
Curriculum Vitae

PERSONAL INFORMATION

- **Name:** Papavasiliou, Anastasia.

EDUCATION

- 1999-2002: **Princeton University**, PhD, Applied Mathematics, June 2002 (supervisor: René Carmona. Thesis title: “ Adaptive Particle Filters with Applications”).
- 1997-1999: **Princeton University**, MA, Applied Mathematics, June 1999.
- 1993-1997: **Aristotelian University of Thessaloniki**: BSc (with honours), Mathematics, June 1997.

CURRENT POSITIONS

- 2017-present: Associate Faculty Fellow, **Alan Turing Institute**.
- 2018-present: Associate Professor (Reader), Department of Statistics, **University of Warwick**.

PREVIOUS POSITIONS

- 2010-2018: Associate Professor, Department of Statistics, **University of Warwick**.
- 2004-2010: Assistant Professor, Department of Statistics, **University of Warwick**.
- 2004-2005 : Postdoctoral Research Associate, Department of Chemical Engineering, **Princeton University** (supervisor: Yannis Kevrekidis).
- 2002-2004 : Non tenure-track Assistant Professor of Applied Mathematics, Department of Applied Physics and Applied Mathematics, **Columbia University**.
- 2001-2002 : Pre-doctoral Research Assistant, Department of Operations Research and Financial Engineering, **Princeton University**.
- Summer 2001: Summer Intern, Statistics and Data Mining Department, **Lucent Bell Labs**, Murray Hill, NJ. (supervisor: Dr. Vander Wiel)
- Summer 1998: Summer Intern, Adaptive Information and Signal Processing Department, **Siemens Corporate Research, Inc.**, Princeton, NJ. (supervisor: Dr. Watrous)

VISITING POSITIONS

- Feb. - Apr. 2010: Visiting Researcher, Oxford-Man Institute, **Oxford University**.
- 2009-2010: Visiting Assistant Professor, Department of Applied Mathematics, **University of Crete**.

AWARDS AND FELLOWSHIPS

- ERC Consolidator Grant 2017 Finalist.
- Leverhulme Research Project grant (PI): *Statistical inference of complex systems through rough paths*, (RPG-2013-270), 2014-2017, £197,766.
- EPSRC grant (PI): *Parameter Estimation for Rough Differential Equations with Applications to Multiscale Modelling*, (EP/H019588/1), 2010–2012. £99,927.
- EPSRC grant (co-PI): *WORKSHOP: Stochastic Filtering and Control*, (EP/F023049/1), 2007, £15,962.
- Marie Curie Fellowship-International Reintegration Grant: *Applications of the Theory of Rough Paths to Speech Recognition*, (MIRG-CT-2005-029160), 2006–2008, €80,000.
- Princeton University, Department of Applied and Computational Mathematics. Graduate Teaching and Research Fellowship. 1997-2001.
- Summer 1995: *Summer Undergraduate Research Fellow* at the Computational Neuroscience Lab, Rockefeller University, New York, NY. (supervisor: Prof. J.Atick)

MAJOR PUBLICATIONS:

1. Approximate Likelihood Construction for Rough Differential Equations (with KB Taylor). Submitted to *Stochastic Processes and Applications*. [arXiv:1612.02536](#).
2. Maximum Likelihood Estimation for Multiscale Ornstein-Uhlenbeck Processes (with F. Zhang). **Stochastics** (in print), DOI10.1080/17442508.2018.1424853.
3. RNA editing generates cellular subsets with diverse sequence within populations (with D Harjanto, T Papamarkou, CJ Oates, V Rayon-Estrada and FN Papavasiliou). **Nature Communications** 7, 12145, 2016.
4. A Distributed Procedure for Computing Stochastic Expansions with Mathematica. **J. Stat. Soft.** 53(11), 2013.
5. Coarse-grained modeling of multiscale diffusions: the p-variation estimates. In **Stochastic Analysis 2010**, pp169–190, Springer, Berlin 2011.
6. Parameter Estimation for Rough Differential Equations (with C. Ladroue). **Ann. Stat.** 39 (4), 2047-2073, 2011.
7. Maximum likelihood drift estimation for multiscale diffusions (with AM Stuart and GA Pavliotis). **Stoch. Proc. Appl.**, vol 119: 3173–3210, 2009.
8. Particle filters for multiscale diffusions. **ESAIM Proceedings**, 19: 108–114, 2007.
9. Variance Reduction for the Equation-Free Simulation of Multiscale Stochastic Systems (with I Kevrekidis). **Multiscale Model. Simul.**6(1): 70-89, 2007.
10. Entropy based adaptive particle filter (with S Liverani), **Nonlinear Statistical Signal Processing Workshop, IEEE**, pp 87–90, 2006.
11. Parameter Estimation and Asymptotic Stability in Stochastic Filtering. **Stoch. Proc. Appl.** vol 116: 1048-1065, 2006.
12. A Uniformly Convergent Adaptive Particle Filter. **J. Appl. Probab.**, vol 42(4):1053-1068, 2005.

