



Centro de Estatística e Aplicações Universidade de Lisboa

Divulgação CEAUL 18/2024

8 maio 2024

Seminário

CEAUL&CEMAT

Penalised Regression Splines For Spatial Capture-Recapture

Ben Stevenson, *University of Auckland, New Zealand*

8 May 2024 - 14h00 | Ciências – ULisboa SASLab (C6, Piso 4) & [Zoom](#)

Dynamic Spatial capture-recapture (SCR) models are widely used to estimate animal density and distribution from wildlife surveys. They involve fitting a spatial point process to animal locations, where each location is typically considered to be the centre of an individual's activity during the survey. One of many complications is that the locations are latent: we are fitting a point process without observing a point pattern. Instead, we observe detection events of animals from an array of detectors, such as physical-capture traps, camera traps, or even microphones. Almost all SCR studies to date have used Poisson processes for animal locations: either a homogeneous process for which animal density is constant over space, or an inhomogeneous process with a log linear relationship between observed spatial covariates and animal density. In this talk, I will describe how we can use penalised regression splines within an SCR model, which has a few benefits relative to the standard approaches. First, we can fit log-Gaussian Cox processes instead of Poisson processes, allowing us to model spatial variation in density without any observed covariates, or without having to assume that our observed covariates fully describe animal density. Second, we can fit smooth effects of covariates on density instead of making assumptions about the nature of the relationship, akin to fitting a generalised additive model rather than a generalised linear model. This talk will include crash-courses in both spatial statistics and in capture-recapture, so feel free to come along even if these topics are unfamiliar to you.

More information, [here](#). [Poster](#).

[Lista dos Seminários](#)

DESTAQUE

Workshop

An Introduction to Spatial Capture-Recapture Models of Animal Density with Acre

13 May 2024 | 14h00 - 17h30 | Ciências ULisboa. Room 6.4.35

Have you ever dreamt of being responsible for the conservation of a gibbon population in a wildlife sanctuary in Cambodia? No? Well here's your chance anyway! In this workshop you will take on the role of lead investigator, responsible for carrying out an acoustic survey of the southern yellow-cheeked crested gibbon (*Nomascus gabriellae*) in Phnom Prich Wildlife Sanctuary. You will have to design the survey, "collect" the data (by simulation), and fit models to estimate population density and distribution using acre.

This workshop will provide an introduction to spatial capture-recapture models and the R package acre, which provides functions to fit spatial capture-recapture models to data collected on acoustic surveys.

Ben Stevenson is a statistician based at the University of Auckland and is visiting CEAUL until the 15th of May on a sabbatical. Spatial-capture recapture (SCR) is a technique that is only 20 years old but which is now widely applied worldwide to estimate density of wildlife. Ben has been working on various aspects of SCR for several years on a range of different methods developments and applications. While Ben's seminar focus is on acoustic data, SCR methods are widely used also under different settings for which animals, or something they might produce like sounds, might be detected at multiple "traps".

[Registration](#) is free but mandatory. More information, [here](#).

NOVIDADES

Workshop

Práticas de Avaliação Responsável da Investigação

10 maio 2024 | 9h30 - 17h30 | Salão Nobre da Reitoria da Universidade de Lisboa

Workshop organizado pela Universidade de Lisboa, no âmbito da sua recente adesão à [CoARA](#) - Coalition for Advancing Research Assessment.

Mais informação, programa e inscrição, [aqui](#).

Workshop

Ciência e Políticas Públicas: Como conseguir pontes?

24 maio 2024 | 9h30 - 17h30 | Ciências ULisboa, Sala 4.2.07

Prazo de inscrição: 10 maio 2024

Workshop organizado pela [PlanAPP](#) - Centro de Competências de Planeamento, de Políticas e de Prospetiva da Administração Pública, em colaboração com o CFCUL - Centro de Filosofia das Ciências da Universidade de Lisboa.

O objetivo deste workshop é aproximar a Ciência e a Política Pública, promovendo a construção de políticas informadas por evidências, sensibilizando e capacitando a comunidade científica para esta necessidade. O workshop destina-se a

investigadores, comunicadores e gestores de ciência, bem como alunos de doutoramento. O workshop é realizado com um mínimo de 10 e um máximo de 16 participantes.

Workshop gratuito, mas de inscrição obrigatória, [aqui](#). O número de lugares é limitado. Mais informação, [aqui](#).

TTWIN2PIPSA Workshop

Excellent Frontier Research: Strategic Perspectives for Successful ERC Funding

22 maio 2024 | 14h00–16h30 | FCIências.ID Auditorium | Building C1, Floor 3, Room 1.3.23

Promoted by the TWIN2PIPSA capacitation activities, this workshop aims to provide a strategic vision on the Excellent Science (Pillar 1) of Horizon Europe funding program, focusing on how the European Research Council (ERC) grants can leverage excellent frontier research within the European Research Area.

Attendees will be given an overview of ERC grant calls, with valuable insights on achieving successful submissions and navigating the review process, drawing from the testimonies of ERC experienced researchers. This workshop seeks to empower the CIÊNCIAS ULisboa community with expertise and skills required to successfully compete in ERC funding calls.

This workshop is open to all CIÊNCIAS ULisboa community, but registration is mandatory. Register [here](#).

