**GEORGIOS KARAGIANNIS**
*Department of Mathematical sciences, University of Durham*
*Stockton Road, Durham, DH1 3LE, UK*
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*Tel: +44(0)1913342718*

## PROFESSIONAL EMPLOYMENT

- Associate professor in Statistics 2021-present
  Department of Mathematical Sciences, University of Durham, UK
- Assistant professor in Statistics 2016-2021
  Department of Mathematical Sciences, University of Durham, UK
- Postdoctoral research associate 2014–2016
  Department of Mathematics, Purdue University, USA
- Postdoctoral research assistant C 2012–2014
  Fundamental & Computational Sciences division, Pacific Northwest National Laboratory, USA
- Research fellow 2011 (short term)
  Centre for Population Change, School of Social Sciences, University of Southampton, UK

## EDUCATION

- PhD in Mathematics (statistics) 2011
  School of Mathematics, University of Bristol, UK

  Thesis title : Annealed Importance Sampling within Reversible Jump Markov chain Monte Carlo algorithm

  Description : In my PhD thesis, I propose a methodology to efficiently implement reversible jump Markov chain Monte Carlo algorithms, applicable for example to model selection problems in the Bayesian framework. I have developed an algorithm which is called 'Annealed importance sampling reversible jump MCMC'. I have demonstrated the performance and properties of the algorithm against challenging Bayesian model uncertainty problems such as Gaussian mixture models, and Poisson change point models.

  Supervisor : Prof Christophe Andrieu

- BSc in Statistics 2005
  Department of Statistics, Athens University of Economics and Business, Greece

  Degree grade : Excellent

- Fellow of the Higher Education Academy (PR153308) 2018
  University of Durham, UK

  Reports:

  - Module 1: Using interactive teaching material in a course related to quantitative methods
  - Module 2: How students achieve deep learning in stats via interactive teaching material

## RESEARCH INTERESTS

- Bayesian statistics
  - >> *Model Selection, Variable Selection, High Dimensionality, Big Data analysis*
- Statistical machine learning, & Uncertainty quantification
  - >> *Computer model calibration (inverse problems),*
  - >> *Gaussian process regression, generalized polynomial chaos,*
- Monte Carlo methods
  - >> *Markov chain Monte Carlo (MCMC), reversible jump MCMC, pseudo-marginal MCMC,*
  - >> *stochastic approximation Monte Carlo, simulated annealing algorithms,*
  - >> *Approximate Bayesian Computations, stochastic gradient MCMC*
- Applications
  - >> *Storm Surge, Ice Sheet, Weather precipitation models & calibration*
  - >> *Carbon Capture models & calibration, Smart Devices, Smart Power Systems*

## PUBLISHED PAPERS IN JOURNALS (PEER REVIEWED)

- Cheng, S., Konomi, B. A., Karagiannis, G., & Kang, E. L. (2024). Recursive nearest neighbor co-kriging models for big multi-fidelity spatial data sets. Environmetrics, e2844.
- Ma, P., Karagiannis, G., Konomi, B.A., Asher, T.G., Toro, G.R. & Cox, A.T. (2022) Multifidelity computer model emulation with high-dimensional output: An application to storm surge. *Journal of the Royal Statistical Society: Series C*, 1–23
- Chang, W., Konomi, B. A., Karagiannis, G., Guan, Y., & Haran, M. (2022). Ice Model Calibration Using Semi-continuous Spatial Data. *Annals of Applied Statistics*.
- Karagiannis, G., Hou, Z., Huang, M., & Lin, G. (2022). Inverse modeling of hydrologic parameters in CLM4 via generalized polynomial chaos in the Bayesian framework. Computation, 10(5), 72.
- Cheng, S., Konomi, B. A., Matthews, J. L., Karagiannis, G., & Kang, E. L. (2021). Hierarchical Bayesian nearest neighbor co-kriging Gaussian process models; an application to intersatellite calibration. *Spatial Statistics*, 100516.
- Konomi, B. A., & Karagiannis, G. (2020). Bayesian analysis of multifidelity computer models with local features and non-nested experimental designs: Application to the WRF model. *Technometrics*, 1-31.
- Karagiannis, G., Hao, W., & Lin, G. (2020). Calibrations and validations of biological models with an application on the renal fibrosis. *International Journal for Numerical Methods in Biomedical Engineering*, 36(5), e3329.
- Karagiannis, G., Konomi, B. A., & Lin, G. (2019). On the Bayesian calibration of expensive computer models with input dependent parameters. *Spatial Statistics*, 34, 100258.
- Alamaniotis, M., & Karagiannis, G. (2019). Application of fuzzy multiplexing of learning Gaussian processes for the interval forecasting of wind speed. *IET Renewable Power Generation*, 14(1), 100-109.
- Karagiannis, G. and Lin, G. (2017). On the Bayesian calibration of computer model mixtures through experimental data, and the design of predictive models. *Journal of Computational Physics*, 342:139 – 160.

