External examiner for the Master's in Artificial Intelligence at Munster Technological University.

External Examiner

2018–present

HIGHER DIPLOMA IN DATA ANALYTICS

NCI, Ireland

- External examiner for the Higher Diploma in Data Analytics at the National College of Ireland.

Programme chair/author

2017–present

HIGHER DIPLOMA IN DATA ANALYTICS

GMIT, Ireland

- Programme chair and primary author of this Springboard+ funded programme.

Academic Council

2016–present

COUNCIL MEMBER

GMIT, Ireland

- Planning, coordination and development of academic standards.

LTA Continuity Framework working group

May 2020

MEMBER

GMIT, Ireland

- To devise future quality assurance mechanisms in light of COVID-19.

Quality Assurance Evaluation Group

CHAIR

- To evaluate immediate alternative learning, teaching, and assessment in light of COVID-19.

Apr 2020
GMIT, Ireland

Academic Standards Committee

CHAIR/MEMBER

- Advises Academic Council on the conformance to and effectiveness of quality assurance implementation.

2016–present
GMIT, Ireland

Programme Amendments Committee

CO-CHAIR

- Advises Academic Council on proposals to amend programmes.

2018–present
GMIT, Ireland

Research Committee

COMMITTEE MEMBER

- Advises Academic Council on research strategy, including quality of post-graduate research.

2016–2019
GMIT, Ireland

Internal and External Quality Assurance Review Panels

CHAIR/MEMBER

- Have participated in numerous internal and external validation panels.

2016–present
GMIT, Ireland

Disciplinary Committee

CHAIR/MEMBER

- Dealing with disciplinary matters and reporting to Governing Body as needed.

As requested
GMIT, Ireland

Student Appeals Committee

MEMBER

- Hearing student appeals on examination matters.

As requested
GMIT, Ireland

Code of Practice Working Groups

MEMBER

- Updating and drafting various parts of GMIT's Quality Framework.

Ongoing
GMIT, Ireland

Planning and Co-ordination Committee

MEMBER

- Advises Academic Council on validation of new programmes and modifications to existing programmes.

2013–2014
IT Sligo, Ireland

Third Level Computing Forum

DEPARTMENT REPRESENTATIVE

- Represent GMIT at the Third Level Computing Forum.

2017–present
Dublin, Ireland

Mathematics Module Board

CHAIR/MEMBER

- Coordinates teaching of mathematics modules across the Schools of IT Sligo.

2013–2014
IT Sligo, Ireland

Programmatic Review

AUTHOR

- Involved in programmatic review, updating modules and programmes across various departments.

2012–present
GMIT and IT Sligo

Professional Development

Quality Assurance and Enhancement

ACADEMIC COUNCIL

- I am a regular participant in GMIT, QQI, and other quality assurance events.

Ongoing
GMIT

Peer learning

VARIOUS ONLINE COURSE PROVIDERS

- I regularly audit and review higher education videos and materials from lecturers around the world.

Ongoing
Online

Google Faculty Institute

INVITED MEMBER

- Invited to and participated in Google's Faculty Institute in London.

Dec 2018
Google, London

Supervising Master's and Doctoral Studies

EPIGEUM

- Module in supervision of doctoral candidates by Dr Douglas Halliday.

June 2016

GMIT

Research Integrity

EPIGEUM

- Online course in research integrity by Professor Nick Steneck.

June 2016

GMIT

Student Engagement seminar

COLIN BRYSON, DIRECTOR OF COMBINED HONOURS PROGRAMME AT NEWCASTLE UNIVERSITY

- Seminar on enabling transformative learning and developing graduate attributes in students.

Apr 2015

GMIT

Building Research Leaders

THINKWELL

- Covered topics such as time management, self-motivation, and promoting oneself.

Feb 2012

UCD, Ireland

Project Management

ON CONSULTING

- Three-day course delivered by Orla Nugent, UCD Smurfit business school.

June 2011

UCD, Ireland

Research

Principal Investigator

ENTERPRISE IRELAND INNOVATION PARTNERSHIP

- *Electricity forecasting and trading in the European Market* in collaboration with industry partner RCL.