NOVAMATH Thematic Weeks 2024

Exploring Pharmaceutical Frontiers in Drug Discovery, Within-Host Dynamics, and Clinical Trials

3 - 21 June, 2024 | FCT NOVA

Event organized by the Center for Mathematics and Applications (NOVA Math). This event, jointly organized by NOVA Math's Thematic Lines – Biomathematics, Mathematics for Health, and Data Science, aims to explore cutting-edge topics at the intersection of mathematics, health, and pharmaceutical sciences. It is designed for students, researchers, and professionals eager to expand their understanding of mathematical models and computational tools pertinent to drug discovery, within-host dynamics, and clinical trials. Participants will have the opportunity to engage in seminars covering fundamental theories, practical hands-on sessions utilizing the R language (and/or other), and informal discussions on the latest advancements in the field.

The thematic weeks will feature subtopics focusing on:

Drug Discovery (Data Science)

Within-Host Dynamics (Biomathematics)

Clinical Trials (Mathematics for Health)

Registration in the SHORT COURSES is free but mandatory, [here](#).

More information, [here](#).

Convite à submissão de propostas para comunicação ou poster

amim'24 - Autumn Meeting of Industrial Mathematics

4-5 outubro 2024 | Foz do Arelho

Prazo de submissão: 30 junho 2024

O objetivo deste encontro é a partilha de conhecimento e experiência na área da Matemática Industrial, em particular a aplicação da matemática na resolução de problemas complexos do mundo real, sejam eles do foro tecnológico, social, económico ou biológico. O encontro irá contar com dois short courses - "Explainable Data Driven Decision Making", por Emilio Carrizosa, e "Exploring mixed integer linear programming: applications to industry problems", por Jorge Orestes

Cerdeira -, contributed talks, uma exposição de posters e ampla oportunidade para aprofundar a ligação entre a matemática e a sua aplicação a problemas concretos.

Mais informação, [aqui](#).

RECORDAMOS

Concurso

Bolsas Instituto Francês de Portugal

Prazo de candidaturas: **17 maio 2024**

O Instituto Francês de Portugal está a aceitar candidaturas para as seguintes bolsas:

Bolsas de Investigação Científica - destinadas a investigadores, doutorandos e pós doutorandos, que desejem estabelecer novas colaborações franco-portuguesas. Permitem aos vencedores do concurso irem para um laboratório ou unidade de investigação em França durante um mês, cobrindo os custos de mobilidade, alojamento e alimentação. Mais informação, [aqui](#).

Bolsas de Mestrado em França - para estudantes portugueses ou estudantes de outra nacionalidade residentes em Portugal aceites num programa de mestrado presencial numa universidade pública francesa. Mais informação, [aqui](#).

SPE

Prémio Estatístico Júnior 2024

Prazo de candidatura: **31 maio 2024**

Iniciativa promovida pela Sociedade Portuguesa de Estatística (SPE) e dirigida aos alunos dos ensinos Básico e Secundário, com o apoio do **Centro de Estatística e Aplicações da Universidade de Lisboa (CEAUL)**.

Mais informação, [aqui](#).

SAVE THE DATE

Encontro Ciência 2024

3 - 5 julho 2024 | Centro de Congressos da Alfândega do Porto

Sob o mote “**+Ciência para Uma Só Saúde e bem-estar global**”, o encontro pretende dar a conhecer e potenciar a ciência de hoje para o futuro da saúde e bem-estar global que queremos amanhã.

Mais informação, [aqui](#).

Formação

Estatística e Análise de Dados em Saúde com SPSS

3.ª e 4.ª feiras de 14 maio a 5 junho 2024 | 18:30 – 20:30 | Online

Curso online, de 8 sessões e com uma duração total de 16 horas, dirigido a estudantes de Mestrado e Doutoramento, e a Profissionais que desenvolvem investigação científica na área da saúde. O curso é ministrado por [Ricardo São João](#), membro do **CEAUL**. Este curso resulta de parceria entre o **CEAUL** e a GADES Solutions.

Mais informação e inscrições, [aqui](#).

Summer School on Advanced Bayesian Methods

16 to 20 September 2024 | Leuven, Belgium

Registration deadline: [31 July 2024](#)

6th Summer School on Advanced Bayesian Methods, organized by the Interuniversity Institute for Biostatistics and Statistical Bioinformatics:

- Two-day course (16-17 September) on **Bayesian causal inference** by Prof Chris Holmes and Dr Andrew Yiu (University of Oxford, UK);
- Two-day course (19-20 September) on **Advanced Bayesian Methods: Theory and Applications in R** by Prof. Nikolaus Umlauf (University of Innsbruck, Austria).

More information, [here](#).

Conferências

6th SHDM – Call for Papers

6th Statistics on Health Decision Making: Artificial intelligence

4-5 July 2024 | University of Aveiro

NEW Abstract Submission deadline: [15 May 2024](#)

"Statistics on Health Decision Making" (SHDM), is an annual event, organized by The Egas Moniz Health Alliance (EMHA), the University of Aveiro, and the Hospital Center of Baixo Vouga. It aims to contribute to sharing what is best done using medical statistics and stimulate research in this area. It is intended to bring together the clinical, academic, and business worlds in a true discussion about the strategic lines of statistics in health decision-making.

More information about the 6th SHDM, [here](#).

CARMA 2024

Internet and Big Data in Economics and Social Sciences

26 - 28 June 2024 | Valencia, Spain

The **6th International Conference on Advanced Research Methods and Analytics - CARMA 2024** focuses on the increasing availability of Internet and Big Data sources of information, and the related need for interdisciplinary approaches. **CARMA 2024** is a leading forum for researchers and practitioners to exchange ideas and advances on how emerging research methods and sources are applied to different fields of social sciences.

More information, [here](#).

Newsletter da FCT, [aqui](#).

Newsletter de Ciências, [aqui](#).

Arquivo da divulgação CEAUL, [aqui](#).

Siga o CEAUL:

[Facebook](#), [Instagram](#), [X](#), [LinkedIn](#)