Emilio Luis Sáenz Guillén

Doctoral Researcher · Bayes Business School
emilio.saenz-guillen@bayes.city.ac.uk | +34 676 255 677
https://www.bayes.city.ac.uk/faculties-and-research/students/emilio-saenz-guillen

EDUCATION / CERTIFICATIONS

BAYES BUSINESS SCHOOL

M.Phil./Ph.D. in Actuarial Science
2022 - Present

1ST YEAR COURSES

Bayes Business School
Probability and Mathematical Statistics (SMM941); Financial Econometrics (SMM943); Pensions and Other Benefits (SMM033; SP4); Machine Learning (SMM636); Applied Deep Learning (SMM768).

London School of Economics and Political Science
Probability and Mathematical Statistics I (ST552); Probability and Mathematical Statistics II (ST553).

ADVANCE HIGHER EDUCATION (UK)

Associate Fellow (AFHEA)
May 2024.

CONSEJO PROFESIONAL DE CIENCIAS ECONÓMICAS DE LA CIUDAD AUTÓNOMA DE BUENOS AIRES

Fully Qualified Actuary
Dec 2023.

UNIVERSITY OF NAVARRA

Master in Economics and Finance (MEF)
2020 - 2021. GPA: 9.28/10
Master's Thesis:
The Chilean Pension System: Actuarial Analysis of a Paradigmatic Social Security Program.
Supervisors: Adj. Prof. José Azar (Ph.D. in Economics, Princeton University) and Dr. Act. Eduardo Melinsky (Director of the Actuarial Program & Research Centre for Insurance, University of Buenos Aires).

SUMMARY

I am an Actuary and Economist, with a deep-rooted interest in the study of mortality and financial risk factors. Currently I am pursuing a Ph.D. in Actuarial Science at Bayes Business School. My research to date has focused on the development of gradient boosting methods and generalised additive models using Geometrically Designed (GeD) splines, with a specific emphasis on their implementation within the real estate market. Prior to my Ph.D., I have worked as Research Assistant examining the impact of stakeholders' ESG pressures on banking behaviour, and the potential moral hazards introduced by government bailout guarantees. In a previous engagement, I worked jointly with the Central Bank of the Argentine Republic (BCRA), studying the effect of network centrality on interest rate spreads in Argentine interbank markets.

ACADEMIC EXPERIENCE

RESEARCH

BAYES BUSINESS SCHOOL | Doctoral Researcher
2022 - Present | London, United Kingdom

- Research topics: splines; gradient boosting methods; micro-level projection of mortality; pension systems modelling.
- Supervisors: Prof. Vladimir Kaishev (Ph.D. in Statistics and Information Theory, Moscow Technical University) and Dr. Douglas Wright (Ph.D. in AM&S, Heriot-Watt University).

IESE BUSINESS SCHOOL | Research Assistant
Jul 2021 – Jul 2022 | Barcelona, Spain

- Worked under the supervision of Assoc. Prof. Christian Eufinger (Ph.D. in Finance, Goethe University), Assoc. Prof. Stefano Sacchetto (Ph.D. in Economics, London Business School) and Assist. Prof. Valentina Raponi (Ph.D. in Finance, Imperial College Business School and Ph.D. in Methodological Statistics, University of Rome La Sapienza).
- Research topics: banking and corporate finance.

INSTITUTO INTERDISCIPLINARIO DE ECONOMÍA POLÍTICA DE BUENOS AIRES (IIEP-BAIRES) | Research Assistant
2019 - 2020 | Buenos Aires, Argentina

- *Econometric methods for the selection of levels of data grouping.* - Prof. Gabriel Montes-Rojas, Ph.D. in Economics, University of Illinois Urbana-Champaign.

INSTITUTO DE INVESTIGACIÓN SOCIAL, ECONÓMICA Y POLÍTICA CIUDADANA (ISEPCI) | Researcher
2018 | Buenos Aires, Argentina

- Índice Barrial de Precios (IBP).

TEACHING

BAYES BUSINESS SCHOOL | Teaching Assistant
2023 - Present | London, United Kingdom

- Mathematics for Actuarial Science (AS1056) - Dr. Russell Gerrard (Ph.D. in Stochastic Processes, Cambridge University).

