Gabriele Nocchi

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About

Bioinformatician and postdoctoral researcher specialized in evolutionary and ecological genomics, with experience in both industry and academia. Interested in population genetics, landscape genomics, quantitative genetics, ecology, evolution, data science and bioinformatics.

Top Skills

· Advanced expertise in bioinformatics and genomics.
· Experienced researcher with multiple peer-reviewed publications.
· Bioinformatics pipelines development and customization.
· Statistical proficiency and analysis in R.
· Expertise in analyzing large-scale sequencing datasets.
· Computational proficiency in R, Perl, Python, Unix/Linux, HPC, Nextflow.

Websites

GitHub: https://github.com/GabrieleNocchi

Weebly: https://gabrielenocchi.weebly.com/

LinkedIn: https://www.linkedin.com/in/gabrielenocchi/

Experience

Postdoctoral Researcher | University of Calgary | Oct 2022 – Present
· Research on convergent evolution in plants and forest trees genomes.
· Research on fine-scale local adaptation in interior spruce. This research initiative, generously funded by Spray Lake Sawmills, aims to enhance reforestation endeavours in Alberta.

Doctoral Researcher | Royal Botanic Gardens, Kew | Oct 2018 – Aug 2022
· PhD student based at both RBG, Kew and QMUL.
· Research on oak trees population genetics.
· Research on acute oak decline (AOD): GWAS and metagenomics.
· Research on the genomics of local adaptation in Asian white birch.

Teaching Assistant | Queen Mary University of London | Jan 2019 – Mar 2020
· Supporting undergraduate students during Biology practical classes.
· Marking undergraduate course works for several Biology modules.

Bioinformatician | Biobam Bioinformatics | Valencia, Spain | Jan 2018 – Jun 2018
· Design and development of a metagenomics data analysis feature for the company software Blast2GO.
· Testing and reviewing existing Blast2GO functionalities related to functional annotation of new genomes.

Inventory Clerk | Verismart Inventories | Feb 2014 – Apr 2017
· Self-employed sub-contractor for VeriSmart™ Inventories.
· Inventory inspections and associated services to letting agents and landlords in London, UK.

Education

PhD Ecological and Evolutionary Genomics | 2018 - 2022 | Queen Mary University of London
· Thesis title: "Population genomics of temperate forest trees"

MSc Bioinformatics with Systems Biology | 2015 - 2017 | Birkbeck College, University of London
· Graduated with Merit.

BSc Biomedical Science | 2010 - 2013 | London Metropolitan University
· Graduated with First Class Honors.

Publications

· Nocchi, G., Wang, J., Yang, L., Ding, J., Gao, Y., Buggs, R. J., & Wang, N. (2023). **Genomic signals of local adaptation and hybridization in Asian white birch.** *Molecular Ecology, 32* (3), 595-612. Available at: https://doi.org/10.1111/mec.16788

· Nocchi, G., Brown, N., Coker, T., Plumb, W., Stocks, J., Denman, S., & Buggs, R. (2022). **Genomic structure and diversity of oak populations in British parklands**. *Plants, People, Planet, 4* (2), 167-181. Available at: https://nph.onlinelibrary.wiley.com/doi/full/10.1002/ppp3.10229

· Gathercole, L., Nocchi, G., Brown, N., Coker, T., Plumb, W., Stocks, J., Nichols, R., Denman, S., Buggs, R. (2021). **Evidence for the widespread occurrence of bacteria implicated in acute oak decline from incidental genetic sampling**. *Forests*, *12*, 1683. Available at: https://www.mdpi.com/1999-4907/12/12/1683

Student Supervision

· Elicia Pauls – Undergraduate student at the University of Calgary

· Emma Cey – Undergraduate student at the University of Calgary

Reviewing

· Plants, People, Planet

· American Journal of Botany

· Heredity

· G3: Genes, Genomes, Genetics

Conferences / Presentations

· Population Genetics Group 55, Norwich, UK, January 2022. Talk: **"Genomic signals of local adaptation in Asian white birch"**.
Recording available at: https://www.youtube.com/watch?v=XTghwqOWqOE&list=PL3lTC-_gPbd7eKBuM-1j0t6gb0BWr5VTR&index=28&ab_channel=EarlhamInstitute%28EI%29

· EvolTree conference: "Genomics and Adaptation in Forest Ecosystems". WSL Birmensdorf, Switzerland, September 2021.

· Queen Mary University of London Postgraduate Symposium, London, UK, March 2020. Poster: **"Genomic structure and diversity of oak populations in British parklands"**.

Awards

· Winner of the 2024 Ed McCauley Postdoctoral Research Excellence Award from the Department of Biological Sciences of the University of Calgary ($2000).

EDI Training

· Harassment and Violence Awareness Training (University of Calgary, October 2022)

· Anti – Racism Workshop (University of Calgary, October 2023)

· Equity, Diversity and Inclusion Through an Ability Studies Lens Workshop (University of Calgary, October 2023)

- Equity, Diversity and Inclusion: Danger of being Burned Out (University of Calgary, October 2023)

- Equity, Diversity and Inclusion: Allies and Allyship with a particular focus on disabled people/people with disabilities (University of Calgary, October 2023)

Computing skills

Advanced: 5+ years   Proficient: 2-3 years   Familiar: 1-2 years

R: Advanced

Perl: Advanced

Unix/Bash: Advanced

HPC (Slurm, SunGrid): Advanced

Microsoft Office: Advanced

Python: Proficient

Docker: Proficient

Nextflow: Proficient

Git: Proficient

Jira: Proficient

QGIS: Familiar

Java: Familiar

Javascript: Familiar

Cloud (AWS): Familiar

mySQL: Familiar

Languages

Italian (native)

English (bilingual proficiency)

References

Academic references are available on request.