Dr. Azadeh Khaleghi

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✉ Mathematics & Statistics
Fylde College, Lancaster University
LA14YF, Lancaster, UK.

CURRENT POSITION

- **Sep 2015 - Present : Assistant Professor of Statistics, Mathematics & Statistics, Lancaster University, UK**

EDUCATION & PREVIOUS POSITIONS

- **2013 – 2015: Postdoctoral Scholar, Mines ParisTech/Curie Institute, Paris, France.**

- **2010 – 2013: Ph.D. Mathematics, Université de Lille I & INRIA, Lille, France.**

- **Jun – Sep 2013: Graduate Summer Intern, Walt Disney Animation Studios, Burbank, CA, USA**

- **2007 – 2009: MSc. Electrical & Computer Engineering, University of Toronto, Toronto, Canada.**

- **2003 – 2007: BSc. Electrical & Computer Engineering, University of Toronto, Toronto, Canada.**

ACHIEVEMENTS & AWARDS

- **2019/20:** Google Faculty Research Award, USD 58000

- **2019/20:** Lancaster University Department of Mathematics & Statistics Tower of Teaching Award Nominee

- **2019:** London Mathematical Society (LMS) Scheme 4 Grant, £4000

- **2017:** Adobe Research Grant, USD 15000

- **2017:** London Mathematical Society (LMS) Scheme 1 Grant, £600

- **2016:** Certificates of the Higher Education Academy (PG-CAP I-II) Teaching Qualifications

- **2015:** French Research & Teaching Qualifications

- **2013:** E. M. Gold Award for the best paper at the ALT International Conference

- **2013:** PhD at INRIA – Université de Lille I with distinction (mention "très honorable")

- **2010:** INRIA Doctoral Grant

- **2006 – 2009:** University of Toronto MSc Fellowship, NSERC Undergraduate Research Award, University of Toronto's Faculty Undergraduate Research Award

RESEARCH VISITS

- **Feb – Mar 2020: Gabor Lugosi**, Department of Economics, Pompeu Fabra University, Barcelona, Spain

- **Jan – Feb 2020: Olivier Collier**, Laboratoire Modal'X, Université Paris-Nanterre, Paris, France

- **Feb – Mar 2018: Statistical Scalability Programme, Isaac Newton Institute for Mathematical Sciences**, Cambridge University, Cambridge, UK

NOTABLE PRESENTATIONS

- **Sep 2020:** **Symposium on Machine Learning and Dynamical Systems, Fields Institute for Research in Mathematical Sciences**, Toronto, Canada
- **Feb 2020:** **Pompeu Fabra University**, Department of Economics, Barcelona, Spain
- **Sep 2019:** **Data, Learning and Inference (DALI) Meeting**, San Sebastian, Spain
- **Mar 2019:** **Université Paris-Nanterre**, Laboratoire Modal'X, Paris, France
- **Apr 2018:** **Isaac Newton Institute (INI) for Mathematical Sciences**, Workshop on heterogeneity, model misspecification and changepoints, Cambridge/Windermere, UK
- **Feb 2018:** **University of Cambridge**, Statistical Laboratory, Cambridge, UK
- **Feb 2018:** **University of Warwick**, Department of Statistics, Coventry, UK
- **Jul 2017:** **ISI2017 61st World Statistics Congress**, Marrakech, Morocco
- **Apr 2017:** **Adobe Research**, San Jose, CA, USA
- **Mar 2017:** **University of Bristol**, School of Mathematics, Bristol, UK
- **Sep 2016:** **Royal Statistical Society (RSS) Conference**, Manchester, UK
- **Jun 2014:** **International Conference on Machine Learning (ICML)**, Beijing, China
- **Mar 2014:** **Ergodic Theory and Dynamical Systems Workshop**, UNC Chapel Hill, NC, USA

WORKSHOPS ORGANIZED

- **Sep 2019:** *Multi Armed Bandits*, at Imperial College, London
- **May 2018:** *Lancaster Probability Days*, at Lancaster University
- **Dec 2017:** *NeurIPS 2017 Time-Series Workshop*, at the NeurIPS international conference, LB, CA, USA
- **Mar 2017:** *Statistical Learning Workshop*, at Lancaster University
- **Dec 2016:** *NeurIPS 2016 Time-Series Workshop*, at the NeurIPS international conference, Barcelona, Spain
- **Dec 2015:** *NeurIPS 2015 Time-Series Workshop*, at the NeurIPS international conference, Montreal, Canada

TEACHING

- **Machine Learning (MATH336):** Lancaster University 2016 – present
  - Designed the course as a new addition to the curriculum upon the Department's request.
  - Topics: Mathematical foundations of **Statistical Learning Theory**, feasibility of learning, theory of generalization, probabilistic framework for learning, Bayes optimal predictor, Empirical Risk Minimization, VC-theory.