- Karagiannis, G., Konomi, B. A., Lin, G., and Liang, F. (2017). Parallel and interacting stochastic approximation annealing algorithms for global optimisation. *Statistics and Computing*, 27(4):927–945.
- Konomi, B. A., Karagiannis, G., Lai, K., and Lin, G. (2017). Bayesian treed calibration: An application to carbon capture with AX sorbent. *Journal of the American Statistical Association*, 112(517):37–53.
- Alamaniotis, M., and Karagiannis, G. (2017). Integration of Gaussian Processes and Particle Swarm Optimization for Very-Short Term Wind Speed Forecasting in Smart Power. *International Journal of Monitoring and Surveillance Technologies Research (IJMSTR)*, 5(3), 1-14.
- Karagiannis, G., Konomi, B. A., and Lin, G. (2015). A Bayesian mixed shrinkage prior procedure for spatial-stochastic basis selection and evaluation of gPC expansions: Applications to elliptic SPDEs. *Journal of Computational Physics*, 284:528 – 546.
- Konomi, B. A., Karagiannis, G., and Lin, G. (2015). On the Bayesian treed multivariate Gaussian process with linear model of coregionalization. *Journal of Statistical Planning and Inference*, 157-158:1 – 15.
- Zhang, B., Konomi, B. A., Sang, H., Karagiannis, G., and Lin, G. (2015). Full scale multi-output Gaussian process emulator with nonseparable auto-covariance functions. *Journal of Computational Physics*, 300:623 – 642.
- Karagiannis, G. and Lin, G. (2014). Selection of polynomial chaos bases via Bayesian model uncertainty methods with applications to sparse approximation of PDEs with stochastic inputs. *Journal of Computational Physics*, 259:114 – 134.
- Konomi, B. A., Karagiannis, G., Sarkar, A., Sun, X., and Lin, G. (2014). Bayesian treed multivariate Gaussian process with adaptive design: Application to a carbon capture unit. *Technometrics*, 56(2):145–158.
- Karagiannis, G. and Andrieu, C. (2013). Annealed importance sampling reversible jump MCMC algorithms. *Journal of Computational and Graphical Statistics*, 22(3):623–648.

## PUBLISHED PAPERS IN CONFERENCES

- Deng, W., Feng, Q., Karagiannis, G., Lin, G., & Liang, F. (2021). Accelerating Convergence of Replica Exchange Stochastic Gradient MCMC via Variance Reduction. *International Conference on Learning Representations (ICLR'21)*.
- Alamaniotis, M., Martinez-Molina, A., & Karagiannis, G. (June 2021). Data Driven Update of Load Forecasts in Smart Power Systems using Fuzzy Fusion of Learning GPs. In 2021 IEEE Madrid PowerTech (pp. 1-6). IEEE.
- Alamaniotis, M., & Karagiannis, G. (September 18-20, 2019) ELM-Fuzzy Method for Automated Decision-Making in Price Directed Electricity Markets. In 2019 16th International Conference on the European Energy Market (EEM) (pp. 1-5). IEEE. Ljublhjana, Slovenia
- Alamaniotis, M., & Karagiannis, G. (June 23-27, 2019). Minute Ahead Wind Speed Forecasting Using a Gaussian Process and Fuzzy Assimilation. In 2019 IEEE. Milan PowerTech (pp. 1-6). IEEE, Milano, Italy
- Alamaniotis, M., Karagiannis, G. (2019). Learning Uncertainty of Wind Speed Forecasting Using a Fuzzy Multiplexer of Gaussian Processes, The 11th Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion, Dubrovik, Croatia.
- Alamaniotis, M., & Karagiannis, G. (2018). Genetic driven multi-relevance vector regression forecasting of hourly wind speed in smart power systems. The Ninth Annual IEEEPES Conference on Innovative Smart Grid Technology North America. Washington, DC, USA, 19-22