June 2020–present

GMIT

Supervisor of Senior Research Fellow

ENTERPRISE IRELAND INNOVATION PARTNERSHIP

- We have hired a Senior Research Fellow who reports to me for the above project.

Nov 2020–present

GMIT

Principal Investigator

ENTERPRISE IRELAND FEASIBILITY STUDY

- Funded project to gauge market potential for a GMIT spin-out based on my research.

March 2021–present

GMIT

Fulbright Scholar

HELSELINK GROUP, SCHOOL OF ENGINEERING, STANFORD UNIVERSITY

- Fulbright TechImpact Scholar investigating Scalable Online Laboratories.

Summer 2014

Stanford University, CA, USA

Fulbright Interviewer and Reviewer

FULBRIGHT COMMISSION IN IRELAND

- I have interviewed and reviewed Fulbright Scholar applicants for a number of years.

As requested

Dublin, Ireland

Fulbright Ambassador

FULBRIGHT COMMISSION

- Appointed Fulbright Ambassador, an on-campus Fulbright Commission representative.

2016–2018

GMIT

PhD student supervision

CONNACHT-ULSTER ALLIANCE BURSARY

- Co-supervisor of a PhD candidate with two co-supervisors at IT Sligo.

October 2020–present

IT Sligo

PhD student supervision

IT SLIGO PRESIDENT'S BURSARY SCHOLARSHIP

- I co-supervised a PhD candidate at IT Sligo. They have paused the PhD having been appointed a Lecturer.

Sept 2014–Sept 2020

IT Sligo

Master's student supervision

SELF-FUNDED

- Currently supervisor of two Master's candidates at GMIT.

2014–present

GMIT

Postgraduate Research Training Centre (1)

MODELLING AND COMPUTATION FOR SOCIETY AND INDUSTRY

- Part of a team of researchers across the CUA applying for PRTC funding.

June 2020-present

Connacht-Ulster Alliance

Postgraduate Research Training Centre (2)

COMPUTATIONAL SCIENCE AND ENERGY

- Part of a team of researchers across the CUA applying for PRTC funding.

June 2020-present

Connacht-Ulster Alliance

Enterprise Ireland – Innovation Voucher

2020

MEITHEAL NA GAOITHE LIMITED

GMIT

- Reporting from APIs.

Enterprise Ireland – Innovation Voucher

2020

BALLINCURRY ENERGY SUPPLY LIMITED

GMIT

- Application Programming Interface relevant to the trading of electricity and the forecasting of the wind power.

Enterprise Ireland – Innovation Voucher

2019

BALLINCURRY ENERGY SUPPLY LIMITED

GMIT

- Integrated Single Electricity Market (I-SEM).

Enterprise Ireland – Innovation Voucher

2018

REPOWER LIMITED

GMIT

- Automation of the sale of a quantity of electricity on a third-party trading platform called SEMOpX.

Enterprise Ireland – Innovation Voucher

2018

REPOWER LIMITED

GMIT

- Forecasting Wind Turbine Energy Production.

Enterprise Ireland – Innovation Voucher

2017

PICALITY LIMITED

GMIT

- Research and develop the attachment of hashtags to automated tweets.

Enterprise Ireland – Innovation Voucher

2016

AFRIDEV EXCHANGE

GMIT

- Research the creation of a dedicated bespoke social media network for students in higher education.

Enterprise Ireland – Innovation Voucher

2015

ALLSOP SPACE LIMITED

GMIT

- Development of an on-line auction platform.

Enterprise Ireland – Innovation Voucher

2015

PIETAS LIMITED

GMIT

- Development of a cloud based accounting solution.

Enterprise Ireland – Innovation Voucher

2015

PIETAS LIMITED

GMIT

- Continued development of a cloud based accounting solution.

Enterprise Ireland – Innovation Voucher (co-funded)

2014

MCOR TECHNOLOGIES

GMIT

- Investigation of the conversion of 2D photographs into 3D computer models.