- **Probability & Stochastic Processes (STOR602ii):** Lancaster University, 2019
  - Designed the course as part of the new curriculum design for the Doctoral Training Center.
  - Topics: Fast-paced introduction to **measure-theoretic probability** geared towards the needs of prospective statistics PhD students at the Doctoral Training Center.

- **Probability & Stochastic Processes (MATH580 / STOR602i):** Lancaster University, 2015 – 2018
  - Introduction to probability *service course* for finance students.

- **Project Skills (MATH390/MATH240):** Lancaster University, 2015 – present

- **MSc/MSci Supervision:** Lancaster University, 2015 – present

ADMINISTRATIVE RESPONSIBILITIES

■ **Sep 2020 – present: APTS Executive Committee Member**

- Contribute to the curriculum design the Academy for PhD Training in Statistics (APTS), a collaboration between major UK statistics research groups to organize courses for first-year PhD students in statistics and applied probability nationally.
  Remark. From 2018 to 2020 I served on the APTS Advisory Committee, and organized an APTS Week, a Statistics "Summer School" which to take place at Lancaster University in July 2020.

■ **Oct 2015 – present: Early Career Research Representative**

- Represent early career staff at the Department's Research Committee meetings.

■ **Oct 2015 – present: Lancaster University Open Day Female Representative**

- Represent the Department at Undergraduate Open Days to increase awareness around women's achievements in mathematical sciences and to encourage women and minority groups to consider careers in mathematics.

■ **Oct 2019 – present: Equality and Diversity Committee Member**

- Contribute to the Department's policies on actively promoting equal opportunities, as well as high-quality and inclusive learning and working experiences for all, and ensuring appropriate procedures for fairness in assessment and treatment.

■ **Oct 2018 – Sep 2019: Postgraduate Research Tutor**

- Contributed to decisions on PhD admissions, coordinated the regular progress reviews of PhD students, and monitored the results of the 1 year confirmation panels.

■ **Oct 2017 - Sep 2019: Head of Computing Committee**

- Represented the Department at the Faculty of Science and Technology's forum on computing policies, needs and objectives.

OTHER SKILLS

■ **Programming**

Python, Matlab, R, C/C++

■ **Languages**

■ **English:** Native   ■ **French:** Bilingual level
■ **Music**

■ **Classical Piano:** Able to play at Canada's RCM Gr-10 Standard

PUBLICATIONS & PREPRINTS

- S. Grünewälder, **A. Khaleghi**, Oblivious Data for Fairness with Kernels, arXiv:2002.02901.

- **A. Khaleghi**, D. Ryabko, Clustering piecewise stationary processes, In Proceedings of the IEEE International Symposium on Information Theory, 2020.

- S. Grünewälder, **A. Khaleghi**, Approximations of the Restless Bandit Problem, Journal of Machine Learning Research, 20:1–37, 2019.

- **A. Khaleghi**, D. Ryabko, J. Mary, P. Preux, Consistent Algorithms for Clustering Time Series, Journal of Machine Learning Research, 17(3):1–32, 2016.

- **A. Khaleghi**, D. Ryabko, Nonparametric Multiple Change Point Estimation in Highly Dependent Time Series, Theoretical Computer Science, 620:119–133, 2016.

- **A. Khaleghi**, D. Ryabko, Asymptotically Consistent Estimation of the Number of Change Points in Highly Dependent Time Series In Proceedings of the International Conference on Machine Learning, 2014.

- **A. Khaleghi**, D. Ryabko, Locating Changes in Highly–Dependent Data with an Unknown Number of Change–Points, In Proceedings of Neural Information Processing Systems, 2012.

- **A. Khaleghi**, D. Ryabko, J. Mary, P. Preux, Online Clustering of Processes, In Proceedings of Artificial Intelligence & Statistics, 2012.

- **A. Khaleghi**, D. Silva, F. R. Kschischang, Subspace Codes, Lecture Notes in Computer Science, 2009.

- **A. Khaleghi**, F. R. Kschischang, Projective Space Codes for the Injection Metric, In Proceedings of the Canadian Workshop on Information Theory 2009.