UNIVERSITY OF BUENOS AIRES
ACTUARY DEGREE
Society of Actuaries (SOA) Recognition Tier: UCAP-AC; Level of Actuarial Courses Offered: Masters
2018 - 2020.
BACHELOR'S DEGREE IN ECONOMICS
2013 - 2018. Cum Laude.

COMPUTING SKILLS

Programming
• R (current maintainer of the GeDS package)• Python • MATLAB
Stata • LaTex • SQL
Software
• Bejerman Accounting System
• Office (Word, Power Point, Excel)

LANGUAGES

English
Fluent. 106/120 in TOEFL; First Certificate in English.
French
Fluent. Dalf C1 Aliance Française.
German
Beginner. Fit in Deutsch 2, Goethe Institut.
Portuguese
Bilingual, 7 years living in Portugal.
Basque
Fluent.
Catalan
Mother tongue.
Spanish
Mother tongue.

OTHER CERTIFICATES

Introductory Certificate in Academic Practice
Learning Enhancement and Development (LEaD). City, University of London.
GRE
Quantitative reasoning: 166/170, 86th percentile.

VOLUNTEERING

2013 - 2017 Solidarity work in Villa La Cava, San Isidro, Buenos Aires.
2011 Solidarity work in ONG Juan Bonal España.

LONDON BUSINESS SCHOOL | TEACHING ASSISTANT
Feb – April 2023/24 | London, United Kingdom

- Time Series Analysis (E334; MBA programme) - Prof. Derek Bunn (Ph.D. in Economics, London Business School).

UNIVERSITY OF NAVARRA | TEACHING ASSISTANT
September 2020 – June 2021 | Pamplona, Navarra, Spain

- Marketing II and Family Business - Assoc. Prof. Goretti Cabaleiro, Ph.D. in Business Economics and Quantitative Methods, University Carlos III.
- Strategic Management - Assoc. Prof. Ricardo Mateo Dueñas, Ph.D. in Business Administration and Accounting, University of Navarra.

UNIVERSITY OF BUENOS AIRES | TEACHING ASSISTANT
2020 | Buenos Aires, Argentina

- Econometrics I - Prof. Gabriel Montes-Rojas, Ph.D. in Economics, University of Illinois Urbana-Champaign.

CONFERENCES

- RSS International Conference 2024, 2-5 September, Brighton (UK). *Augmented Spline Regression for Advanced Data Analysis: Generalized Additive Models and Functional Gradient Boosting with Geometrically Designed (GeD) Splines*
- 26th International Conference on Computational Statistics (COMPSTAT 2024), 27-30 August 2024, University of Giessen. *Enhancing Geometrically Designed Spline (GeDS) regression through Generalized Additive Models and Functional Gradient Boosting.*
- Insurance Data Science Conference, 17-18 June 2024, Stockholm University, Department of Mathematics. *Generalized Additive Models & Functional Gradient Boosting with Geometrically Designed (GeD) Splines: Application to Insurance Data.*

OTHER WORK EXPERIENCE

GRUPO ISN ARGENTINA, PURCHASING AND FINANCE DEPARTMENT | MANAGER
May 2017 - Jul 2018 | Buenos Aires, Argentina
Manager of the Department of Purchasing and Finance during the launch of a new contract with Volkswagen.
Collections | Purchases (market survey, budget evaluation, dealing with suppliers) | General accounting.

UNIVERSITY OF BUENOS AIRES | ADMINISTRATOR
Oct 2015 - Dec 2016 | Buenos Aires, Argentina
Administrative assistant at the Student Center of the Faculty of Psychology of the University of Buenos Aires.
Responsibilities included dealing with suppliers, payment of wages, allocation of scholarships and organization of academic seminars. This was a part-time position.

EL MOLINO RESTO/BAR | COOK
Feb 2014 - Jun 2015 | Buenos Aires, Argentina
Cook at grill restaurant. Part-time job.

SAUMA WAGEN ARGENTINA | INTERNSHIP
2012 | Buenos Aires, Argentina
100-hour accounting internship at the official Ford and Volkswagen dealership.

SUPERVISION IN ARGENTINIAN ELECTIONS PASO and Final
2013, 2015, 2017 and 2019.

AWARDS, FELLOWSHIPS, & GRANTS

2019 | UBACyT research scholarship, University of Buenos Aires