Fabian R. **Ketwaroo**

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Research Interests

Ecological statistics, Spatial and spatio-temporal modeling, Spatial Capture-Recapture models, N-mixture models, Objective priors, Bayesian Modeling and Variable selection, Theory and Applications, Computational Methods.

Education

PhD in Statistics
United Kingdom

University of Kent — *2019 – Present*

- Supervisor: Dr. Eleni Matechou

International MSc Statistics
United Kingdom

University of Kent — *2017 –2019*

- Distinction

B.S. Mathematics
Guyana

University of Guyana — *2011 –2015*

- Distinction (3.6/4.0 GPA).

Experience

University of Kent
United Kingdom

Statistics Clinic Lead — *2022 - Present*

- Employed by the Student Learning Advisory Service to assist students from across the university with their understanding of statistics

University of Kent
United Kingdom

Graduate Teaching Assistant — *2019 - Present*

- Marked assessments and provided assistance in computer classes and tutorials in modules such as Mathematical Statistics, Statistical Learning, Advanced Regression modelling, Data Science with R.
- Created online quizzes for the module Applied Statistical Modelling 1.

University of Kent
United Kingdom

Senior Ambassador — *2018 - Present*

- Math Tutor for GCSE students at a mixed secondary school in Ramsgate.
- Ambassador team member for
  - guided tours on University of Kent open days,
  - Outreach event: Statistics Gone Wild,
  - Royal Institution Masterclasses.

University of Kent
United Kingdom

Research Assistant — *Nov. 2019 - Aug. 2020*

- Developed and implemented Rshiny app to model Caste-Specific Demography and Phenology in Bumblebees using citizen science data.

University of Guyana
Guyana

Part-time Tutor (On-Line Programme) — *Mar. 2017 - July 2017*

- Promoted discussions, monitored students' progress and assessed students' work for modules: Introducing Statistics and Essential Mathematics.

University of Guyana
Guyana

Lecturer in Mathematics — *2015 - 2017*

- Taught and evaluated modules such as Calculus, Groups Rings and Field, Linear Algebra and Applied Mathematics.

Academic Qualifications

Associate Fellow — *United Kingdom*
Advanced Higher Education — *2021*

Graduate Statistician — *United Kingdom*
Royal Statistical Society — *2019-2021*

Projects

The following projects are being drafted to be submitted by March 2023:

Spatial Capture Recapture Models to account for Disease Uncertainty — *University of Kent*
Spatio-temporal modelling of European badgers to better understand how disease (bovine tuberculosis (TB)) dynamics are linked to population dynamics within a spatial context. TO BE SUBMITTED TO ENVIRONMETRICS — *2019-Present*

Specifying, Assessing and Selecting N-mixture Models in a Bayesian framework — *University of Kent*
Implementing objective priors for N-mixture models and investigating model selection and identifiability of N-mixture model within a Bayesian framework. TO BE SUBMITTED TO METHODS IN ECOLOGY AND EVOLUTION. — *2019-Present*

A New Modeling Framework for Roost Count Data — *University of Kent*
Novel modeling framework that can be used to estimate population size at a site, while accounting for observation error and temporary emigration parametrically and non-parametrically, including efficient variable selection algorithm for identifying important predictors of observation error. TO BE SUBMITTED TO ANNALS OF APPLIED STATISTICS — *2021-Present*

Bayesian Caste-Specific Demography and Phenology in Bumblebees: Modeling BeeWalk Data. — *University of Kent*
New Bayesian model for Bumblebee citizen science data in the U.K. This model produces estimates of key demographic parameters such as caste-specific phenology and average nest productivity, in the wild. I implemented the model into an R shiny app, allowing users without prior knowledge of R to fit the model to their data. TO BE SUBMITTED TO THE JOURNAL OF THE ROYAL STATISTICAL SOCIETY: SERIES C (APPLIED STATISTICS) OR JOURNAL OF AGRICULTURAL, BIOLOGICAL AND ENVIRONMENTAL STATISTICS — *Nov. 2020- Aug. 2021*

Awards & Scholarships

2020	**Research grant**, University of Kent	*United Kingdom*
2019	**Vice Chancellor Scholarship**, University of Kent	*United Kingdom*
2019	**School prize in MSc Statistics for highest examination results, including best MSc project**, University of Kent	*United Kingdom*
2019	**RSS prize for best MSc Statistics student**, University of Kent	*United Kingdom*
2012	**3rd Place**, P.A.N.A.M. Powerlifting Championship	*Orlando, U.S.A*

Professional Development

Asymptotic Methods and Statistical Applications — *United Kingdom*
London Taught Course Centre — *2020*

Advanced Computational Methods in Statistics — *United Kingdom*
London Taught Course Centre — *2019*

Maximum Entropy Models for Complex Networks — *United Kingdom*
London Taught Course Centre — *2019*

Conferences and Workshops

2022	**International Statistical Ecology Conference**, Online	*South Africa*
2021	**National Centre for Statistical Ecology** , Online	*United Kingdom*
2021	**EURING Analytical Meeting & Workshop** , Online	*CANADA*
2021	**Bayesian Young Statisticians Meeting, j-ISBA** , Online	*United Kingdom*
2020	**NIMBLE workshop**, Online	*U.S.A*
2020	**International Statistical Ecology Conference**, Online	*Australia*

Presentations

International Statistical Ecology Conference — *Online*
Poster Presentation: *A New Modelling Framework for Roost Count Data.* — *July. 2022*

National Centre for Statistical Ecology — *Online*
Talk: *Spatially Explicit Capture-Recapture Disease Uncertainty Models* — *June. 2021*

PGR Statistics Seminar, University of Kent — *Online*
Talk: *How to Walk the BeeWalk: Modelling Bumblebee Citizen Science Data* — *Mar. 2021*

International Statistical Ecology Conference — *Online*
Talk: *Objective Priors from Scoring rules for N-mixture models* — *June. 2020*

Computing skills

Programming R, Rshiny, NIMBLE (advanced), C/C++ (intermediate), Phyton, JavaScript, Google Earth Engine (beginner)
Typesetting system LaTex (advanced)