Finlay Maguire | Curriculum Vitae

Halifax, Nova Scotia

finlaymaguire@gmail.com • finlaymagui.re

Education

Doctor of Philosophy — **University College London**
Bioinformatics — *October 2011 - July 2016*

Title: A Multi-omic Analysis of the Photosynthetic Endosymbioses of *Paramecium bursaria*
Supervisor: Thomas A. Richards
A reconstruction of cellular interactions in a nascent endosymbiotic system through novel application of machine learning and computational methods to analyse 'single' cell metagenomic, metabolomic, and metatranscriptomic datasets. It involved the first use of these datasets in the study of non-model multi-eukaryote systems.

Master of Arts — **University of Oxford**
Natural Sciences - Biological Sciences, Honours — *October 2008–June 2011*

Title: The Evolution of the Folate Biosynthesis Gene Fusions in the Eukaryotes.
Supervisor: Thomas A. Richards
Conducted an independent bioinformatics honours research project to polarise deep-branching relationships within the evolutionary tree of life.

Research Grants

NVIDIA Accelerated Data Science GPU Grant — **Dalhousie University**
PI (equivalent: $4,000) — *September 2019*

SSHRC Explore Grant — **Dalhousie University**
Co-PI ($4,950) — *June 2019–May 2020*

Donald Hill Family Fellowship in Computer Science — **Dalhousie University**
3-Year Independent Research Fellowship ($165,000) — *April 2019–April 2022*

NASA Planetary Biology Program — **John F. Kennedy Space Center**
10-Week Research Fellowship (£3500) — *July–October 2013*

UCL-NHM Joint-Institution PhD Studentship — **University College London**
4-Year PhD Studentship (£70,000) — *October 2011–December 2016*

Society for General Microbiology Harry Smith Studentship — **University of Exeter**
8-Week Research Scholarship (£1890) — *June–August 2010*

Honours and Awards

Canadian Institutes of Health Research — **Stockholm, Sweden**
Hacking AMR 2019 Award ($3000) — *November 2019*

American Society of Microbiology — **Washington, DC**
Travel Award ($600) — *September 2018*

Canadian Society of Microbiology — **University of Manitoba**
Travel Award ($500) — *June 2018*

Dalhousie Computer Science In-House Conference — **Dalhousie University**
Best Presentation ($50) — *January 2018*

School of Informatics Jamboree — **University of Edinburgh**
Poster Prize (£50) — *March 2015*

National Data Science Bowl — **Neuroglycerin**
Top ∼5% (57/1049) — *December 2014–March 2015*

American Epilepsy Society Seizure Prediction Challenge — **Neurogylcerin**
Top 5% (16/527) — *August–October 2014*

FEMS Young Scientist Grant — **Sant Feliu du Guixols, Spain**
Meeting Scholarship (£350) — *October 2013*

Earth and Space Foundation — **John F. Kennedy Space Center**
Research Scholarship (£300) — *July–October 2013*

FEMS Young Scientist Grant — **Sant Feliu du Guixols, Spain**
Meeting Scholarship (£350) — *October 2011*

Society for General Microbiology Undergraduate Grant — **University of York**
Travel Award (£170) — *September 2011*

Dukinfield Exhibition in Biological Sciences — **University of Oxford**
Scholarship for Academic Excellence (£300) — *October 2009–July 2011*

Experience

Research Experience

Donald Hill Family Fellow — **Dalhousie University**
Faculty of Computer Science — *April 2019–Present*
Independent research fellowship to develop interdisciplinary data analytics approaches with a social/health focus. Work encompasses the development of machine-learning based bioinformatics methods to improve antimicrobial resistance diagnostics/surveillance. Additionally, fellowship supports collaborations with local non-profits and across academic disciplines to apply data-science methods to solve extant problems related to key social/health issues (e.g. refugee health, homelessness, and substance-use disorders).

Postdoctoral Fellow — **Dalhousie University**
Faculty of Computer Science — *February 2017–March 2019*
Supervisor: Robert G. Beiko
Lead the development of the AMRtime project: a machine-learning based antimicrobial resistance prediction tool for metagenomic datasets. Responsibilities include co-ordination of genomic epidemiology bioinformatics projects involving 3 universities and several national public health and agrifood stakeholders.

