Seminário

CEAUL & CEMAT

Bayesian spatial modeling of misaligned data using INLA and SPDE

Paula Moraga, *KAUST, Saudi Arabia*

Spatially misaligned data are becoming increasingly common due to advances in data collection and management. We present a Bayesian geostatistical model for the combination of data obtained at different spatial resolutions. The model assumes that underlying all observations, there is a spatially continuous variable that can be modeled using a Gaussian random field process. The model is fitted using the integrated nested Laplace approximation (INLA) and the stochastic partial differential equation (SPDE) approaches. In order to allow the combination of spatially misaligned data, a new SPDE projection matrix for mapping the Gaussian Markov random field from the observations to the triangulation nodes is proposed. We show the performance of the new approach by means of simulation and an application of PM2.5 prediction in USA. The approach presented provides a useful tool in a wide range of situations where information at different spatial scales needs to be combined.

23 março 2023 (5ª feira) - 15h00 | **IST, Edifício da Matemática, sala P3.10** & **Zoom**.

Mais informação, aqui.

Lista dos seminários.

Statistics and Risk Management Seminar
NOVA MATH/FCT NOVA

Modeling and forecasting number of confirmed and death caused COVID-19 in IRAN: A Comparison of Time Series Forecasting Methods

Mahdi Jabbari, *University of Copenhagen & Ferdowsi University of Mashhad*

This study aimed to develop accurate models for forecasting the number of confirmed and death cases related to COVID-19 in Iran. Nine models, including NNETAR, ARIMA, Hybrid, Holt-Winter, BSTS, TBATS, Prophet, MLP, and ELM network models, were applied to the absolute number of confirmed and death case data from February 20 to August 15, 2020, and evaluated based on performance metrics such as RMSE, MAE, and MAPE. The MLP network was found to be the most suitable model for forecasting confirmed cases, while the Holt-Winter model was the best for forecasting death cases. Based on the trend of data and forecast results, the number of confirmed cases and death cases are almost constant and decreasing, respectively. However, the possibility of re-emergence of the disease requires continued preventive care.

22 março 2023 (4ª feira) - 14h00 | [Zoom](#).

KCL Statistics Seminars
Kings College London

Accounting for model uncertainty in latent space network models

Mark Steel, *University of Warwick*

We focus on models for network data which contain quantitative information about relationships between nodes. In particular, we consider model that capture similarity between nodes through unobserved latent variables. We investigate how to deal with model specification uncertainty through formal Bayesian model averaging. In the context of a Poisson model with a log-Normal rate parameter, we give conditions under which a common improper prior leads to posterior existence. We derive an MCMC strategy for inference using Bayesian model averaging over the model space (constructed by including or excluding each of the covariates, including the latent ones). The model is applied to bilateral migration flows between 38 OECD countries during the period 2015-2020 and it is shown to outperform three popular gravity models. This is joint work with Gregor Zens..

23 março 2023 (5ª feira) - 14h00 | **Microsoft Teams meeting**

Meeting ID: 353 117 580 735

Passcode: ARF2kP

Ciclo de Conferências "Desafios da Ciência na Sociedade Contemporânea" da Academia de Ciências de Lisboa

Relações Ciência-Tecnologia

Apresentada pelo Professor Pedro Conde (IST-ULisboa, ACL) e pelo conferencista Jorge Luís Oliveira e Silva (ACL, IST-ULisboa), com comentários do Professor Yasser Omar (IST-ULisboa, ACL). Conferência que se realiza no âmbito do programa "Ao Encontro da Sociedade", organizado pelo Instituto de Altos Estudos da Academia das Ciências de Lisboa.

22 março 2023 (4.ª feira) – **18:00**

 Acesso Zoom: https://videoconf-colibri.zoom.us/j/92374028924

ID Reunião: 92374028924

Sessão de informação

EIC Pathfinder

29 março 2023 - 15h00 | Instituto Superior Técnico - Anfiteatro Abreu Faro

The ANI (National Innovation Agency) and the EIC (European Innovation Council) are organizing an information session on the main rules and steps to succeed on the EIC Pathfinder funding instrument, followed by a networking session with EIC representatives as well succeeded entities.

More information, **here**. Registration is free, but mandatory, **here**.

Encontros

174th European Study Group with Industry

3 e 7 de julho de 2023 em Felgueiras

Este encontro permitirá que académicos das mais diversas áreas da Matemática trabalhem colaborativamente em desafios industriais com que as empresas se confrontam diariamente, sugerindo metodologias da sua área de especialização que conduzem à solução e contribuindo, desta forma, para a transferência de ID.

Mais informação, **aqui**. A **inscrição** é gratuita, mas obrigatória.

Workshops

Computational and Applied Statistics

The workshop of the 23rd International Conference on Computational Science and Applications (ICCSA 2023) will be held on **July 3-6, 2023**, in Athens, Greece. The aim of CAS workshop is to bring together scientists working in computational statistics, scientific computation and applications in all areas of sciences, engineering, industry, economics, life sciences and social sciences. Topics of interest include (but are not limited to):

•   Computational Statistics: new issues in the design of computational algorithms for implementing statistical methods, development in R, Python, etc;

•   Applications: statistical case study in all areas of sciences, engineering and industry, including economics, medicine, biology, earth sciences and social sciences.

