Centro de Estatística e Aplicações
Universidade de Lisboa

Divulgação CEAUL 19/2025

24 junho 2025

Seminário

CEAUL&CEMAT

Approximation Gaussienne de l'estimateur de la prime nette d'une distribution à queue lourde sous censure aléatoire

Louiza Soltane*, *Laboratoire de Mathématiques Appliquées Université Mohamed Khider, Biskra, Algérie*

25 Jun. 2024 - 14h30 | Ciências Ulisboa, C6, Piso 4, SASLab (Sala 6.4.29) & Zoom

La prime nette est un outil pratique de gestion des risques et l'une des mesures de risque les plus connues en assurance. Il est également connu sous le nom de principe de la valeur moyenne ($\mu = E[X]$), le principe de prime le plus simple, équivalent à l'espérance de la variable de taille de sinistre (risque). Dans ce principe, le taux de prime est fixé égal à la valeur attendue du risque X ($X \geq 0$), de fonction de répartition F, qui est définie par

$$\Pi = E[X] := \int_0^\infty (1 - F(x))dx,$$

Où $\Pi : \chi \to \mathbb{R}$, appelée fonction de mesure du risque et χ un ensemble de variables aléatoires réelles. En effet, il existe dans la littérature une grande variété d'estimateurs asymptotiquement normaux sur la base des données complètes. Cependant, il arrive souvent en pratique que les données soient censurées pour une raison ou une autre de telle façon que les techniques d'estimation basées sur les données complètes deviennent inappropriées. On utilise dans ce travail la théorie des valeurs extrêmes pour proposer une estimation alternative pour les données censurées aléatoirement à droite. Sous des conditions modérées, nous établissons la normalité asymptotique de l'estimateur proposé. La preuve repose fortement sur l'approximation gaussienne de Brahmi et al. (2015), Stute (1995) et les résultats de Kaplan-Meier (1958).

*En collaboration avec D. Meraghni et A. Necir

Mais informação aqui. Poster.

Lista dos Seminários

DESTAQUE

Workshop

Introduction to GLLVM - With spatial and temporal dependency

22-26 September 2025 | Institute for the Sea and the Atmosphere (IPMA) - Hybrid onsite/online

The central theme of this course, by Dr. Alain Zuur and Dr. Elena Ieno, is the analysis of multiple correlated response (or dependent) variables using GLMs and GLMMs. Rather than applying multiple univariate GLMs or GLMMs, we will focus on multivariate GLMMs, particularly generalised linear latent variable models (GLLVMs), for the simultaneous analysis of all variables. During the course, a large number of exercises will be covered, with examples such as trait variables from turtle hatchlings from multiple clutches, biomass data from fish species sampled at multiple sites, count data from 250 freshwater benthic species sampled at 200 sites, abundances of multiple parasite species on fish, counts of 60 different debris types in water samples, abundances of multiple spider species in traps, multiple morphometric variables sampled from honeybees, and absence/ presence of diet variables from faecal samples of brown bears.

More information here.

Sessão de informação

Do laboratório para o mercado: oportunidades de financiamento no âmbito dos Conselhos Europeus de Investigação e de Inovação (ERC e EIC)

25 junho 2025 | 10:00 - 11:30 | online

Sessão de informação organizada pela FCT e ANI dedicada aos programas European Research Council (ERC) e European Innovation Council (EIC) do Horizon Europa

Mais informação aqui.

Inscrição, obrigatória, aqui.

Jornadas Científicas 2025 | ULisboa

ULisboa no Espaço Europeu de Investigação: Construir Carreiras Atrativas, Fortalecer Instituições

25 junho 2025 | 10:00 - 19:00 | Pavilhão de Portugal

A edição de 2025 das Jornadas Científicas da Universidade de Lisboa tem como objetivo refletir sobre os desafios que se colocam à ULisboa no momento em que está a iniciar o processo de candidatura ao selo HR Excellence in Research, no âmbito da Estratégia de Recursos Humanos para Investigadores (HRS4R) promovida pela Comissão Europeia, para implementar a Carta Europeia do Investigador, prevista na “Recomendação do Conselho relativa a um quadro europeu para atrair e reter talentos no domínio da investigação, da inovação e do empreendedorismo na Europa”.

Mais informação e programa aqui.