Associate Research Fellow — **University of Exeter**
Living Systems Institute — *October 2016–January 2017*
Supervisor: Thomas A. Richards
Brief fellowship to consolidate doctoral research. Work involved the *in silico* simulation and experimental induction of RNAi in *P. bursaria*, and modelling of protein transmembrane domain evolution using deep recurrent neural networks.

Competitive Machine Learning Team — **University of Edinburgh**
Neurogylcerin — *August 2014–March 2016*
- National Data Science Bowl II: estimation of cardiac ventricular volume from MRI videos with deep recurrent neural networks.
- National Data Science Bowl: image classification of plankton using a combined deep convolutional, computer vision augmentation, and hierarchical labelling approach.
- American Epilepsy Society Seizure Prediction Challenge: classification of pre-seizure iEEGs from normal brain activity utilising signal analysis features and an ensemble of classical models.

NASA Researcher — **John F. Kennedy Space Center**
Exposing Microbes in the Stratosphere Project — *July–October 2013*
Supervisor: David J. Smith
Performed ground-based trials for investigating the transcriptomic response to high UV-C flux exposure in *Bacillus*. Assisted with the design and construction of an atmospheric microbe exposure and sampling apparatus for high-altitude weather balloons.

BBC Scientific Consultant — **John F. Kennedy Space Center**
Cloud Lab Documentary — *October 2013*
Acted as NASA representative and scientific advisor (uncredited) for the British Broadcasting Company documentary on atmospheric sciences. Developed microbial sampling and exposure protocols and briefed the cast and producers on the relevant microbiological background.

Undergraduate Researcher — **University of Exeter**
SGM Harry Smith Studentship — *June–August 2010*
Funded summer honours research project (8 week) on the evolution of folate biosynthesis gene fusions within the eukaryotes with a joint experimental and bioinformatics approach.

Teaching Experience

Graduate Directed Study: Microbial Feature Encoding — **Dalhousie University**
Seminar Facilitator — *May–August 2020*

Bioinformatics Algorithms (CSCI6802) — **Dalhousie University**
Lecturer (12.5%) — *January–April 2020*

Graduate Directed Study: Machine-Learning Phenotype Prediction — **Dalhousie University**
Seminar Facilitator — *September–December 2019*

MicroResearch — **Dartmouth General Hospital**
Assistant Instructor — *September 2019*

Introduction to Computational Biology (CSCI4180/6801) — **Dalhousie Univesity**
Lecturer (20%) — *March 2019*

Bioinformatics Algorithms (CSCI6802) — **Dalhousie University**
Guest Lecturer on Phylogenetic Statistics — *March 2018*

Data Management (INFO6540) — **Dalhousie University**
Guest Lecturer on Statistical Data Formats — *February 2018*

Adult Literacy Network — **North Memorial Library**
GED Tutor — *January 2018–Present*

International Course on Antibiotics and Resistance — **Annecy, France**
Assistant Bioinformatics Tutor — *November 2017*

Graduate Directed Study: Bioinformatics for Metagenomics — **Dalhousie University**
Seminar Facilitator — *September–December 2017*

Introduction to Python and Advanced Python — **University of Exeter**
Assistant Instructor — *January–March 2016*

Machine Learning for the Life Sciences — **University of Exeter**
Lecturer (25%) — *June 2016*

Bioinformatics for Genomics — **University of Exeter**
Assistant Instructor — *February 2015*

Unix and Perl — **University of Exeter**
Assistant Instructor — *October 2014*

Image Processing with Python — **University of Exeter**
Assistant Instructor — *September 2014*

Software Carpentry Bootcamp — **University of Exeter**
Teaching Assistant — *November 2013*

Supervision Experience

Postdoctoral Fellow — **Dalhousie University**
Faculty of Computer Science — *May 2020–Present*
Co-supervision of a postdoctoral research project using graph-methods to extract genomic context of mobile AMR genes from metagenomic data.

Undergraduate Research Project — **Carleton University**
School of Linguistics and Language Studies — *October 2019–July 2020*
Co-supervision of an honours student on the use of "NetSpeak" by self-identified autistic redditors.

Antimicrobial Resistance Hackathon — **Stockholm, Sweden**
Team Leader — *December 2019*
Led a team of 5 researchers developing a tool to facilitate automated contextualisation of antimicrobial resistance predictions.