- Alamaniotis, M., & Karagiannis, G. (2018, November). Learning uncertainty of wind speed forecasting using a fuzzy multiplexer of Gaussian processes. In Mediterranean Conference on Power Generation, Transmission, Distribution and Energy Conversion (MEDPOWER 2018) (pp. 1-6). IET.
- Nasiakou, A., Alamaniotis, M., Toukalas, L.H. & Karagiannis, G. (August 2017), A Three-Stage Scheme for Consumers' Partitioning Using Hierarchical Clustering Algorithm, 8th International Conference on Information, *Systems and Applications (IISA)*. Larnaca, Cyprus, 6.

## BOOK CHAPTERS

- Alamaniotis, M., & Karagiannis, G. (2023). Toward Smart Energy Systems: The Case of Relevance Vector Regression Models in Hourly Solar Power Forecasting. In Fusion of Machine Learning Paradigms: Theory and Applications (pp. 119-127). Cham: Springer International Publishing.
- Karagiannis, G. P. (2022). Introduction to Bayesian statistical inference. In Uncertainty in Engineering (pp. 1-13). Springer, Cham.

## OTHER RESEARCH OUTPUTS

- Qiu, T., Karagiannis, G., & Lin, G. (August 4, 2016). Model Selection Using Gaussian Mixture Models and Parallel Computing, The Summer Undergraduate Research Fellowship (SURF) Symposium, Paper 142.
- Karagiannis, G. (2011). AISRJMCMC - Annealed Importance Sampling within Reversible Jump Markov Chain Monte Carlo algorithm, PhD thesis, Department of Mathematics, University of Bristol, UK

## EDITORIAL OUTPUTS

- Einbeck J., Drikvandi R. Karagiannis, G. Perrakis, K. (2024, July). Proceedings of the 38th International Workshop on Statistical Modelling. Presented at 38th International Workshop on Statistical Modelling (IWSM), Durham, UK (ISBN: 9780907552444, URL: https://durham-repository.worktribe.com/output/2741031)

## TEACHING

- Spatio-temporal statistics (MATH4341) Michaelmas: 2023, 2024
  Department of Mathematical sciences, University of Durham, UK

  **My role:** Lecturer, and author of the teaching material.

  `https://github.com/georgios-stats/Spatio-Temporal_Statistics_Michaelmas_2023#details`
- Bayesian Statistics III/IV (MATH3341/4031) Michaelmas: 2017, 2019, 2021
  Department of Mathematical sciences, University of Durham, UK

  **My role:** Lecturer, and author of the teaching material.

  `https://github.com/georgios-stats/Bayesian_Statistics_Michaelmas_2021#details`
- Bayesian Statistics III/IV (MATH3341/4031) Epiphany: 2022
  Department of Mathematical sciences, University of Durham, UK

  **My role:** Lecturer

- Topics in Statistics III/IV (MATH3361/40711) Michaelmas: 2018, 2020
  Department of Mathematical sciences, University of Durham, UK

  **My role:** Lecturer, and author of teaching material.
  `https://github.com/georgios-stats/Topics_in_Statistics_Michaelmas_2020#aim`

- Machine Learning and Neural Networks III (MATH3431) Epiphany: 2023, 2024
  Department of Mathematical sciences, University of Durham, UK

  **My role:** Lecturer, and author of the teaching material.
  `https://github.com/georgios-stats/Machine_Learning_and_Neural_Networks_III_Epiphany_2024#details`

- Statistical Methods III (MATH3051) Epiphany: 2021
  Department of Mathematical sciences, University of Durham, UK

