

CURRICULUM VITAE

GIACOMO ZANELLA

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BOCCONI INSTITUTE FOR DATA SCIENCE AND ANALYTICS
VIA ROENTGEN 1, MILAN, ITALY
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EMPLOYMENT

- 2019 - present **Assistant Professor in Statistics** at **Bocconi University**, Department of Decision Sciences.
- 2016 - 2019 **Post-Doctoral Researcher** in Statistics at **Bocconi University**, funded by the European Research Council grant “New Directions in Bayesian NonParametrics”.
- 2016 - present **Affiliated** to the De Castro statistics initiative at the Collegio Carlo Alberto (Turin, Italy), the Bocconi Institute for Data Science and Analytics (BIDSA) and the Innocenzo Gasparini Institute for Economics research (IGIER).
- 2015 - 2016 **EPSRC Doctoral Prize fellow** in the Mathematical Sciences at the **University of Warwick** (UK), Department of Statistics. Academic sponsor: **Gareth O. Roberts**. The Engineering and Physical Sciences Research Council (EPSRC) Doctoral Prize is a prestigious scheme aimed to “recruit the best PhD students receiving EPSRC support” and “to improve retention of the very best students in research careers” (EPSRC website).

EDUCATION

- 2012 - 2015 **PhD in Statistics** at the **University of Warwick**. Supervisor: **Wilfrid S. Kendall**. Thesis title: Bayesian complementary clustering, MCMC and Anglo-Saxon place-names. PhD Viva: January 2016. Examiners: Victor Panaretos (EPFL), Yee Whye Teh (Oxford).
- 2012 Visiting student at **Chalmers University of Technology**, Goteborg, Sweden.
- 2010 - 2012 **Master degree in Mathematics, 110/110 cum laude**, Grade Average 29.7/30. University of Milan (Università degli Studi di Milano), Italy. Master thesis: *Branching-Stable Point Processes*. Supervisors: V.Capasso, S.Zuyev.
- 2007 - 2010 **Bachelor degree in Mathematics, 110/110 cum laude**, Grade Average: 29.0/30. University of Milan, Italy. Thesis: *Maps and plans in optimal transportation theory*.
- 2005 - 2006 Exchange year (4th year of High School) at **St. Dominic’s High School**, London, UK.
- 2002 - 2007 **Scientific High School** (Liceo Sacro Cuore), Milan, Italy. Final score: **100/100**.

TEACHING AND SUPERVISION EXPERIENCE

- 2021 - present **Course Director:** Advanced Computational Statistics. Bocconi University, PhD School
- 2021 - present **Lecturer:** Bayesian Theory I. Bocconi University, PhD School
- 2020 **Course Director:** Introduction to Statistics. Bocconi University, PhD School
- 2019 - present **Lecturer:** Machine Learning II. Bocconi University, M.Sc School
- 2018 - present **Course Director:** Applied Stochastic Processes. Bocconi University, BSc School
- 2017 - present **Lecturer:** Bayesian Statistical methods. Bocconi University, M.Sc School
- 2016 - 2019 **Lecturer:** Mathematics&Statistics: Module 2. Bocconi University, BSc School
- 2017 - present **Supervision** of BSc., M.Sc. and PhD students. Bocconi University.
- 2015 Teaching Assistant: ABS2015 Summer School for PhD students. Como, Italy
- 2013 - 2015 Teaching Assistant: Applied Stochastic Processes. University of Warwick, BSc School
- 2012 - 2015 Teaching Assistant: Probability Theory. University of Warwick, BSc School