Undergraduate Research Project — **McMaster University**
Department of Biochemistry & Biomedical Sciences — *May 2019–September 2019*
Co-supervision of a student using machine-learning to model the impacts of different environmental toxins on *Zebrafish*.

Masters Student — **Dalhousie University**
Department of Sociology and Social Anthropology — *June 2019–June 2020*
Co-supervision of a SSHRC-funded sociologist investigating the experiences of socially isolated men in the 'incel' community using natural language processing and grounded interviews.

Undergraduate Research Project — **Dalhousie University**
Faculty of Computer Science — *May–August 2019*
Supervision of a student performing phylogenetic analyses of putative resistance genes.

Undergraduate Honours Thesis — **Dalhousie University**
Department of Biology — *October 2018–April 2019*
Supervision of a student analysing patterns of resistance in 8000 metagenome assembled genomes.

Undergraduate Research Project — **Dalhousie University**
Faculty of Computer Science — *July–August 2018*
Supervision of an NSERC-funded research assistance developing machine-learning approaches to detecting rRNA gene fragments in metagenomes.

Industrial Research Assistance Program Consultancy — **Dalhousie University**
Team Coordinator — *June–September 2018*
Supervised a PhD student on a NRC-IRAP funded consultancy project applying machine-learning approaches to time-sheet data.

Bioinformatics Consultancy — **Dalhousie University**
Team Coordinator — *July–November 2017*
Supervised 2 PhD students performing microbial genomic analyses for a clinical microbiome company.

High School Researcher — **University of Exeter**
Department of Biosciences — *January–March 2016*
Co-supervision of a Nuffield Foundation-funded high school student from a deprived area doing research on the evolution of endosymbiotic algae.

Undergraduate Honours Thesis — **University of Exeter**
Department of Biosciences — *November–December 2014*
Supervision of an honours project performing phylogenetic analysis of the components of the RNAi system of *Paramecium*.

Undergraduate Honours Thesis — **Natural History Museum**
Microbiology — *June–October 2013*
Supervision of a visiting research student registered at the University of Oxford involving the bioinformatic analysis of horizontal gene transfers of arsenate resistance.

Professional Experience

Canadian COVID Genomics Network (CanCOGeN) — **National**
Workflow Development and Quality Control — *April 2020–Present*

Member

Conference Peer Review — **Conference**
Workshop Reviewer — *January 2020–Present*
Performed reviews of submissions for RECOMB-Seq 2020

New Frontiers in Research Fund Explore — **Canadian Tri-agency Secretariat**
External Grant Reviewer — *December 2019–Present*
Acted as an external grant reviewer for the 2019 Explore competition stream for high-risk, high-reward, interdisciplinary research.

Public Health Alliance for Genomic Epidemiology (PHA4GE) — **International**
Data Structure Working Group — *November 2019–Present*
Member of technical working group one (Data Structures)

Canadian Association of Postdoctoral Societies Annual Conference — **Dalhousie University**
Organiser — *3 November 2019*
Hosted and coordinated the annual CAPS meeting.

Integrated Rapid Infectious Disease Analysis (IRIDA) Initiative — **National**
Tool Development Team — *February 2017–Present*
Member

Executive — **Dalhousie University**
Postdoctoral Union — *October 2018–March 2019*
Negotiated improved mental health and parental supports.

Publication Peer Review — **Journals**
Journal Reviewer — *February 2014–Present*
Performed reviews for: Current Biology, BMC Genomics, PLoS Computational Biology, Nature Microbiology, GigaScience, Communications Biology, MSystems, and, Bioinformatics

