

Dr Deon Roos

Lecturer in Applied Statistics, University of Aberdeen

deon.roos4@abdn.ac.uk · orcid.org/0000-0003-4866-7472 · deonroos.github.io · Aberdeen, Scotland

Lecturer in Applied Statistics at the University of Aberdeen. I carry out research across a range of fields, teach statistics from undergraduate to PhD level, and work with people from other disciplines to design and analyse their studies. Before this I spent nearly two years as a statistician at the Animal and Plant Health Agency, producing analysis within government. Across all of it, what I care about most is that the data and the model can actually answer the question being asked; only then does it matter that the results are made clear to the people who rely on them.

EDUCATION

PhD Ecology

EMPLOYMENT

Fellowships

APHA

Lecturer

2016

2018

2020

2022

2024

NOW

Experience

Lecturer in Applied Statistics

Jan 2024 – Present

University of Aberdeen, Aberdeen, Scotland

- Lead and collaborate on research across several fields, developing and applying statistical models to real-world questions.
- Work with people from other disciplines to design their studies and analyse their data, and to interpret the results for non-specialist audiences.
- Teach applied statistics from undergraduate to PhD level.

Senior Statistical Ecologist

May 2022 – Jan 2024

Animal & Plant Health Agency, Sand Hutton, England

- Translated statistical analysis into recommendations for non-specialist decision-makers across government, on projects spanning disease surveillance, environment, agriculture, and regulatory policy.
- Built bespoke statistical pipelines and ran computationally intensive jobs on AWS EC2 within a secure government data environment.
- Set statistical direction and mentored analysts across multidisciplinary teams.

Teaching & Research Fellowships

Dec 2020 – May 2022

University of Aberdeen, Aberdeen, Scotland

- Coordinated and delivered a highly rated, fully online undergraduate statistics course.
- Conducted international ecological research, including study design and simulation modelling for species management.

Education

PhD Ecology

2016 – 2021

University of Aberdeen, Aberdeen, Scotland

- Thesis: rodent pest population dynamics.

BSc (Hons) Zoology, First Class

2012 – 2016

University of Aberdeen, Aberdeen, Scotland

Core capabilities

Statistics & modelling

Causal inference, Bayesian inference, spatio-temporal and hierarchical modelling, hidden Markov models, simulation-based inference, study design, population and disease dynamics

Communicating statistics

Translating analysis for non-specialist decision-makers, teaching complex methods, data visualisation, open educational resources, textbook authorship

Tools & infrastructure	R, RShiny, Python, SQLite, AWS EC2, automated pipelines, reproducible workflows (Quarto, Git, LaTeX)
Domain knowledge	Public health and disease surveillance, environment and agriculture, ecology, government and policy analytics
Languages	English (fluent), Afrikaans (fluent), Spanish (basic)

Selected publications

Selected from peer-reviewed output; full list at orcid.org/0000-0003-4866-7472.

- 2025 Sara Sharaf, Timothy Lawes, **Deon Roos**, et al. Universal versus targeted chlorhexidine and mupirocin decolonisation and clinical and molecular epidemiology of *Staphylococcus epidermidis* bloodstream infections in patients in intensive care in Scotland, UK. *The Lancet Microbe*. doi:10.1016/j.lanmic.2025.101118
- 2024 J. Colomer, G. Massei, **D. Roos**, C. Rosell, J. D. Rodríguez-Teijeiro. What drives wild boar density and population growth in Mediterranean environments?. *Science of the Total Environment*. doi:10.1016/j.scitotenv.2024.172739
- 2022 **Deon Roos**, Constantino Caminero-Saldaña, David Elston, François Mougeot, María Carmen García-Ariza, Beatriz Arroyo, Juan José Luque-Larena, Francisco Javier Rojo Revilla, Xavier Lambin. From pattern to process? Dual travelling waves, with contrasting propagation speeds, best describe a self-organised spatio-temporal pattern in population growth of a cyclic rodent. *Ecology Letters*. doi:10.1111/ele.14074
- 2019 **Deon Roos**, Constantino Caminero-Saldaña, Beatriz Arroyo, François Mougeot, Juan José Luque-Larena, Xavier Lambin. Unintentional effects of environmentally-friendly farming practices: arising conflicts between zero-tillage and a crop pest, the common vole (*Microtus arvalis*). *Agriculture, Ecosystems and Environment*. doi:10.1016/j.agee.2018.11.013

Teaching & public engagement

Statistics teaching, University of Aberdeen

2020 – Present

Undergraduate to PhD level; coordinator of BI3010 (around 150 students), a course built for genuine understanding rather than recipe-following.

Open educational resources

Author of the free online textbook *An Introduction to R* (intro2r.com); creator of a free, open course on generalised linear models for students at any institution.

Guest lecturer, Introduction to Health Data Science (PU5058)

University of Aberdeen. Postgraduate; the theory underlying effective data visualisation.

Awards & funding

- 2019 **Best Student Presentation**, University of Aberdeen
- 2019 **Best Presentation**, Iberian Vole Workshop, Porto
- 2017 **Sir Maitland Mackie Scholarship**, University of Aberdeen
Funding for agricultural research.
- 2016 **Outstanding BSc Zoology Student**, University of Aberdeen