SUPERVISION

Post-doctoral:

- Dr Kasia Taylor, 2014–2017. Now Senior Risk Modelling Analyst, National Grid.
- Dr Theo Papamarkou, 2014–15. Now lecturer at the University of Glasgow.
- Dr Christophe Ladroue, 2010–12. Now Statistical Programmer at Quantics Biostatistics.

Doctoral:

- Daniel Wilson-Nunn, 2016–present (Department of Statistics, University of Warwick/Alan Turing Institute. Co-supervised with Prof T. Lyons and Dr Hao Ni).
- Ella Kaye, 2016–present (Department of Statistics, University of Warwick/OxWaSP. Co-supervised with Dr J. Brettschneider).
- Yang Zhao, 2014–present (Department of Statistics, University of Warwick).
- Theodoros Manikas 2013–present (Department of Statistics, University of Warwick).
- Fan (Mike) Zhang, 2007–2011 (Center for Scientific Computing, University of Warwick. Co-supervised with Prof A. Stuart). Now Quantitative Modeler at International Monetary Fund.

MSc: I have supervised more than 20 MSc thesis for the Department of Statistics, University of Warwick and 3 MSc thesis for the MSc Programme in Mathematical Finance, University of Warwick.

TEACHING

– I have taught a large and diverse number of undergraduate and post-graduate courses at the University of Warwick, Columbia University and the University of Crete. Subjects include *Stochastic Processes*, *Multivariate Statistics*, *Mathematical Statistics*, *Probability*, *Numerical Methods*, *Numerical Methods for PDEs and Stochastic Simulations*. During my graduate studies at Princeton University, I was the Teaching Assistant for several courses, including *Stochastic Calculus with applications to finance*, *Regression and Applied Time Series*, *Computer Methods for problem solving with JAVA*, *Mathematics in Engineering*.

SERVICE TO COMMUNITY

Editorial Work:

– Guest Editor of *Stochastics: An International Journal of Probability and Stochastic Processes*, vol. 82(1), 2010. Special issue on Filtering and Stochastic Control.

Organisational Work:

– Organiser of the workshop on “Statistics for differential equations driven by rough paths”, University of Warwick, September 2016. The workshop was funded by the CRiSM, University of Warwick and Leverhulme Trust.

– Co-organiser of the workshop on “Stochastic Filtering and Control”, University of Warwick, August 2007. The workshop was funded by EPSRC and was ranked as “outstanding” by the reviewers.

– Organiser of the Midlands Probability Theory Seminar in 2006-07 and 2015-16.

Thesis Examiner:

– External examiner: Philip Paine (PhD, Mathematica Sciences, University of Nottingham, 2015) and Laura Campbell (MPhil, Mathematics, Oxford University, 2010).

– Internal examiner: C. Guo (PhD, Statistics, University of Warwick, 2016), J. Gogala (PhD, Statistics, University of Warwick, 2016), S. Agapiou (PhD, Mathematics, University of Warwick, 2014), D. Kelly (PhD, Mathematics, University of Warwick, 2013), T. Papamarkou (PhD, Statistics, University of Warwick, 2011).

Reviewer for a large number of journals in probability, statistics and applied mathematics. I have also acted as reviewer for grant applications for the NESRC and the NSF.

INSTITUTIONAL RESPONSIBILITIES

– 2014–present: Undergraduate Admissions Officer, Department of Statistics, University of Warwick.

COMMISSIONS OF TRUST

– 2013: NSF Panel Member.