Publications

Published

1. Stairs JA, Bergey B, **Maguire F**, Scott S *Motivation to access laparoscopic skills training: results of a national survey of obstetrics and gynaecology residents* PLOS ONE 2020, 15 (4), e0230931
2. Peabody M, Lau WYV, **Maguire F**, Beiko RG, Brinkman FSL, Hoad G. *PSORTm: predicting bacterial and archaeal protein subcellular localization prediction tool from metagenomic data* Bioinformatics 2020, 36 (10), 3043-3048
3. Alcock B, Raphenya A, Lau T, Tsang K, Bouchard M, Edalatmand A, Huynh W, Nguyen A, Cheng A, Liu S, Min S, Miroshnichenko A, Tran H, El Werfalli R, Nasir J, Oloni M, Speicher D, Florescu A, Singh B, Faltyn M, Hernández-Koutoucheva A, Sharma A, Bordeleau E, Pawlowski A, Zubyk H, Dooley D, Griffiths E, **Maguire F**, Winsor G, Beiko RG, Brinkman FSL, Hsiao W, Van Domselaar G, McArthur AG *CARD 2020: Antibiotic Resistome Surveillance with the Comprehensive Antibiotic Resistance Database* Nucleic acids research. 2020 Jan 8;48(D1):D517-25.
4. Wideman JG, Monier A, Rodríguez-Martínez R, Leonard G, Cook E, Poirier C, **Maguire F**, Milner DS, Irwin NA, Moore K, Santoro AE. *Unexpected mitochondrial genome diversity revealed by targeted single-cell genomics of heterotrophic flagellated protists.* Nature microbiology. 2020 Jan;5(1):154-65.
5. Chambouvet A, Monier A, **Maguire F**, Itoïz S, del Campo J, Elies P, Edvardsen B, Eikreim W, Richards TA. *Intracellular Infection of Diverse Diatoms by an Evolutionary Distinct Relative of the Fungi.* Current Biology. 2019 Dec 2;29(23):4093-101.
6. **Maguire F**, Rehman MA, Carrillo C, Diarra MS, Beiko RG. *Identification of Primary Antimicrobial Resistance Drivers in Agricultural Nontyphoidal Salmonella enterica Serovars by Using Machine Learning*. MSystems. 2019 Aug 27;4(4):e00211-19.
7. Milner DS, Attah V, Cook E, **Maguire F**, Savory FR, Morrison M, Müller CA, Foster PG, Talbot NJ, Leonard G, Richards TA. *Environment-dependent fitness gains can be driven by horizontal gene transfer of transporter-encoding genes.* Proceedings of the National Academy of Sciences. 2019 Mar 19;116(12):5613-22.

8. Stairs J, Bal N, **Maguire F**, Scott H. *A resident-led clinic that promotes the health of refugee women through advocacy and partnership.* Canadian Medical Education Journal. 2019 Nov;10(4):e102.
9. Leonard G, Labarre A, Milner DS, Monier A, Soanes D, Wideman JG, **Maguire F**, Stevens S, Sain D, Grau-Bové X, Sebé-Pedrós A. *Comparative genomic analysis of the 'pseudofungus' Hyphochytrium catenoides.* Open biology. 2018 Jan 10;8(1):170184.
10. Richards TA, Leonard G, Mahé F, del Campo J, Romac S, Jones MD, **Maguire F**, Dunthorn M, De Vargas C, Massana R, Chambouvet A. *Molecular diversity and distribution of marine fungi across 130 European environmental samples.* Proceedings of the Royal Society B: Biological Sciences. 2015 Nov 22;282(1819):20152243.
11. Chambouvet A, Gower DJ, Jirků M, Yabsley MJ, Davis AK, Leonard G, **Maguire F**, Doherty-Bone TM, Bittencourt-Silva GB, Wilkinson M, Richards TA. *Cryptic infection of a broad taxonomic and geographic diversity of tadpoles by Perkinsea protists.* Proceedings of the National Academy of Sciences. 2015 Aug 25;112(34):E4743-51.
12. Smith DJ, Thakrar PJ, Bharrat AE, Dokos AG, Kinney TL, James LM, Lane MA, Khodadad CL, **Maguire F**, Maloney PR, Dawkins NL. *A balloon-based payload for Exposing Microorganisms in the Stratosphere (E-MIST).* Gravitational and Space Research. 2014 Dec 31;2(2).
13. **Maguire F**, Henriquez FL, Leonard G, Dacks JB, Brown MW, Richards TA. *Complex patterns of gene fission in the eukaryotic folate biosynthesis pathway.* Genome biology and evolution. 2014 Oct 1;6(10):2709-20.
14. **Maguire F**, Richards TA. *Organelle evolution: a mosaic of 'mitochondrial' functions.* Current Biology. 2014 Jun 2;24(11):R518-20.
15. Chambouvet A, Berney C, Romac S, Audic S, **Maguire F**, De Vargas C, Richards TA. *Diverse molecular signatures for ribosomally 'active' Perkinsea in marine sediments.* BMC microbiology. 2014 Dec;14(1):110.