Google Internet of Things (IoT) Award

2016

GOOGLE

GMIT

- Principal Investigator for successful application to Google Internet of Things (IoT) Technology Research Award Pilot.

Dynamic Appraisal of Situational Aggression (DASA)

2015–present

NATIONAL FORENSIC MENTAL HEALTH SERVICE/TRINITY COLLEGE DUBLIN

GMIT

- Collaboration with Professor Harry Kennedy, Director of the Central Mental Hospital.

Enterprise Ireland – Commercialisation Fund

2011–2012

UCD AND NUIG

NUIG, UCD

- Co-ordinated the continued funding of an EI commercialisation project, linked to my postdoctoral research.

Inhaler Compliance Assessment (INCA) ROYAL COLLEGE OF SURGEONS IN IRELAND (RCSI) AND BEAUMONT HOSPITAL • Collaborative work on a data analytics workflow for analysing patient inhaler use.	2014 GMT
INGENIARIUM HORIZON 2020 APPLICATION • Consortium with partners in Ireland, France, Poland, Sweden, Norway, Wales, Latvia, Spain, and Portugal.	2014 GMT
IRCSET Embark PhD Scholarship THESIS: DIHEDRAL CODES • Awardee of an IRCSET Embark postgraduate PhD scholarship.	2005–2009 NUIG
Early Childhood Play and Entrepreneurship FP7 APPLICATION, IT SLIGO • Involved as a Statistician in an FP7 application in the area of childcare.	2013 IT Sligo
Broadcast Authority of Ireland OCEAN FM • Involved in successful application of Ocean FM to the Broadcast Authority of Ireland.	2014 IT Sligo

Papers reviewed

Discrete Mathematics PAPER ON ALGEBRAIC ERROR-CORRECTING CODES	Oct 2020 Elsevier
Discrete Mathematics RESUBMITTED PAPER ON ERROR-CORRECTING CODES	May 2019 Elsevier
Discrete Mathematics PAPER ON ERROR-CORRECTING CODES	Jan 2019 Elsevier
Finite Fields with Applications RESUBMITTED PAPER ON ERROR-CORRECTING CODES	Jan 2018 Elsevier
Finite Fields with Applications PAPER ON ERROR-CORRECTING CODES	Oct 2017 Elsevier
Finite Fields with Applications PAPER ON ERROR-CORRECTING CODES	Feb 2017 Elsevier

Publications and presentations

Academics, Analytics, and SMEs ATLANTEC FESTIVAL • Invited to speak at this digital technology conference.	May 2021 McLoughlin
An observational study of a cross platform risk assessment mobile application in a forensic inpatient setting JOURNAL OF PSYCHIATRIC RESEARCH • In collaboration with the National Forensic Mental Health Service.	Submitted, in second round of minor edits Carey, McLoughlin, et al.
Brain Tumor Classification using Fused Non-linear Deep Features THE 2ND INTERNATIONAL CONFERENCE ON MEDICAL IMAGE AND COMPUTER-AIDED DIAGNOSIS • Led by Hamail Ayaz, a PhD candidate I co-supervise.	2021 Ayaz, McLoughlin, et al.