  **My role:** Lecturer, and tutor.

- Statistics I (MATH1541) Epiphany: 2017, 2019
  Department of Mathematical sciences, University of Durham, UK

  **My role:** Lecturer, and tutor.

- Introduction to Bayesian statistics (2 lectures course) 2018
  UTOPAE summer school, University of Durham, UK

  **My role:** Lecturer, author of teaching material.
  `https://github.com/georgios-stats/UTOPIAE-Bayes`

- Introduction to Gaussian process regression (2 lectures course) 2016
  Purdue Summer SURF Program, College of Engineering, Purdue University, IN,USA

  **My role:** Lecturer, and author of teaching material.
  `https://github.com/georgios-stats/Intro_GPR_SURF_2016`

## SUPERVISION OF STUDENTS/PROJECTS

Supervision of PhD students

- Yue Zhang 2023-
  Department of Mathematical sciences, University of Durham, UK

  **My role :** PhD supervisor (full)

- Kieran Richards 2018-2022
  Department of Mathematical sciences, University of Durham, UK

  **Thesis title :** Approximate methods for otherwise intractable problems
  **My role :** PhD supervisor (full)

- Ting He 2016-2017
  Department of Mathematical sciences, University of Durham, UK

**My role :** Second PhD supervisor (percentage 10%)

Supervision of MScR (by research) students

- Tingjiao Cui 2022-2024

  Department of Mathematical sciences, University of Durham, UK

  **Thesis title :** Causal Bayesian machine learning to assess the heterogeneous effect of smoking or drinking with mortality: A longitudinal analysis of Chinese Longitudinal Healthy Longevity Study

  **My role :** MScR supervisor (full)

Supervision of MSc students/project

- Heu, X., (2024). HCTM: A High-order Correlation Jointed Transformer Method for Histopathology Image Classification, Master Dissertation (MISCADA). Department of Mathematical Sciences, University of Durham, UK
- Xiong, M., (2024). Bayesian Hierarchical Modelling for Spatiotemporal Financial Data, Master Dissertation (MISCADA). Department of Mathematical Sciences, University of Durham, UK
- Bai, Y., (2024). Effect of Gaussian Noise Intensity on the Training Effectiveness of MNIST Dataset, Master Dissertation (MISCADA). Department of Mathematical Sciences, University of Durham, UK
- Hao, H., (2024). Stock Prediction using GAN with Instagram Sentiment Analysis, Master Dissertation (MISCADA). Department of Mathematical Sciences, University of Durham, UK
- Wang, Z., (2024). A Comparative Analysis of Transformer and GRU Models on Small-Scale Text Classification Tasks Master Dissertation (MISCADA). Department of Mathematical Sciences, University of Durham, UK
- Lin, Z., (2023). The Development of Risk Preferences and Rationality in Chinese Youth: An Application of Bayesian Mixture Modeling, Master Dissertation (MSc in Mathematical Sciences). Department of Mathematical sciences, University of Durham, UK
- Yang, J., (2023). The prediction of bike-sharing repeat usage rate based on the combination of the Linear model, XGBoost, SAR, and spatial Dubin model, Master Dissertation (MSc in Mathematical Sciences). Department of Mathematical sciences, University of Durham, UK
- Porter, T., (2022). Latent Dirichlet Allocation and its application on a real-world dataset, Master Dissertation (MISCADA). Department of Mathematical Sciences, University of Durham, UK
- Wang, X., (2022). Model-based Clustering on High-dimensional Data, Master Dissertation (MISCADA). Department of Mathematical Sciences, University of Durham, UK
- Yu, Q., (2022). Comparison of Three Different Classifiers for Predicting Heart Disease and their Efficiency, Master Dissertation (MISCADA). Department of Mathematical Sciences, University of Durham, UK
- Hocke, J. C., (2021). Efficient Dynamic Nearest Neighbor Gaussian Processes for Large Spatio-Temporal Data, Master Dissertation (MISCADA). Department of Mathematical Sciences, University of Durham, UK
- Vaughan, E.C., (2021). Leveraging spatio-temporal statistics to investigate child labour in India 1971-2001. Master Dissertation (MDS). Department of Mathematical Sciences, University of Durham, UK