Pre-prints

1. Griffiths EJ, Timme RE, Page AJ, Alikhan N-F, Fornika D, **Maguire F**, Mendes CI, Tausch SH, Black A, Connor TR, Tyson GH, Aanensen DM, Alcock B, Campos J, Christoffels A, da Silva AD, Hodcroft E, Hsiao WWL, Katz LS, Nicholls SM, Oluniyi PE, Olawoye ID, Raphenya AR, Vasconcelos ATR, Witney AA, MacCannell DR. *The PHA4GE SARS-CoV-2 Contextual Data Specification for Open Genomic Epidemiology* preprints.org 2020 10.20944/preprints202008.0220.v1
2. Lee BD, Titus AJ, Yu K, Chevrette MG, Stewart PA, Cofer EM, Raschka S, **Maguire F**, Lengerich BJ, Kalinin AA, Gitter A, Greene CS, Boca SM, Triche TJ. *Ten Quick Tips for Deep Learning in Biology* `benjamin-lee.github.io/deep-rules` 2019
3. Matthews T, Bristow F, Griffiths E, Petkau A, Adam J, Dooley D, Kruczkiewicz P, Curatcha J, Cabral J, Fornika D, Winsor G, Courtot M, Bertelli C, Roudgar A, Fejaio P, Mabon P, Enns E, Thiessen J, Keddy AWS, Isaac-Renton J, Gardy J, Tang P, **The IRIDA consortium**, Carriço J, Chindelevitch L, Chauve C, Graham M, McArthur AG, Taboada E, Beiko RG, Brinkman FSL, Hsiao WWL, Van Domselaar G *The Integrated Rapid Infectious Disease Analysis (IRIDA) Platform*. bioRxiv. 2018 Jan 1:381830.

Under review

1. Nasir J, Kozak R, Aftanas P, Raphenya AR, Smith K, **Maguire F**, Maan H, Alruwaili M, Banerjee A, Mbareche H, Alcock B, Knox N, Mossman K, Wang B, Hiscox J, McArthur A, Mubareka S *A comparison of whole genome sequencing of SARS-CoV-2 using amplicon-based sequencing, random hexamers, and bait capture*
2. **Maguire F***, Baofeng J*, Gray K, Lau V, Beiko RG, Brinkman FSL. *Metagenome-Assembled Genome Binning Methods Disproportionately Fail for Plasmids and Genomic Islands* `github.com/fmaguire/mag_sim_paper` 2020
3. **Maguire F**, Alcock BP, Amogelang RR, Brinkman, FSL McArthur AG, Beiko RG *A systematic evaluation of read-based antimicrobial resistance gene detection paradigms in metagenomic data*
4. Jenkins BH*, **Maguire F***, Leonard G, Eaton JD, West S, Housden BE, Milner DS*, Richards TA. *An RNAi-dependent punishment for algal elimination in a phototrophic endosymbiosis*
5. **Maguire F**, Graven MA, MacDonald NE, *Data Ordinality: The Missing Link in Medical and Research Errors*

6. Tsang KK, **Maguire F**, Zubyka HL, Chou S, Edalatmand A, Wright GD, Beiko RG, McArthur AG, *Identifying novel -lactamase substrate activity through in silico prediction of antimicrobial resistance*

Presentations

Invited Talks

Biochemistry and Biomedical Sciences Seminar — **McMaster University**
Departmental Seminar — *3 December 2019*
Around the Resistome in 80 Ways: an Empirical Evaluation of Antimicrobial Resistance Gene Detection Methods

MicroResearch — **Dartmouth General Hospital, Halifax, NS**
Workshop — *16–27 September 2019*
Review of Mental Health Programs, Processes and Services for First Responders in the Halifax Regional Municipality

Faculty of Medicine Research Day — **Dalhousie University**
Faculty Conference — *13–14 May 2019*
Machine-Learning Based Identification of Novel Resistance Gene Activity

Faculty of Medicine Research Day — **Dalhousie University**
Faculty Conference — *13–14 May 2019*
A Collaborative Examination of the Online Communities of Autistic Individuals

Research Group Seminar — **Simon Fraser University**
Brinkman Lab — *26 March 2019*
Socially Focused Research With Bioinformatics Tools

