

Education

- 2023 **PhD Bioinformatics**, *University of Galway*
Analysis of putative somatic mutations in 200,000 human exomes. Awarded Irish Research Council postgraduate scholarship to investigate and analyse mutational processes inferred from low-depth sequencing UK Biobank exome data
- 2017 **MSc. Biomedical Genomics**, *University of Galway, 1.1*
NGS data analysis, Bioinformatics, Cancer Biology, Immunology, Python, Statistical Computing in R, Medical Genomics and Machine learning
- 2016 **BSc. Biotechnology**, *University of Galway, 2.1*
Modules: Biochemistry, Microbiology, Industrial Processes, French, Genetics, Pharmacology and Business

Work Experience

- Sept 2022 – **Training Co-ordinator**, *University of Galway*, Training coordination of the residential
Feb 2023 training program centre for research training in genomics data science
- Jan 2019 – **HPC Systems Administrator**, *University of Galway*, Bioinformatics HPC
Jan 2021
- Jan 2018 – **Bioinformatician**, *Keane Group*, EMBL-EBI, Cambridge
Sept 2018 Development of statistical analysis pipelines relating to the Accelerating Medicines Project-Type 2 Diabetes. Loading of datasets to the AMP node and submission to the EGA archive
- Oct 2017 – **Bioinformatics Internship**, *Supervisor: Prof Cathal Seoighe*, University of Galway
Dec 2017 Investigation of genes in cancer under selection for downregulation via NMD
- Apr 2015 – **Research Assistant**, *Laboratoire de Biotechnologie et Chimie Marines*, Vannes,
Jul 2015 France

Achievements

- 2020 **Awarded €25,000 Small Research Equipment grant**
To upgrade and storage capacity increase of bioinformatics high performance compute cluster
- 2018 **Government of Ireland postgraduate scholarship**
Awarded a 4-year scholarship from the Irish research council to study the somatic mutation rate variation across large population-scale datasets

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🌐 declan93.github.io • in [declan-bennett](#) • 🌐 [declan93](#)

2017 **Winner of the inaugural Roche prize for best MSc Biomedical Genomics research project**

Skills

- Pipeline development for biobank scale datasets
- Proven publication and employment record developing GWAS methods & pipelines
- Hands on experience with large NGS datasets (UK biobank, GTEx, TCGA, ICGC) as well as analysing CRISPR KO screens
- Extensive experience in statistical programming languages (R, Julia) and genome association analysis toolsets (samtools, GATK, plink etc...)
- Experience in Python scripting language and workflow management systems (Snakemake, nextflow)
- Comfortable working with Unix based operating systems or with cloud based technologies (AWS, google cloud)
- Significant report writing and presentation experience
- Strong data analysis and visualisation skills developed through education and research
- Collaboration and team working skills demonstrated throughout my studies and at work
- Adaptable and flexible individual who is highly motivated and excited by new opportunities/challenges
- Active decision maker with strong attention to detail
- Excellent work ethic and commitment to quality

References

Prof Cathal Seoighe

Director, SFI Centre for Research Training
in Genomics Data Science
School of Mathematical and Statistical
Sciences
University of Galway, Ireland
✉ cathal.seoighe@universityofgalway.ie

Dr Thomas Keane

Team Leader - EGA & Archive Infrastruc-
ture
EMBL-EBI, Cambridge, UK
✉ tk2@ebi.ac.uk

Publications

- [1] Declan Bennett, Donal O'Shea, John Ferguson, Derek Morris, and Cathal Seoighe. Controlling for background genetic effects using polygenic scores improves the power of genome-wide association studies. *Scientific reports*, 11(1):1–10, 2021.
- [2] Anja Göder, Aisling Quinlan, Michael David Rainey, Declan Bennett, Jacqueline Corso, and Corrado Santocanale. Ptpb1 enforces atr-chk1 signalling determining the potency of cdc7 inhibitors. *Iscience*, 2023.
- [3] Michael D Rainey, Declan Bennett, Rachel O'Dea, Melania E Zanchetta, Muriel Voisin, Cathal Seoighe, and Corrado Santocanale. Atr restrains dna synthesis and mitotic catastrophe in response to cdc7 inhibition. *Cell reports*, 32(9):108096, 2020.

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