



Biodiversity Conservation Society Sarawak
Pertubuhan Konservasi Biodiversiti Sarawak

Modeling Patterns and Dynamics of Species Occurrence

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Workshop outline

The presence or absence of a species across a set of landscape units is a fundamental concept widely used in ecology (e.g., species range or distribution, epidemiology, habitat modeling, resource selection probability functions, as a monitoring metric, metapopulation studies, biodiversity and species co-occurrence). An important sampling issue, however, is that a species may not always be detected when present at a landscape unit. This will result in "false absences" causing parameter estimates to be biased if unaccounted for, possibly leading to misleading results and conclusions, even with moderate levels of imperfect detection.

This workshop will cover many of the latest methods for modeling patterns and dynamics of species occurrence in a landscape while accounting for the imperfect detection of the species. Participants will be introduced to available software through worked examples, and there will be special emphasis on aspects of study design. While primarily aimed at the beginner and intermediate level, more experienced researchers will also benefit from attending. Topics to be covered include:

- single-season occupancy models for patterns in species occurrence
- multiple-season occupancy models for dynamic of species occurrence
- study design and its influence on the interpretation of "occupancy"
- species co-occurrence models
- community-level applications
- multi-state occupancy models
- integrated modeling of habitat and species occurrence dynamics

A detailed schedule is available at www.bcss.org.my/stats/5-day_Agenda.pdf

Intended audience

The course is primarily aimed at the beginner and intermediate level, but more experienced researchers will also benefit from attending.

Participants must be "computer literate" and must bring along a laptop computer that is capable of running Windows-based software.

Venue

The venue is the seminar room of Rumah Universiti (University Guesthouse) at Universiti Malaya. www.um.edu.my has a campus map and a map of the locality; the LRT station "Universiti" on the Kelana Jaya line is near the main entrance to the campus.