Joint Departmental Seminar — **Universities of Auckland and Waterloo**
Remote presentation — *19 October 2018*
AMRtime: Rapid Accurate Identification of Antimicrobial Resistance Determinants from Metagenomic Data

Conference Oral Presentations

Canadian Society of Microbiology — **Sherbrooke, QC**
Annual Conference — *10–13 June 2019*
Precise Identification of Antimicrobial Resistance Determinants Using Metagenomic Data

American Society of Microbiology — **Washington, DC**
Rapid Applied Microbial NGS and Bioinformatic Pipelines Conference — *23–26 September 2018*
AMRtime: Rapid Accurate Identification of Antimicrobial Resistance Determinants from Metagenomic Data

Integrated Rapid Infectious Disease Analysis — **National Microbiology Labs, Winnipeg**
Annual General Meeting — *22 June 2018*
Using Machine Learning Methods to Accurately Classify AMR in Metagenomic Data

Dalhousie Computer Science In-House Conference — **Dalhousie University**
Departmental Conference — *24–26 January 2018*
BayeHem: Bayesian Optimisation of Genome Assembly

Canadian Institute For Advanced Research — **Toronto, ON**
Integrated Microbiology Meeting — *1–5 June 2016*
An Analysis of RNAi Pathway Components and Function in *Paramecium*

Machine Learning for Life Sciences — **University of Exeter**
Workshop — *2nd June 2015*
Casting a Deep Net: Classifying Plankton from Shadowgraph Images

Machine Learning for Life Sciences — **University of Exeter**
Workshop — *1st June 2015*
Stumbling Over the Decision Boundary

European Molecular Biology Organisation — **EMBO Heidelberg**
Young Investigators Program — *2–7 December 2013*
Endosymbiont Proteins Implicated in the Maintenance of the Photosynthetic Endosymbiosis between *Paramecium bursaria* and *Chlorella*

Conference Poster Presentations

Canadian Society of Microbiology — **Sherbrooke, QC**
Annual Conference — *10–13 June 2019*
Integrated Rapid Infectious Disease Analysis: A comprehensive platform for public health bioinformatics and AMR surveillance using genomic data

Canadian Society of Microbiology — **University of Manitoba**
Summer Conference — *18–21 June 2018*
The Cost of Speed: Evaluating Systematic Failures in Metagenomic AMR Profiling

European Molecular Biology Organisation — **EMBO Heidelberg**
Young Investigators Program — *2–7th December 2013*
Key Principles in Molecular Phylogenetics

European Molecular Biology Organisation — **Sant Feliu de Guixols, Spain**
Comparative Genomics of Eukaryotic Microorgamisms Conference — *19–24th October 2013*
Endosymbiont Proteins Implicated in the Maintenance of the Photosynthetic Endosymbiosis between *Paramecium bursaria* and *Chlorella*

Systematics Association — **Natural History Museum, London**
Young Systematists Forum — *1st December 2011*
Folate Biosynthesis Gene Fusion Evolution in the Eukaryotes

Society for General Microbiology — **University of York**
Summer Conference — *5–7th September 2011*
Evolution of Folate Biosynthesis Gene Fusion in the Eukaryotes

European Molecular Biology Organisation — **Sant Feliu de Guixols, Spain**
Comparative Genomics of Eukaryotic Microorgamisms Conference — *15–20th October 2011*
Evolution of Folate Biosynthesis Gene Fusions in the Eukaryotes

Co-Authored Presentations

American Assocation for Applied Linguistics — **Virtual**
Talk — *20–23 March 2020*
"TL;DR: An exploratory corpus analysis of netspeak and autism" (*Emma Bornheimer*)

EASST/4S (Society for Social Studies of Science) — **Virtual**
Talk — *18–21 August 2020*
"It's Over": Involuntarily celibate men's perception of women, social media, and the masculine order (*Kayla Preston*)

International Society for Evolutionary Protistology — **Virtual**
Talk — *10–14 August 2020*
Emergent RNA-RNA Interactions Can Promote Stability in a Nascent Endosymbiosis (*Ben Jenkins*)

Choanoflagellates and Friends — **Virtual**
Talk — *26–27 May 2020*
Emergent RNA-RNA Interactions Can Promote Stability in a Nascent Endosymbiosis (*Ben Jenkins*)

