



Papaspiliopoulos, Omiros

Universitat Pompeu Fabra
Social & Behavioural Sciences

Previously to becoming ICREA Research Professor I had been Research Associate at Lancaster and Oxford University, Assistant Professor at Warwick University, and Professor at UPF. I am currently the director of the Masters in Data Science and the Data Science Center at Barcelona GSE. I have extensively published in the top journals in Statistics, have served as Associate Editor for several journals and as of January 2018 as Deputy Editor for *Biometrika*. I has delivered more than 80 invited talks, and given courses at ENSAE in Paris, the Berlin Mathematical School, the Department of Mathematics at University of Copenhagen, and the Engineering Department at Osaka University. In 2010 I was awarded the Royal Statistical Society's Guy Medal in Bronze, which is arguably the highest distinction in Statistics in Europe.

Research interests

I develop modern statistical methodology appropriate for problems that arise in Economics, Finance, the Social Sciences and Biology. A unifying theme in my research is the statistical estimation of highly structured stochastic models from partially informative observations using computational methods. The work I do is at the intersection of Statistics, Machine Learning, Applied Probability and Applied Mathematics. I am interested in phenomena that exhibit temporal dependence that can be modelled using stochastic processes, e.g. stochastic differential equations, hidden Markov models, state-space models, and cross-sectional dependence, which can be modelled using networks and partial differential equations. I like Bayesian statistics. My research has focused on the development of new algorithms for statistical inference in such settings, and the theoretical analysis of their properties. In particular, I have worked extensively on Monte Carlo methods.

Selected publications

- Agapiou S, **Papaspiliopoulos O**, Sanz-Alonso D & Stuart AM 2017, 'Importance Sampling: Intrinsic Dimension and Computational Cost', *Statistical Science*, 32, 3, 405 - 431.
- **Papaspiliopoulos O** & Rossell D 2017, '[Bayesian block-diagonal variable selection and model averaging](#)', *Biometrika*, 104:2, 343-359.

Selected research activities

Editorial activity:

Biometrika, SIAM Journal of Uncertainty Quantification, Statistics and Computing, Bulletin of the Hellenic Mathematical Society.

Leadership:

Scientific Director of the Master in Data Science, Barcelona Graduate School of Economics

Director of the Data Science Center at Barcelona Graduate School of Economics

Director of Data Science Summer School at Barcelona Graduate School of Economics

Seminars:

Department of Statistics, Newcastle University, May 2017

Department of Applied Mathematics, NTUA, June 2017

Invited talks at conferences and workshops:

Isaak Newton program on Statistical Foundations of Uncertainty Quantification for Inverse Problems, June 2017

Public lectures

What is Deep Learning and why everyone is talking about it, jointly with Alex Karatzoglou (Telefonica Research). Hub Events, March 2017, Athens, and Pasteur Institute, September 2017, Athens

Summer Schools:

Bayesian Machine Learning in Social Sciences

Instructors: Stephen Hansen (University of Oxford), Omiros Papaspiliopoulos (ICREA-UPF and Barcelona GSE), David Rossell