



Centro de Estatística e Aplicações Universidade de Lisboa

Divulgação CEAUL 17/2025

15 maio 2025

Seminário

CEAUL&CEMAT

Systems Learning of Single Cells

Qing Nie, *Department of Mathematics, Department of Developmental and Cell Biology, NSF-Simons Center for Multiscale Cell Fate Research, University of California, Irvine, USA*

21 May 2024 - 14h30 | Ciências Ulisboa, C6, Floor 4, SASLab (Room 6.4.29)

Cells make fate decisions in response to dynamic environments, and multicellular structures emerge from multiscale interplays among cells and genes in space and time. The recent single-cell genomics technology provides an unprecedented opportunity to profile cells for all their genes. While those measurements provide high-dimensional gene expression profiles for all cells, it requires fixing individual cells that lose many important spatiotemporal information. Is it possible to infer temporal relationships among cells from single or multiple snapshots? How to recover spatial interactions among cells, for example, cell-cell communication? In this talk I will present our newly developed computational tools to study cell fate in the context of single cells as a system. In particular, I will show dynamical models and machine-learning methods, with a focus on inference and analysis of transitional properties of cells and cell-cell communication using both high-dimensional single-cell and spatial transcriptomics, as well as multi-omics data for some cases. Through their applications to various complex systems in development, regeneration, and diseases, we show the discovery power of such methods in addition to identifying areas for further method development for spatiotemporal analysis of single-cell data.

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

[Lista dos Seminários](#)

DESTAQUE

ULisboa

3 Minutos de Tese - Final da Competição 2025

22 maio 2025 | 18:00 – 19:30 | Pavilhão de Portugal | Gratuito

Na final desta 3.^a Edição da competição 3 Minutos de Tese (3MT), os doze finalistas vão explicar o impacto da sua investigação a um público não especializado, em apenas três minutos e recorrendo a um único diapositivo.

Lista de finalistas [aqui](#). Mais informação [aqui](#).

90 Segundos de Ciência

Projeto MEDCEX

Patrícia Bermudez, investigadora e Membro Integrado do **CEAUL**, nos 90 **Segundos de Ciência** sobre o projeto MEDCEX – *Compound extremes in Mediterranean temperature, wind and wildfires*, por si liderado.

Leia e oiça a entrevista [aqui](#).

Webinar Gratuito

Estatística e Análise de Dados em Saúde com SPSS

28 maio 2025 | 19:00 – 20:00 | Online | Gratuito

Este webinar, de **Ricardo São João**, Membro Integrado do **CEAUL**, pretende demonstrar a utilização do SPSS na análise de dados em Saúde e Ciência da Vida, com recurso a vários exemplos, permitindo uma visão de diferentes abordagens metodológicas. Webinar organizado em parceria com a **Gades Solutions**.

Mais informação e inscrição [aqui](#).

NOVIDADES

Formação ULisboa

Formação para Preparação de Candidaturas a Financiamento Europeu em Investigação

Prazo de inscrição: 23 maio 2025, 17h00

Estão abertas as inscrições para a edição de 2025 de Formação para preparação de candidaturas a financiamento europeu em investigação da Universidade de Lisboa. Esta formação, destinada a todos os docentes e investigadores da ULisboa têm como objetivo de reforçar a capacitação para a submissão de candidaturas a oportunidades de financiamento disponibilizadas pelos programas **European Research Council** (ERC) e **European Innovation Council** (EIC).

As ações de formação incluem workshops temáticos seguidos de sessões de mentoria personalizada, permitindo que os investigadores beneficiem de um apoio estruturado em diferentes fases do processo de candidatura, até preparação para a entrevista.

A mentoria visa apoiar a preparação de propostas, tanto em formato remoto como presencial, com foco na revisão crítica, análise e aconselhamento estratégico, de forma a maximizar as hipóteses de sucesso nos programas de financiamento. Este acompanhamento está limitado a 50 investigadores, distribuídos pelos vários workshops.

Mais informação [aqui](#). Inscrição [aqui](#).

RECORDAMOS

SPE

Prémio Estatístico Júnior 2025

Prazo de candidatura: 31 maio 2025

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

Mais informação [aqui](#).

ICRA10

International Conference on RA (Risk Analysis)

22 - 24 September 2025 | Patras, Greece and online

Abstract submission deadline: 1 June 2025

The International Conference on Risk Analysis (ICRA10) is dedicated to advancing knowledge and fostering discussion on the latest developments in theoretical and computational models in Risk Analysis. The conference emphasizes applications across a wide range of fields, including Life Sciences, Environmental and Public Health, Economics and Finance, and the Reliability of Engineering and Biomedical Systems.

More information [here](#).

Curso

Estatística e Análise de Dados em Saúde com SPSS

3.ª e 4.ª feiras de 17 junho a 7 julho 2025 | 18:30 – 20:30 | Online

Curso online, de 8 sessões e com uma duração total de 16 horas.