- Cramp, R., (2021). Statistical Methods for the Analysis of Geospatial Data. Master Dissertation (MDS). Department of Mathematical Sciences, University of Durham, UK
- Wang, B., (2020). Tuning the Hyperparameters of CNN by Multi-Task Bayesian Optimization. Master Dissertation (MISCADA). Department of Mathematical Sciences, University of Durham, UK.
- Jiang, Z. (2020). Multi-task Bayesian Optimisation with batch sampling. Master Dissertation (MISCADA). Department of Mathematical Sciences, University of Durham, UK.
- Li Y. (2020). Multi-objective Bayesian Optimization Method in the Allocation of Asset Portfolio. Master Dissertation (MISCADA). Department of Mathematical Sciences, University of Durham, UK.
- Yan, K. W., (2019). Methodology for Longitudinal Analysis. Master Dissertation (MSc in Mathematical Sciences). Department of Mathematical sciences, University of Durham, UK

Supervision of internship students/project

- Gözaçan, A., (2020). The Variance Reduction Stochastic Gradient Multitry Monte Carlo algorithm for Machine Learning. Internship technical report. Department of Mathematical Sciences, University of Durham, UK.

  **My role :** Supervisor, and Grant holder

  **Grant :** London Mathematical Society Undergraduate Research Bursaries

  **Comments:** The intern was a student in the University of Durham

- Richards, K., (2017). On the Population Resampling based Stochastic Approximation algorithm for the evaluation of emulators against large data-sets. Internship technical report. Department of Mathematical Sciences, University of Durham, UK.

  **My role :** Supervisor, and Grant holder

  **Grant :** London Mathematical Society Undergraduate Research Bursaries

  **Comments:** The intern was a student in the University of St Andrews

- Naas, J., (2017). MCMC algorithms for the analysis of big data. Internship technical report. Department of Mathematical Sciences, University of Durham, UK.

  **My role :** Supervisor

  **Grant :** IAESTE British Council

  **Comments:** The intern was a student in the Georg-August-Universitat Gottingen

- Qiu, T., (2016). Bayesian Global Optimization with Sequential and Batch Sampling. Summer school poster. The Summer Undergraduate Research Fellowship (SURF) Symposium, Purdue University, IN, USA.

  **My role :** Assistant mentor during my post-doc

Supervision of MMath and BSc students/final projects

- O'Keeffe, J., (2024). Deep Gaussian Processes for Binary Classification. Undergraduate dissertation for MMath. Department of Mathematical Sciences, University of Durham, UK.
- Calafiore, L., (2024). Establishing a Statistical Framework for the Analysis of Individual Playing Styles in Football. Undergraduate dissertation for MMath. Department of Mathematical Sciences, University of Durham, UK.

- Kollard, W., (2024). Forecasting the Directional Movement of a Stock's Realised Volatility Using Recurrent Neural Networks. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Jones, J., (2024). Optimising Deep Neural Networks for Image Classification. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Nielson, J., (2024). Clustering in Gene Expression Analysis. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Goodban, S., (2023). Comparative analysis of decision thresholds and detection limits within radiation dosimetry. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Onno, I., (2023). Analysing the CAP-MEM Clinical Study Data: Using Linear Regression Models, Mediation and Network Analysis. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Poore, M., (2023). Exploring the Effects of Psychiatric Diagnoses and Medication on the Autonomic Nervous System. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
  - Poore M., Onno I., Watson S., Costa T., Hudson L., Einbeck J., Karagiannis G., (2023). Exploring the Effects of Psychiatric Diagnoses Medication on Dysregulation of the Autonomic Nervous System (Findings from an Internship Project on the CAP-MEM Observational Cohort). Poster in 2023 Summer Meeting 23rd-26th July, University of Manchester, UK
- Piekos, J., (2022). Characterising the Shape of the COVID-19 Pandemic (Using Functional Data Analysis). Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Mulligan, A., (2022). Optimizing the Approach for Spatial Prediction of Functional Data. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Kumar, A., (2022). Functional data analysis and kriging. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Turasz, J., (2022). Functional Data Analysis (A statistical analysis on the bond yields of the Federal Reserve System). Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Goodyer, F., (2021). Bayesian Hierarchical Modelling for Spatio-Temporal Data: Models for Point-Referenced Data and Overcoming their Challenges with DNNGPs. Undergraduate dissertation for MMath. Department of Mathematical Sciences, University of Durham, UK.
- Riley, A., (2021). Spatiotemporal Model Formulation and Inference for Epidemiological Applications. Undergraduate dissertation for MMath. Department of Mathematical Sciences, University of Durham, UK.
- Burnford, D., (2021). Bayesian Prediction of Gaussian Spatial Data with the Predictive Process Model. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Cufflin, H., (2021). Bayesian Hierarchical Modelling of Univariate and Multivariate Point-Referenced Spatial Data. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.

