

Pierce Maguire, PhD

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🎓 PhD in Physics (**Thesis**)

🌐 Irish-Canadian Dual Citizen

🔬 [Google Scholar](#)

🌐 [linkedin.com/in/pierce-maguire/](https://www.linkedin.com/in/pierce-maguire/)

🔗 More, including portfolio, at piercemaguire.com/resume

Science, research, marketing and communications professional.

Lead proposal writer and/or project manager for successful or pending funding applications worth >C\$18M, C\$14M of which is non-repayable).

Expertise in materials science and physics, microscopy, experimental design, and scientific and engineering proposals.

Research output: several presentations at international conferences and authorship of 22 peer-reviewed scientific articles.

Experience with collaborations and partnerships in non-profit, academic, and private sectors in Canada and Ireland.

Experience

SALTWORKS TECHNOLOGIES, GREATER VANCOUVER, BC, CANADA

01/2020 – Present

Technology Specialist/Marketing Manager From 07/2021

Full-time, permanent

- **Research development & innovation grants:** Wrote or project-managed successful/pending grant proposals >C\$18M. Responsible for monitoring calls and reporting. A detailed list of funders is available on request.
- **Marketing, business development & writing:** Increased organic traffic by >100% through technical and content improvement. Created articles, web pages, slide decks, press releases, conference abstracts/papers, spec sheets, etc. Presented projects at conferences. Contributed to revenue growth of more than 10× and headcount from ~50 to >160 between fiscal years 2020 and 2023.
- **Other:** Wrote the company's engineering professional practice management plans (PPMP) in fulfillment of legal requirements for the company's practice of engineering in two provinces. Responsible for non-technology IP such as trademarks and web domain strategies.

TRINITY COLLEGE DUBLIN, DUBLIN, IRELAND

10/2017 – 06/2019

Post-Doctoral Researcher

Full-time, contract

- **Industry partnership lead researcher:** Customized prototype lasers with Eblana Photonics Ltd. Reached "97%" completion per consortium's final report. Responsibilities included literature review, experiment design, developing novel/automated manufacturing processes, characterization and analysis, knowledge transfer. The industry partner requested project extension and expansion following this success. The project included development of novel ion beam manufacturing processes (including nanoscale milling and in-situ device surface passivation), extensive optical and electronic characterization, and the authoring of a lengthy technical report for knowledge transfer of the processes and the results to all consortium partners.

ACCESSED, DUBLIN, IRELAND

02/2018 – 06/2018

PhD Tutor

Part-time, contract

- **Teaching & course design:** Designed, created and delivered “Measuring and Making on the Nanoscale” course to secondary school students.

MICROSCOPY SOCIETY OF IRELAND
Information Officer

12/2014 – 05/2018
Part-time, casual

- **Public relations, communications, cooperation:** Upgraded website, set up and operated social media accounts, implemented Stripe payment system, managed events and campaigns, solicited industry sponsors, answered enquiries, facilitated institutional cooperation including equipment-sharing, project managed refurbishment of microscopes and charitable distribution in Ireland and Kenya.

Education

CERTIFICATE

01/2023 – 12/2023

Research Administration

Mohawk College, ON, Canada

- **Achievements:** Top of class final assignment in proposal writing. Full marks in ethics and project management modules.
- **CARA:** Program delivered in association with the Canadian Association of Research Administrators (CARA).

DOCTORATE

09/2013 – 09/2017

Physics

Trinity College Dublin, Ireland

- **Thesis:** “*Precise Modification of 2D Materials by Gas Ion Beams.*”
- **Coursework:** Completed internationally recognised (ECTS) courses on Teaching Physics, Surface Science & Technology, Transmission Electron Microscopy and Nanoscience.
- **International Research:** Awarded a Chinese government scholarship for a research trip to Nanjing University for two months in 2014.

BACHELOR’S

09/2009 – 08/2013

Physics & Chemistry of Advanced Materials

Trinity College Dublin, Ireland

- **Final Year Project:** Completed in Imperial College London, UK, in 2012 on the “*Physical Characterisations of Silver Nanoparticles & Diesel Exhaust Particles for Nanotoxicology Studies*” with Dr. Alexandra Porter. Presented at the 2013 Winter Enrichment Programme at the King Abdullah University of Science and Technology, Saudi Arabia. Awarded 2nd prize of 32 candidates (from >300 applications).

Selected Papers

Defect Sizing, Separation, and Substrate Effects in Ion-Irradiated Monolayer Two-Dimensional Materials, *Phys. Rev. B* 98, 134109, <https://doi.org/10.1103/PhysRevB.98.134109>.

MoS₂ Memtransistors Fabricated by Localized Helium Ion Beam Irradiation, *ACS Nano* 2019, 13, 12, 14262–14273, <https://doi.org/10.1021/acsnano.9b07421>.

Defect-Moderated Oxidative Etching of MoS₂, *Journal of Applied Physics* 126, 164301 (2019), <https://doi.org/10.1063/1.5115036> (editor’s pick).

Suppression of the Shear Raman Mode in Defective Bilayer MoS₂, *Journal of Applied Physics* 125, 064305 (2019), <https://doi.org/10.1063/1.5086366>.