March 26, 2023: **Deadline for abstract and paper submission.**

The proceedings of the CAS 2023 Workshop will appear in the Springer-Verlag, Lecture Notes in Computer Science (LNCS) series. The paper must be camera-ready, between **12 and 18 pages long** and formatted according to the LNCS rules

The authors can submit abstracts and papers to your session accessing the electronic submission site. You can find the instructions to prepare and submit papers here.

Oportunidades

2023 Call for MPP2030-FCT PhD Grants

MIT Portugal Program, sponsored by FCT, will offer up to 10 Scholarships in the strategic area of the MPP of Climate Science & Climate Change. MIT Portugal Program is accepting applications until **22 March 2023, 5 pm (Lisbon time)**.

More information, here.

Affiliated Ph.D. Programs

CMU Portugal, sponsored by FCT, will offer up to 12 Scholarships for the 2023/2024 academic years.

Applications, until **31 March 2023**.

More Information, here.

Formações

València International Bayesian Summer School – 6th edition (VIBASS 6)

10 to 14 July 2023 | València, Spain

Registrations opened on 15th Jan. 2023 and **usually sell out quickly**.

VIBASS 6 is a five-day summer school that offers an opportunity to be introduced to Bayesian learning without previous knowledge of the subject.

More information and practical details about VIBASS 6 including the registration form can be found here.

Summer school on Advanced Bayesian Methods

Deadline for registration: July 31, 2023.

Organized by the Interuniversity Institute for Biostatistics and statistical Bioinformatics (I-BioStat). The target audience of the summer school is statisticians and/or epidemiologists with a sound background in statistics, but also with a background in Bayesian methodology.

Three-day course (**11-13 September**) on Bayesian Workflow for hierarchical and ODE-based models using Stan by Dr. Charles Margossian (Flatiron Institute, Center for Computational Mathematics in New York)

Two-day course (**14-15 September**) on Spatial modeling with inlabru in ecology and beyond-background and practice by Prof. Janine Illian (University of Glasgow, UK).

This is the 1st announcement. If interested, save the week. More information available soon.

Financiamento

1ª edição do Programa RESTART

Candidaturas à 1ª edição do Programa RESTART estão abertas até **30 de março de 2023.**

O programa RESTART destina-se a promover a igualdade de género e de oportunidades, através do financiamento competitivo de projetos individuais de I&D em todos os domínios científicos, no montante máximo de 50 mil euros e com uma duração de execução de 18 meses, quando realizados por investigadoras ou investigadores que tenham gozado recentemente de uma licença parental, incluindo por adoção.

Mais informações, **aqui**.

Primeiro Concurso Transnacional Conjunto (CTC) - "The way forward: a thriving sustainable blue economy for a brighter future".

 Parceria europeia cofinanciada Sustainable Blue Economy Partnership (SBEP), desenvolvida no âmbito do Programa-Quadro Horizonte Europa. O **Submissão de candidaturas** até **14 de abril de 2023 (14h GMT)**.

Mais informações, **aqui**.

Interreg Europe - Sharing solutions for better policy

Interreg Europe's second call for projects proposal will open on **15 March** and close at noon on **9 June 2023**.

Program objectives:

1. Smarter Europe
2. Greener Europe
3. More connected Europe
4. More social Europe
5. Europe closer to Citizens

Set of support tools to make the project development a success and more information, here.

Conferências

3rd Stream of Abstract submissions for ASMDA2023

 6 - 9 June 2023, Heraklion, Crete, Greece

The Applied Stochastic Models and Data Analysis International Conference (ASMDA2023) and the Demographics2023 Workshop in the Hellenic Mediterranean University (HMU) is a Hybrid Conference including in-Person and Virtual presentations.

3rd Stream of Abstract submissions Deadline: 30th March 2023.

More information, here.

Lisbon Young Mathematicians Conference 2023

 14 - 15 april 2023, Universidade Aberta, Lisbon.

Conference directed for Postdocs, PhD, and Master students in Mathematics and affine areas of Lisbon Universities. PhD and Master students will present short communications about their current research work.

Registration is free but mandatory. Registration is available here.

Deadline for registration: 31st March 2023.

More information, [here](#).

14ª Conferência Lusófona de Ciência Aberta – chamada de trabalhos

A 14ª Conferência Lusófona de Ciência Aberta (ConfOA), que se realiza na Universidade Federal do Rio Grande do Norte, em Natal, Brasil, nos dias 18, 19, 20 e 21 de setembro de 2023, e **está a aceitar trabalhos nos seguintes temas**:

• Acesso Aberto e Dados de Investigação Abertos: sistemas, políticas e práticas

• Ciência Aberta e outras expressões de conhecimento aberto

• Gestão de informação de Ciência e Tecnologia

Data limite para a submissão de trabalhos: *3 de abril 2023*

Mais informações [aqui](#).

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