- Emelianova, I., (2021). Bayesian hierarchical modelling and analysis of large spatial datasets with Gaussian processes. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Benjamin, A., (2020). The Computational Mathematics Behind Bayesian Neural Networks In Artificial Intelligence. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Worlidge, M., (2019). Bayesian Model Choice Using Reversible Jump Markov Chain Monte Carlo. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Reynolds, D., (2019). Approximate Bayesian Computation for Model Comparison. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Cloran, A., (2019). Bayesian Model Selection. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Mills, J., (2019). Bayesian model comparison for time series. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Howes, A., (2018). Constrained Bayesian Optimization. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Robinson, S., (2018). Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.
- Shaw, C., (2018). Bayesian Global Optimization with Sequential and Batch Sampling. Undergraduate dissertation for BSc. Department of Mathematical Sciences, University of Durham, UK.

## Academic awards and funding

- London Mathematical Society Undergraduate Research 2020
  To supervise a summer project
- London Mathematical Society Undergraduate Research 2017
  To supervise a summer project
- IAESTE British Council 2017
  To supervise a summer project
- Grant award for the participation in the ICERM's IdeaLab program at Brown University 2015
- Young academic award for the participation in the CRiSM workshop on Model Uncertainty 2010
- University of Bristol Postgraduate UK & EU Research Scholarship 2006–2009
- Chalkiopoulos Foundation, Scholarship of Honour 2003–2004

## Academic service & citizenship

- Admissions tutor for the MSc in Mathematics in Durham University 2024-now
- Local organizer for the Academy for PhD Training in Statistics (APTS) Durham week 2024(July)

- Organizing committee member in the International Workshop on Statistical Modelling (IWSM) 2024(July)
- Chair of the North Eastern Local Group of the Royal Statistical Society 2024-now
- Postgraduate admissions representative for the statistics group 2023-now
- External examiner at statistics for the programmes BSc (Hons) Mathematics and MMath in the University of Central Lancashire in the Preston Campus, and for the programme BSc (Hons) Mathematics and Statistics in the the University of Central Lancashire in the Cyprus Campus. 2022-now
- Organizing committee member of the 38th International Workshop on Statistical Modelling (IWSM) in Durham city in UK, 14 to 19 July 2024 2024
- Program committee member for the scientific area "Intelligent Computing and Machine Learning" of the 39th International Conference on Advanced Information Networking and Applications (AINA-2025) Open University of Catalonia, Barcelona, Spain, April 9 -11, 2025 2025
- Program committee member for the scientific area "Intelligent Computing and Machine Learning" of the 38th International Conference on Advanced Information Networking and Applications (AINA-2024) Kitakyushu International Convention Center, Kitakyushu, Japan, April 17-19, 2024 2024
- Local organiser for the Academy for PhD Training in Statistics (APTS) 2023/24 Week 3 in Durham City UK 2024
- The Sixteenth International Conference on Information, Intelligence, Systems and Applications (IISA 2025), Mytilene, Island of Lesbos, Greece, July 10-12, 2025 2025
- The Fifteenth International Conference on Information, Intelligence, Systems and Applications (IISA 2024), Grand Arsenali, Chania, Crete, Greece, July 17-20, 2024 2024
- Judge for the American Statistical Association SBSS Student Paper Competition 2022, 2023
- Co-organizer as Finance chair (Treasurer) and Registration chair of "ICTAI: IEEE 32nd International Conference on Tools with Artificial Intelligence" 2020
- Area chair (machine learning), and reviewer of "ICTAI: IEEE 30th & 31th International Conference on Tools with Artificial Intelligence" 2018, 19, 22
- Organizer of the "Statistics seminar" at Dept. of Mathematical sciences, University of Durham 2017-2020
- Member of the local organising committee of the "Royal Statistical Society North Eastern Local Group" 2016-2023
- Examiner in a PhD VIVA in the Dept of Mathematical Sciences, University of Durham, UK 2018
- Member of the task force developing the courses and curriculum of new programs
  - BSc/MMath Mathematics and Statistics (G111/G114) 2019
  - MSc Scientific Computing and Data Analysis (G5K609) 2018
- Reviewer in research proposals for grants
  - Reviewer in Research Council UKRI grant proposal (Ref: ***) for 5-year research 2020

