

Jesse Patrick Harrison

Data Scientist (CSC – IT Center for Science Ltd)

Nationalities: Finnish and Canadian

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Projects and Publications

- Research support services for CSC clients and HPC environment maintenance (R on Puhti supercomputer)
- Designing and teaching R courses at CSC and at external institutes
- 19 peer-reviewed publications in the fields of microbial ecology, environmental chemistry and astrobiology

Work Experience

- April 2019 – Present: Data Scientist
CSC – IT Center for Science Ltd, Espoo, Finland
Artificial Intelligence and Data Analytics (AIDA) team
Research support and data analysis services, HPC environment maintenance and teaching focusing on R
- 2018 – 2019: Postdoctoral Researcher
Turku Bioscience, Medical Bioinformatics Centre, Turku, Finland
Research focusing on human gut microbiology and bioinformatics tool development
- 2017 – 2018: Postdoctoral Researcher
University of Helsinki, Faculty of Biological and Environmental Sciences, Aquatic Biogeochemistry Research Unit (ABRU), Helsinki, Finland
Research focusing on high-throughput sequencing as a tool for marine environmental monitoring
- 2015 – 2017: Postdoctoral Researcher
University of Vienna, Centre for Microbiology and Environmental Systems Science, Division of Microbial Ecology (DOME)
Research focusing on Raman microspectroscopy for analysing bacterial cells within complex environments
- 2014 – 2015: Technical Advisory Group Member
UK Department for Environment, Food and Rural Affairs (DEFRA)
Advising the UK Government on issues concerning plastic biodegradability (leader of the Aquatic Environments Work Package)
- 2012 – 2015: Postdoctoral Researcher
The University of Edinburgh, School of Physics and Astronomy, UK Centre for Astrobiology
Research focusing on the habitability of extreme environments and extremophile physiology

Education

- 2008 – 2012: NERC / CASE PhD project
The University of Sheffield, Department of Animal and Plant Sciences
Industrial partner: UK Centre for Environment, Fisheries and Aquaculture Science (CEFAS)
Research focusing on microbial-microplastic interactions and infrared microspectroscopy
- 2004 – 2008: MbiolSci in Biology with Conservation and Biodiversity (1st Class Hons)
The University of Sheffield, Department of Animal and Plant Sciences
Masters project focusing on freshwater ecotoxicology

Teaching

R programming courses

- September 03–04 2019: Introduction to Data Analysis with R (University of Helsinki)
- September 23 2019: R Basics (CSC)

Other teaching experience

- 2013 – 2017: Supervisor for six Masters students (Universities of Vienna and Edinburgh)
- 2016: Practical Instructor, International Fluorescence In Situ Hybridization Course (University of Vienna)
- 2012 – 2013: MOOC Teaching Assistant (Astrobiology and the Search for Extraterrestrial Life, The University of Edinburgh)

Skills and Certificates

General

- Data wrangling and manipulation
- Data visualization
- Statistical modeling and interpretation
- Science communication
- Sequence data repositories (e.g. NCBI GenBank)

OS / Software

- Linux
- R / RStudio
- Anaconda
- Git / GitHub
- Jupyter
- PRIMER
- Bioinformatics tools (e.g. micca, mothur)

Teaching certificates

- July - August 2019: Carpentries Instructor Training, Athens (pending approval)

Committee and Board Memberships

- 2015 – 2019: Frontiers Editorial Board
Review Editor (Microbiotechnology, Ecotoxicology and Bioremediation)
- 2018: Research Programme Committee
University of Helsinki, Faculty of Biological and Environmental Sciences
- 2015: AstRoMap European Astrobiology Roadmap Panel
Funding: European Commission
- 2013 – 2016: PhD project Steering Committee
Swansea University and Fera Science Ltd.

Science Communication

- Eight oral presentations and eleven poster presentations at international and national conferences
- Invited attendee at four workshops (including 2013 Royal Society / Chinese Academy of Sciences Frontiers of Science Symposium, Beijing)
- Public interviews including BBC Radio 4 (UK), DRadio Wissen (Germany) and a documentary on marine plastic pollution (“Plastic: The Real Sea Monster”, screened in Europe by ARTE)