ASM Microbe — **Chicago, IL**
Poster — *19–21 June 2020*
Metagenomic Analysis and the Resistance Gene Identifier (RGI) - Sensitivity & Accuracy, Sequence Variation Allele Networks, and Pathogen Prediction (*Amogelang Raphenya*)

ASM Microbe — **Chicago, IL**
Poster — *19–21 June 2020*
Evolving Threat Detector (ETD) - automated epidemiological contextualization and analysis of antibiotic resistome predictions (*Amogelang Raphenya*)

Emerging Statistical Challenges: Analysis of Human Microbiome Data — **Banff, BC**
Talk — *15–20 September 2019*
Has anyone seen my plasmid? Probing the dark corners of metagenome-assembled genomes (*Robert Beiko*)

Society of Environmental Toxicology and Chemistry — **Toronto, ON**
Talk — *3–7 November 2019*

Challenges and opportunities for microbiome analysis in toxicology (*Fiona Brinkman*)

Intelligent Systems for Molecular Biology/ECCB **Basel, Switzerland**
Poster *21–25 July 2019*
Combining multiple features and algorithms to learn antimicrobial resistance genotype-phenotype relationships (*Kara Tsang*)

ASM Microbe **San Francisco, CA**
Talk *20–24 June 2019*
Prediction of Antimicrobial Resistance Genes and Mutations for Genomic and Metagenomic Sequencing Data (*Amogelang Raphenya*)

ASM Microbe **San Francisco, CA**
Poster *20–24 June 2019*
Resistome and Variant Prediction for Improved Antimicrobial Surveillance with the Comprehensive Antibiotic Resistance Database (*Brian Alcock*)

Applied Bioinformatics and Public Health Microbiology **EBI, UK**
Poster *5–7 June 2019*
PSORTm and AMRtime: Adapting predictive genome-scale bioinformatic approaches to the challenges of metagenomic data (*Venus Lau*)

Applied Bioinformatics and Public Health Microbiology **EBI, UK**
Poster *5–7 June 2019*
Integrated Rapid Infectious Disease Analysis (IRIDA): a comprehensive and distributed platform for public health genomic epidemiology (*Will Hsiao*)

Canadian Conference on Medical Education **Niagra, ON**
Talk *11–16 April 2019*
Motivation to Access Laparoscopic Skills Training by Obstetrics and Gynaecology Residents: A Novel Tool to Characterize Motivation (*Jocelyn Stairs*)

CUGH: Translation and Implementation for Impact in Global Health Conference **Chicago, IL**
Poster *8–10 March 2019*
Halifax Newcomer Well Woman Clinic: Promoting the Health of Refugee Women Through Advocacy and Partnership (*Jocelyn Stairs*)

School of Informatics Jamboree **University of Edinburgh**
Poster *26 March 2015*
Classifying Plankton Species with Deep Learning and Computer Vision (*Gavin Gray*)

National Association for Research in Science Teaching **Indianapolis, IN**
Poster *25–28th March 2012*
Working on the Public's Perception and Understand of Science and Scientists through a Popular, Open-Access 'AskScience' Website (*Leigh Ariño de la Rubia*)

Tennessee Maths and Science Education Research Conference **Murfreesboro, TN**
Poster *2–3rd February 2012*
Online Conversations as a Way of Understanding the Public's Views of the Natural of Science: Research on Reddit's 'AskScience' (*Leigh Ariño de la Rubia*)

Outreach

MicroBinfie Podcast **Online**
Podcast *26 August 2020*
Participated in a discussion of teaching in microbial bioinformatics

Academic Associations

- American Society of Microbiology
- Canadian Society of Microbiology
- Canadian Association of Postdoctoral Socities

- International Society of Infectious Disease
- British Phycological Society

References

- **Robert G. Beiko**, Professor in Bioinformatics, Associate Dean Research, Faculty of Computer Science, Dalhousie University (Postdoctoral supervisor), E-mail: *beiko@cs.dal.ca*
- **Andrew G. McArthur**, Cisco Research Chair in Bioinformatics, Department of Biochemistry and Biomedical Sciences, McMaster University (Collaborator), E-mail: *mcarthua@mcmaster.ca*
- **Thomas A. Richards**, Chair of Evolutionary Genomics, Department of Zoology, University of Oxford (PhD supervisor), E-mail: *thomas.richards@zoo.ox.ac.uk*