O curso pretende fornecer as ferramentas necessárias para que o investigador na área da saúde consiga desenvolver, de forma autónoma, trabalhos de investigação científica utilizando a metodologia estatística apropriada. Pretende-se que no final do curso, o formando consiga aplicar técnicas de análise descritiva e inferencial, bem como identificar a metodologia estatística apropriada de acordo com diferentes desenhos experimentais e interpretar os resultados. O software a abordar é o SPSS. Curso destinado a estudantes de Mestrado e Doutoramento e aos profissionais que desenvolvem investigação científica na área da saúde.

O curso ministrado por [Ricardo São João](#), membro do **CEAUL**, e resultante da parceria entre o **CEAUL** e a [GADES Solutions](#).

Mais informação e inscrição [aqui](#).

Mathematics

Special Issue: Advances in Statistics, Biostatistics and Medical Statistics

Guest Editor - [Tiago Dias Domingues](#), DEIO and **CEAUL member**

Deadline for manuscript submission: 20 June 2025

The fields of statistics, biostatistics, and medical statistics are experiencing rapid advancements driven by the increasing complexity of data and the critical need for rigorous analytical methods in health-related research. This Special Issue brings together a collection of cutting-edge research articles that showcase the latest developments in these domains. The contributions highlight innovative statistical methodologies, novel applications in biostatistics, and transformative approaches in medical statistics. Topics covered include, but are not limited to, advanced modeling techniques, high-dimensional data analysis, machine learning integration, and the statistical challenges posed by personalized medicine. The

Special Issue aims to serve as a valuable resource for statisticians, biostatisticians, and medical researchers, providing insights into emerging trends and offering practical solutions to current statistical challenges in the biomedical and public health sectors. By fostering interdisciplinary collaboration and knowledge exchange, this Special Issue contributes to the ongoing evolution of statistical science in the context of medical and health-related research.

More information [here](#).

Stochastic Environmental Research and Risk Assessment (SERRA)

Statistical Analysis and Modeling of Characteristics and Impacts of Major Mechanisms of Atmospheric Moisture Transport

Guest Editors - Luis Gimeno, University of Vigo, [Patrícia de Zea Bermudez](#), DEIO and **CEAUL** member, and [Luis Gimeno-Sotelo](#), DEIO and **CEAUL** member

Submission deadline: 30 June 2025

This Collection is devoted to original and innovative applications of recent statistical methodologies to the study of the major mechanisms of atmospheric moisture transport of atmospheric rivers, low-level jets, tropical cyclones and monsoons. This includes both the study of the characteristics of these systems – structure, spatial distribution, trends in their occurrence, analysis of extremes – as well as the assessment of their impacts mainly extreme precipitation events, floods and droughts.

For this Collection we invite cutting-edge contributions related to methods and applications of spatio-temporal statistics, data mining, data visualization, automatic algorithms, clustering and classification analysis of temporal series, extreme value modelling and analysis of dependence structures on topics.

More information [here](#).

Call for invited session proposals

2026 ISBA World Meeting

28 June - 3 July 2026 | Aichi Industry & Labor Center, Nagoya, Japan

Deadline for invited sessions proposal submission: 6 July 2025

The 18th World Meeting of the International Society for Bayesian Analysis - 2026 ISBA World Meeting, will take place at the Aichi Industry & Labor Center - [WINC AICHI](#) in [Nagoya, Japan](#). The purpose of the meeting is to bring together the diverse international community of investigators in statistics who develop and use Bayesian methods to share recent findings and to present new and challenging problems.

The call for Contributed Talks and Posters will open in Fall 2025, after Invited Session decisions are announced.

More information [here](#).

7th SHDM

7th Statistics on Health Decision Making: Epidemiology

10 - 11 July 2025 | University of Aveiro

The meeting "STATISTICS ON HEALTH DECISION MAKING" aims to promote the boosting of research and discussion of Medical Statistics. This meeting brings together clinical, academic and professional world, in a discussion forum about strategic lines of statistics in health decision making.

More information [here](#).

Axioms – Special Issue

Probability Theory and Stochastic Processes: Theory and Applications

Guest Editors - [João Paulo Martins](#), [Rui Santos](#) e [Miguel Felgueiras](#), membros integrados do **CEAUL**.

Submission deadline: **31 December 2025**

Probability theory and stochastic processes are fundamental branches of mathematics with extensive applications in various scientific and engineering disciplines. Over the years, advancements in probability theory and stochastic processes have led to groundbreaking developments in areas such as machine learning, network analysis, and risk management, highlighting their importance in both theoretical and applied contexts. This Special Issue seeks to showcase the latest developments in this vibrant field, emphasizing both innovative theoretical contributions and practical applications that address real-world challenges.

The aim of this Special Issue is to bring together high-quality research that advances our understanding of probability theory and stochastic processes. This includes theoretical breakthroughs, novel methodologies, and significant applications that demonstrate the versatility and impact of these mathematical tools. This Special Issue aligns with the journal's scope by fostering interdisciplinary connections and disseminating knowledge that bridges theoretical foundations and practical implementations.

In this Special Issue, original research articles and reviews are welcome.

More information [here](#).

Newsletter “Ciências agora” [aqui](#).

Newsletter da FCT [aqui](#).

Arquivo da divulgação CEAUL [aqui](#).

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