# Rowan Barker-Clarke, Ph.D.

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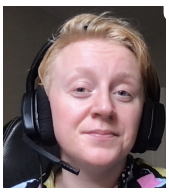
rbarkerclarke http://rbarkerclarke.github.io/



## Current Employment

Since 2021 · · · · **Postdoctoral Research Fellow,** Mathematical oncology and evolution
Taussig Cancer Center, Cleveland Clinic, Cleveland, OH, USA
Advisor: *Prof. Jacob Scott*

## Education

2015 – 2020 **Ph.D., University of Cambridge, UK** Medical Science.
Thesis title: *Analysing the relationship between immune infiltration and tissue architecture in high grade serous ovarian cancer.*
Advisor: *Prof. James Brenton*

2011 – 2015 **M.Phys., University of Oxford, UK** in Physics with Biological Physics.
Thesis title: *GPU accelerated enumeration and exploration of HP model genotype-phenotype maps for protein folding.*
Advisor: *Prof. Ard Louis*

## Research Publications

### Journal Articles

1. **R. Barker-Clarke**, D. Weaver, and J. G. Scott, "Graph" texture" features as novel metrics that can summarize complex biological graphs," *Physics in Medicine and Biology*, 2023.
2. E. S. King, J. Pelesko, J. Maltas, **R. Barker-Clarke**, E. Dolson, and J. G. Scott, "Fitness seascapes facilitate the prediction of therapy resistance under time-varying selection," *bioRxiv*, pp. 2022–06, 2022.
3. E. Somasundaram, A. Litzler, R. Wadhwa, **R. Barker-Clarke**, and J. Scott, "Persistent homology of tumor ct scans is associated with survival in lung cancer," *Medical Physics*, vol. 48, no. 11, pp. 7043–7051, 2021.
4. A. Montfort*, **R. Barker-Clarke***, A. M. Piskorz, *et al.*, "Combining measures of immune infiltration shows additive effect on survival prediction in high-grade serous ovarian carcinoma," *British Journal of Cancer*, vol. 122, no. 12, pp. 1803–1810, 2020, *These authors contributed equally.
5. P. Irwin, L. N. Fletcher, D. Tice, *et al.*, "Time variability of neptune's horizontal and vertical cloud structure revealed by vlt/sinfoni and gemini/nifs from 2009 to 2013," *Icarus*, vol. 271, pp. 418–437, 2016.

### Books and Chapters

1. **R. Barker-Clarke** and J. G. Scott, "Decoding cancer evolution through adaptive fitness landscapes," in *Cancer Systems Biology and Translational Mathematical Oncology*, Oxford: Oxford University Press, 2023, Accepted.

## Teaching

2023 **Topology of biological systems.** Reading course.
Comprehensive Cancer Centre, Cleveland, OH, USA

**Sex and Gender in Biology.** Guest Lecture.
UCMerced, CA, USA

2018 **R for Biologists.** Computational center.
Cambridge

**Python for Biologists.** Computational center.
Cambridge

2014–2022 **Private tutor** Mathematics, Biology, Physics and Chemistry.
Online.

## Skills

Languages Native English speaker with strong reading, writing and speaking competencies.

Coding R, Python, C++, LaTeX, Html, css

Misc. Academic research, mentoring, training, teaching, LaTeX typesetting and publishing.

## Other Experience

### Awards and Achievements

2015 **Department Prize for Best Overall MPhys Project**, University of Oxford.

**Rolls Royce Prize for Most Innovative MPhys Project**, University of Oxford.

### Certification

2023 **Good Clinical Practice Course (US FDA focus)**. Awarded by CITI.

### Referee and Judge Experience

2022 NEOhio Science Fair Judge

## Outreach

2023 **Science Mentor**, RiseUP Ohio.

**Public Liason Officer**, HIV Prevention Program. LGBTQ+ Center of Greater Cleveland.

## References

**Prof Jacob Scott**
Case Western Reserve University,
Cleveland, OH.
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**Prof James Brenton**
University of Cambridge,
Cambridge, UK.
james.brenton@cruk.cam.ac.uk