- London Mathematical Society Undergraduate Research Bursaries 2018, 2019

- Reviewer at Journals & Conferences

  Journal of Computational and Graphical Statistics (Journal) ● Journal of Royal Statistical Society Series A (Journal) ● Statistics and Computing (Journal) ● Scientific Reports ● International Journal for Uncertainty Quantification (Journal) ● Journal of Applied Statistics ● Statistical Analysis and Data Mining (Journal) ● International Journal of Monitoring and Surveillance Technologies Research (Journal) ● International Journal on Artificial Intelligence Tools (Journal) ● Informatics (Journal) ● Applied sciences (Journal) ● Formal aspects of computing (Journal) ● 7th International Conference on Information, Intelligence, Systems and Applications (Conference) ● International Journal of Forecasting (Journal)

- Member of the editorial board in the ES Materials and Manufacturing (ESMM) journal 2020-2021

## CONFERENCES, WORKSHOPS, SEMINARS, ETC...

- Participation in the long research programme "Uncertainty Quantification and AI for Complex Systems March 3 - May 23, 2025", Institute for Mathematical and Statistical Innovation, The University of Chicago, IL, USA. 2025
- UQSay seminar, Univ. Paris-Saclay 2023
- SIAM Conference on Uncertainty Quantification (UQ22), Atlanta, GA / USA 2022
- Departmental colloquium, Department Mathematical Sciences, University of Cincinnati, OH, USA 2020
- Departmental seminar, Department of Electrical and Computer Engineering, UTSA, TX, USA 2020
- Statistics seminar, Department of Statistics, Athens University of Economics and Business, Greece 2019
- International conference in European energy market, Ljubljana, Slovenia 2019
- 13th IEEE PowerTech 2019, Bovisa Campus of Politecnico di Milano, Italy 2019
- Durham mathematical society undergraduate colloquium in Durham, UK 2019
- SAMSI program in Model Uncertainty: Mathematical and Statistical (MUMS), SAMSI, NC, USA 2018
- International Society for Bayesian Analysis meeting (ISBA2018), Edinburgh, UK 2018
- SIAM Conference on Uncertainty Quantification (UQ18), Garden Grove, California, USA 2018
- Workshop on the Current Trends and Challenges in Data Science and Uncertainty Quantification, Purdue University, Indiana, USA 2018
- ACMS Department Colloquium, University of Notre Dame, Indiana, USA 2016
- ASA Joint Statistical Meetings (JSM), Seattle, Washinghton, USA 2015
- IdeaLab program, ICERM, Brown University, Rhode Island, USA 2015
- 22nd ASA/IMS Spring Research Conference, Cincinnati, Ohio, USA 2015
- UC Math Department Colloquium, University of Cincinnati, Ohio, USA 2015
- PNNL post-doc symposium, Pacific National Northwestern Laboratory, Washington, USA 2014

- CRiSM model uncertainty workshop, University of Warwick, UK 2010
- Greek stochastics $\alpha'$ Monte Carlo: Probability and Methods, Lefkada, Greece 2009
- Research students conference in probability and statistics, University of Lancaster, UK 2009

## PROFESSIONAL MEMBERSHIPS

- The Royal Statistical Society (RSS)
- Society for Industrial and Applied Mathematics (SIAM)
- IEEE