Reporting from APIs MEITHEAL NA GAOITHE LIMITED • Enterprise Ireland Innovation Voucher.	April 2021 McLoughlin
Application Programming Interface relevant to the trading of electricity and the forecasting of the wind power BALLINCURRY ENERGY SUPPLY LIMITED • Enterprise Ireland Innovation Voucher.	2020 McLoughlin
Integrated Single Electricity Market (I-SEM) BALLINCURRY ENERGY SUPPLY LIMITED • Enterprise Ireland Innovation Voucher.	2019 McLoughlin
Automation of the sale of a quantity of electricity on a third-party trading platform called SEMOpX REPOWER LIMITED • Enterprise Ireland Innovation Voucher.	2019 McLoughlin
Forecasting Wind Turbine Energy Production REPOWER LIMITED • Enterprise Ireland Innovation Voucher.	2018 McLoughlin
Research and develop the attachment of hashtags to automated tweets PICALITY LIMITED • Enterprise Ireland Innovation Voucher.	2017 McLoughlin
Mobile applications in forensic practice: Why should we start using them and what are the risks? INTERNATIONAL ASSOCIATION OF FORENSIC MENTAL HEALTH SERVICES CONFERENCE • In collaboration with the National Forensic Mental Health Service.	2017 Carey, McLoughlin, et al.
Research the creation of a dedicated bespoke social media network for students in higher education AFRIDEV EXCHANGE • Enterprise Ireland Innovation Voucher.	2017 McLoughlin
A Cross Platform Risk Assessment Mobile Application For Precise Data Collection PSYCHIATRY IN THE DIGITAL AGE: FACULTY OF FORENSIC PSYCHIATRY ANNUAL CONFERENCE • In collaboration with the Central Mental Hospital, Dundrum, Dublin.	2017 Carey, McLoughlin, et al.
Development of an on-line auction platform ALLSOP SPACE LIMITED • Enterprise Ireland Innovation Voucher.	2016 McLoughlin
Continued development of a cloud based accounting solution PIETAS LIMITED • Enterprise Ireland Innovation Voucher.	2016 McLoughlin
Development of a cloud based accounting solution PIETAS LIMITED • Enterprise Ireland Innovation Voucher.	2015 McLoughlin
Investigation of the conversion of 2D photographs into 3D computer models MCOR TECHNOLOGIES • Enterprise Ireland Innovation Voucher.	2015 McLoughlin
Mining Moodle Data to Predict Students' Maths Performance CONFERENCE ON APPLIED STATISTICS IN IRELAND • Analysing student performance to identify possible interventions.	2014 Doyle, McLoughlin, et al..

Dihedral Codes	2012
THE 6TH DE BRÚN WORKSHOP, NUIG	McLoughlin
<ul style="list-style-type: none"> Linear Algebra and Matrix Theory: connections, applications and computations. 	
Master Class: Bringing Research to Market	2012
EUROSCIENCE OPEN FORUM (ESOF)	McLoughlin
<ul style="list-style-type: none"> ESOF is a biennial, pan-European, general science conference. I was invited to talk about commercialisation work. 	
Evolutionary Clustering and Analysis of User Behaviour in Online Forums	2012
INTERNATIONAL AAAI CONFERENCE ON WEB AND SOCIAL MEDIA	Morrison; McLoughlin; et al.
<ul style="list-style-type: none"> pp. 519-522 	
A group ring construction of the [48,24,12] type II linear block code	2012
DESIGNS, CODES AND CRYPTOGRAPHY (SPRINGER)	McLoughlin
<ul style="list-style-type: none"> Volume 63, Issue 1, pp 29–41 	
A Group Ring Construction of the Extended Binary Golay Code	2008
IEEE TRANSACTIONS ON INFORMATION THEORY	McLoughlin; Hurley
<ul style="list-style-type: none"> Volume 54, Issue 9 	
Non-Cyclic Group Ring Codes	2008
THE CLAUDE SHANNON INSTITUTE SEMINARS, UCD	McLoughlin
<ul style="list-style-type: none"> Invited talk at UCD. 	
The Extended Binary Golay Code	2008
THE CLAUDE SHANNON INSTITUTE WORKSHOP ON CODING AND CRYPTOGRAPHY	McLoughlin
<ul style="list-style-type: none"> Hosted by the Claude Shannon Institute and the Boole Centre for Research in Informatics, UCC. 	
Socialens	2012
DIGITAL ENTERPRISE RESEARCH INSTITUTE FRIDAY SEMINARS, NUIG	McLoughlin
<ul style="list-style-type: none"> Presentation to colleagues on commercialisation of postdoctoral research at NUIG. 	
Socialens	2011
CLIQUE RESEARCH CLUSTER WORKSHOP, UCD	McLoughlin
<ul style="list-style-type: none"> Presentation to colleagues on commercialisation of postdoctoral research at UCD. 	
Dihedral Codes	2009
NATIONAL UNIVERSITY OF IRELAND, GALWAY	McLoughlin
<ul style="list-style-type: none"> PhD thesis on error-correcting codes. 	