Richard Glennie

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Education

PhD in Statistics   2014 − 2018
University of St Andrews
Thesis: *Incorporating Animal Movement with Distance Sampling and Spatial Capture-Recapture*

MMath (Hons) Mathematics (Fast Track)   2010 − 2014
University of St Andrews
1st Class
Royal Statistical Society accredited course

Employment

Biometrika Research Fellow   2018 − present
University of St Andrews

School coordinator for Academic Skills   2017 − 2018
University of St Andrews

Tutor and demonstrator   2014 − 2018
University of St Andrews
School of Mathematics and Statistics

Maths and Statistics Tutor   2014 − 2018
University of St Andrews
Centre for Academic, Professional and Organisational Development

Private tutor   2014 − 2016
Tutored High-School and College level students

Scholarships

Biometrika Fellowship   2019 − present
Biometrika 2-year fellowship

Carnegie-Caledonian PhD scholarship   2014 − 2018
Full 3.5 year funding awarded

Carnegie vacation scholarship   2013
Undergraduate research internship at University of St Andrews

Summer Studentship   2011, 2012
Undergraduate studentship award by School of Mathematics and Statistics
University of St Andrews

Robertson Trust scholarship   2010 − 2014
Undergraduate bursary

Research Grants

Double MOCHA: Phase II Multi-study Ocean acoustic   Sept 2018 − Dec 2021
Human effects Analysis
Co-Principal Investigator, Office of Naval Research, USA.

Publications

Michelot, T., **Glennie, R.**, Harris, C., & Thomas, L. (2021). Varying-coefficient stochastic differential equations with applications in ecology. *Journal of Agricultural, Biological and Environmental Statistics*, 1-18.

Astarloa, A., **Glennie, R.**, Chust, G., García-Baron, I., Boyra, G., Martínez, U., ... & Louzao, M. (2021). Niche segregation mechanisms in marine apex predators inhabiting dynamic environments. *Diversity and Distributions*.

McClintock, B. T., Langrock, R., Gimenez, O., Cam, E., Borchers, D. L., **Glennie, R.** , & Patterson, T. A. (2020). Uncovering ecological state dynamics with hidden Markov models. *Ecology letters*, 23(12), 1878-1903.

Glennie, R., Buckland, S. T., Langrock, R., Gerrodette, T., Ballance, L. T., Chivers, S. J., & Scott, M.D. (2020). Incorporating animal movement into distance sampling. *Journal of American Statistical Association*, Jun 8:1-9.

Miller, D., **Glennie, R.**, & Seaton, A. (2020). Understanding the stochastic partial differential equation approach to smoothing. *Journal of Agricultural, Biological, and Environmental Statistics*, 25, 1-16.

Glennie, R., Borchers, D. L., Murchie, M., Harmsen, B. J, & Foster, R. J. (2019). Open population maximum likelihood spatial capture-recapture. *Biometrics*, 75(4), 1345-1355.

Langrock, R., Kneib, T., **Glennie, R.**, & Michelot, T. (2017). Markov-switching generalized additive models. *Statistics and Computing*, 27(1), 259-270.

Glennie, R., Buckland, S. T., & Thomas, L. (2015). The effect of animal movement on line transect estimates of abundance. *PloS one*, 10(3), e0121333.

Book In Preparation

Borchers, D. L., Stevenson, B., Howe, E., Distiller, G., & **Glennie, R.**. Spatial capture-recapture by maximum likelihood. *Springer*.

Software

I have created multiple R packages. These can be seen on my GitHub page: `https://github.com/r-glennie`

Presentations

A full list of the presentations I have given is available at `http://www.richardglennie.co.uk/`.

Supervision

Current Postdoctoral Researchers:

- Théo Michelot   2019 − 2022
  Double Mocha project developing flexible animal movement models to describe whale movement and if/how they respond to Navy sonar.

- Timo Adam   2020 − 2022
  Research fellowship on hierarchical hidden Markov models, random effects in spatial capture-recapture, and modelling open populations with spatial capture-recapture.

Current PhD Students:

- Andrew Seaton   2019–2021
  Integrating point process models with methods to estimate animal population density
  (10% supervisor).

- Savannah Rogers   2020 − 2024
  Open population capture-recapture methods for photo ID surveys
  (2nd supervisor 50%)

- Cal Fagard-Jenkin   2020 − 2023
  Parallelism in algorithms used in statistical ecology
  (2nd supervisor 20%)

I have supervised around two MSc dissertations per year since 2018 covering areas in statistics, data mining, and statistical ecology.

Teaching

Module Coordinator & Lecturer for School of Mathematics and Statistics, St Andrews
MT4113: Computing in Statistics   2019, 2020

Lecturer for School of Mathematics and Statistics, St Andrews
Masters in Conservation: Wildlife Survey Methods Case Study   2018
MT5751: Estimating Animal Abundance   2018
MT3832: Mathematical Programming   2017

Tutor for School of Mathematics and Statistics, St Andrews
MT4113: Computing in Statistics   2016, 2017
MT2508: Statistical Inference   2014, 2015, 2016
MT2504: Combinatorics and Probability   2014, 2016
MT1002: Mathematics   2015

Mathematics and Statistics Tutor   2014 − 2018
Centre for Academic, Professional, and Organisational Development, St Andrews

Workshop Demonstrator
Run by the Centre for Academic, Professional, and Organisational Development, St Andrews

in association with Biomathematics and Statistics Scotland

Applied Multivariate Statistics	Apr 2017
Experimental Design	Apr 2017
Mixed Models	Mar 2017
Regression	Feb 2017
Basic Statistics	Jan 2017

Other Activities

Organised Biometrika's Careers in Statistics Event   2021
One-day, online conference for MSc and PhD students in statistics