Cerimónia de Entrega

Prémios Científicos Universidade de Lisboa/Caixa Geral de Depósitos 2025

25 junho 2025 | 17:30 | Centro de Congressos do Pavilhão de Portugal

Os Prémios Científicos Universidade de Lisboa/Caixa Geral de Depósitos, constituídos por um incentivo para a investigação no valor de 6.500€, visam premiar a atividade de investigação científica e a publicação internacional de elevada qualidade e impacto.

A Cerimónia é precedida pelas Jornadas Científicas da Universidade de Lisboa, dedicadas ao tema “ULisboa no Espaço Europeu de Investigação: Construir Carreiras Atrativas, Fortalecer Instituições”.

Mais informaçãoe programa aqui.

NOVIDADES

Statistics and Risk Management Seminar – NOVA MATH/FCT NOVA

Illuminating Distributions: Wavelet-Based Quantile Density Estimation with Applications in Auction Theory

Hassan Doosti, *Macquarie University's School of Mathematical and Physical Sciences, Sidney, Australia*

26 Jun. 2024 - 14h00 | Zoom

Quantile density functions, which capture the local structure of probability distributions, have emerged as powerful tools in fields ranging from risk analysis to economic modeling. In this talk, we delve into advanced nonparametric strategies for estimating quantile density functions, spotlighting the versatility and precision of wavelet-based techniques. We investigate a range of estimators—including linear, hard thresholding, and block thresholding approaches—within both unbiased and length-biased sampling frameworks. A key focus is placed on the challenges introduced by sampling bias and the use of adaptive wavelet methods for effective bias correction. Through the lens of auction theory, we demonstrate how quantile-driven insights can unravel bidder behavior and valuation dynamics. Supported by simulation studies and real-world case examples, the presentation underscores the power of wavelet methods in handling complex and irregular data landscapes.

PT-MATHS-IN & math-in

XI Iberian Modeling Week

7 - 11 July 2025 | Centre de Recerca Matemàtica, Barcelona

Registration deadline: 26 June 2025

The XI IMW is a joint initiative of PT-MATHS-IN (Portugal) and math-in (Spain), aimed at introducing undergraduate and master’s students to industrial mathematics through hands-on problem-solving. This is an excellent opportunity for students from both countries to work in teams on real-world challenges under the supervision of academic mentors and industry professionals. The organization will offer support for student accommodation.

More information here.

Unite!

Research School 2025

3 - 7 novembro 2025 | Autrans, Grenoble (França)

Prazo de inscrição ULisboa: 30 julho 2025

Este evento único reunirá estudantes de mestrado e doutoramento com investigadores e líderes da indústria de toda a Europa para uma experiência inesquecível. O programa desta 2.ª edição da **Unite! Research School** terá como destaque temas como o espaço e a tecnologia, a biologia, a inteligência artificial (IA) e a cibersegurança. Explorará também as competências transversais necessárias aos aspirantes a cientistas.

Este curso é um Blended Intensive Programme (BIP), a sua conclusão proporciona a atribuição de 3 ECTS aos estudantes de mestrado e 30 horas de formação aos estudantes de doutoramento. As atividades incluirão workshops, painéis de discussão, desafios de investigação em colaboração e visitas a estruturas de investigação em Grenoble. A inscrição é gratuita e inclui alojamento e refeições de segunda-feira, dia 3, a sexta-feira, dia 7 de novembro de 2025. Poderá obter financiamento adicional através de bolsa Erasmus +. O prazo de inscrição diferente para cada universidade.

Mais informação e contacto para inscrição aqui.

RECORDAMOS

ESGI

European Study Group with Industry

14 - 18 July 2025 | Centre de Recerca Matemàtica, Barcelona

Registration deadline: 6 July 2025

The European Study Group with Industry (ESGI) is an established initiative that connects mathematicians with industry professionals to solve complex real-world problems using advanced mathematical techniques. Originating in 1968 at the University of Oxford, ESGI has grown into a Europe-wide network that supports industrial innovation through mathematics. Each ESGI is an intensive, week-long workshop, where teams of mathematicians—ranging from graduate students to senior researchers—collaborate on industry-proposed problems. This edition of ESGI is a coorganization between Math-in and PT-MATH-IN (Portugal) and Math-in(Spain).

The ESGI will feature four to five problems, each assigned to a group of five to six researchers. Each group will work under the joint guidance of industry representatives and academic researchers, applying mathematical techniques to address real-world challenges. The problems, which are tentative at this stage, are expected to come from fields such as mobility, optimization, and pharmaceuticals. This structure aims to promote collaboration between academia and industry while developing practical solutions through applied mathematics.

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

New submission deadline: 30 September 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.