NITheCS
National Institute for Theoretical and Computational Sciences

Stellenbosch UNIVERSITY IYUNIVESITHI UNIVERSITEIT

A COLLABORATIVE WORKSHOP FOR RESEARCHERS

BRIDGING STATISTICS, MACHINE LEARNING AND ECOLOGICAL COMPLEXITY

FRIDAY, 16 OCTOBER 2026

SCHOOL FOR DATA SCIENCE AND COMPUTATIONAL THINKING, STELLENBOSCH UNIVERSITY; & ONLINE

APPLY BY 18 SEPTEMBER 2026

How can advances in statistics and machine learning help us better understand complex ecological systems, and how can ecological challenges inspire new methodological and statistical research?

Join us for a day of discussion, connection and collaboration at the intersection of statistics, machine learning and ecological complexity. Participation is free of charge.

About the workshop

This interdisciplinary workshop will connect researchers working on complex ecological questions with those developing or applying quantitative methods.

The programme will combine ecological and quantitative presentations with group discussions aimed at developing new collaborations. In-person attendance is encouraged, but researchers unable to travel may participate online. Refreshments and lunch will be provided to in-person attendees.

Who should attend?

Researchers working in statistics, machine learning and ecological complexity may attend.

Postdoctoral fellows and postgraduate students are also welcome.

The event is particularly relevant to researchers interested in:

- Multivariate data analysis
- Spatial and spatio-temporal modelling
- Statistical and machine-learning methods
- Ecological systems and ecological complexity
- Environmental and biological applications.

What to expect

Participants will present their work, research questions, methodological challenges and potential project ideas.

The programme will include opportunities for discussion, networking and identifying areas of shared interest.

The workshop aims to connect researchers who may be able to:

- Develop interdisciplinary research projects
- Apply statistical and machine-learning methods to ecological problems
- Identify new methodological questions from ecological applications
- Collaborate on research papers and future funding proposals.

Outcomes

By the end of the workshop, each interdisciplinary group should aim to identify:

- A shared research question or project idea
- The data, methods and expertise required
- Potential collaborators
- A possible research paper, funding proposal or other output
- Practical next steps to continue the collaboration.

REGISTER TO ATTEND:
https://bit.ly/3UUS48d

science, technology & innovation
Department: Science, Technology and Innovation
REPUBLIC OF SOUTH AFRICA

NRF National Research Foundation

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School for Data Science and Computational Thinking, Stellenbosch University | 16 October 2026



Call for contributions

Those wishing to contribute to the programme may apply to give a short presentation or lead a discussion on:

- Current or planned research
- A dataset or ecological problem requiring methodological input
- A statistical or machine-learning method with potential ecological applications
- An idea for an interdisciplinary collaboration.

Contributed presentations will be approximately **10-15 minutes**, followed by a short discussion.

Guidance for presenters

Presenters are encouraged to address:

- The ecological or scientific question
- The nature and structure of the data
- The main statistical or computational challenges
- Existing or potential analytical approaches
- Opportunities for interdisciplinary collaboration.

Got a query?

Email Stephan van der Westhuizen:
stephanvdw@sun.ac.za

APPLY NOW

To apply as a contributor or an attendee, please submit our form:
https://bit.ly/3UUS48d

NITheCS Associate Workshop Organisers:

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Preliminary programme

TIME	SESSION
09:00-09:20	**Arrival** Registration and arrival
09:20-10:30	**Welcome and introductions** Workshop objectives and brief introductions from participants
10:30-11:00	**Tea and networking**
11:00-12:15	**Morning Talks: Session 1** Ecological research questions and relevant statistical or machine-learning approaches
12:15-12:45	**Morning Talks: Session 2** Multivariate, spatial and temporal ecological data
12:45-13:45	**Lunch**
13:45-14:00	**Research pitches** Brief presentations of datasets, methodological challenges and potential projects
14:00-15:15	**Introduction to the breakaway sessions** Formation of interdisciplinary groups based on shared research interests
15:15-15:45	**Tea and informal discussion**
15:45-16:30	**Breakaway Session 1: Exploring connections** Research problems, available data, suitable methods and complementary expertise
16:30-16:55	**Breakaway Session 2: Developing collaboration plans** Refine research questions and identify possible projects, papers or funding opportunities
16:55-17:00	**Closing**
From 17:00	**Informal networking**

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