PAPERS PUBLISHED OR UNDER REVISION

- S. Livingstone and G. Zanella (2021+) **On the robustness of gradient-based MCMC algorithms.** *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, *In press*.
- B. Betancourt, G. Zanella and R. Steorts (2021+) **Random Partition Models for Microclustering Tasks.** *Journal of the American Statistical Association (T&M)*, *In press*.
- G. Zanella and G.O. Roberts (2021+) **Multilevel linear models, Gibbs samplers and multigrid decompositions.** *Bayesian Analysis (with discussion)*, *in press*.
- M. Hird, S. Livingstone, G. Zanella (2021) **A fresh take on 'Barker dynamics' for MCMC.** *Proceedings of MCQMC2020 (forthcoming)*
- O. Papaspiliopoulos, G. Roberts, and G. Zanella (2020) **Scalable inferences for crossed random effect models.** *Biometrika*, *107(1)*, 25-40.
- G. Zanella (2020) **Informed proposals for local MCMC in discrete spaces.** *Journal of the American Statistical Association (T&M)*, *115(530)*, 852-865.
- G. Zanella and G. Roberts (2019) **Scalable importance tempering and Bayesian variable selection.** *Journal of the Royal Statistical Society: Series B (Statistical Methodology)*, *81(3)*, 489-517.
- A. Lee, S. Tiberi and G. Zanella (2019) **Unbiased approximations of products of expectations.** *Biometrika*, *106(3)*, 708-715.
- G. Zanella, M. Bedard, W. Kendall (2017) **A Dirichlet form approach to MCMC Optimal Scaling.** *Stochastic Processes and their Applications*. 127(12), 4053-4082.
- G. Zanella, B. Betancourt, J. Miller, H. Wallach, A. Zaidi, R. Steorts (2016) **Flexible Models for Microclustering with Applications to Entity Resolution.** *Advances in Neural Information Processing Systems (NIPS)* 27, 1417-1425.
- G. Zanella (2015) **Random partition models and complementary clustering of Anglo-Saxon place-names,** *Annals of Applied Statistics*. 9(4), 1792-1822.
- G. Zanella and S. Zuyev (2015) **Branching-Stable point processes,** *Electronic Journal of Probability*. 20 (119), 1-26.
- D. Bissacco, V. Catanese, A. Fossati, S. Salvati, M. Carmo, G. Zanella and P. Settembrini (2015) **Effect of Chronic Kidney Disease on Long-Term Survival in Asymptomatic Patients Undergoing Carotid Endarterectomy.** *Journal of Vascular Surgery*, 61(6):67S.

TECHNICAL REPORTS AND PAPERS UNDER REVIEW

- O. Papaspiliopoulos, T. Stumpf-Fétizon and G. Zanella. **Scalable computation for Bayesian hierarchical models.** arXiv preprint arXiv:2103.10875
- A. Fasano, D. Durante and G. Zanella. **Scalable and Accurate Variational Bayes for High-Dimensional Binary Regression Models.** arXiv preprint arXiv:1911.06743
- O. Papaspiliopoulos and G. Zanella. **A note on MCMC for nested multilevel regression models via belief propagation.** ArXiv preprint at arXiv:1704.06064

INVITED PRESENTATIONS

Conferences, workshops and seminars (selection): ESSEC Business School (2022/TBD); University of Padova, Department of Statistical Sciences (2021/12); King's College, Department of Mathematics (2021/12); Joint Statistical Meetings, Washington State (2021/08); ISBA Conference (2021/07); U. of Bristol, Mathematics (2021/03); BayesComp 2020, U. of Florida, (2020/01); Probabilistic Coupling and Geometry Workshop, U. of Warwick (2019/12); European Meeting of Statisticians, Palermo (2019/07); Texas A&M, Statistics (2019/02); Purdue, Statistics (2019/02); Duke, Statistical Science (2019/01); U. of Toronto, Statistical Science (2019/01); U. of Cambridge, StatsLab (2019/01); CIRM Masterclass in Bayesian Statistics, Luminy (2018/10); EPFL, Mathematics (2018/03); BayesComp 2018; U. of Southampton, Mathematical Sciences (2017/12); ERCIM 2017 (2017/10); LMS Symposium on Markov Processes, Durham (2017/07); Greek Stochastics, Milos (2017/07); BISP10, Milan (2017/07)

FELLOWSHIPS AND AWARDS

2020 & 2021	Bocconi Research Excellence Award. Bocconi University.
2020	National Scientific Qualification as Associate Professor in Statistics
2018	Marie Skłodowska-Curie Actions Seal of Excellence , for an Individual Fellowship application (certificate awarded to applications scoring above 85%)
2017	Savage Award (Honorable Mention). International Society for Bayesian Analysis.
2017	John Copas Prize in Statistics (for best PhD thesis). Faculty of Science of the University of Warwick
2015 - 2016	PI in a UK EPSRC grant. Project title: MCMC theory for discrete spaces. Duration: 12 months. Funding: 39.868£
2015	Giving to Warwick Prize (for outstanding teaching contributions). Department of Statistics. University of Warwick.
2014 - 2016	Junior Travel Award for ISBA 2014, MCMSki V (2015) and ISBA 2016 conferences.
2014	Honourable mention for poster , MCMSki IV conference.
2013	Warwick Awards for Teaching Excellence (nomination). University of Warwick.
2012 - 2015	Center for Research in Statistical Methodology (CRiSM) PhD studentship
2008 - 2010	Incentives for students enrolled in Chemistry, Physics and Mathematics degree. Award assigned by the University of Milan
2007	Merit scholarship from INdAM (National Institute of High Mathematics). Monetary award (4k per year) assigned through national examination to 40 students in Mathematics across all Italy.

OTHER ACADEMIC ACTIVITIES AND INSTITUTIONAL RESPONSIBILITIES

2020 - present	Associate Editor for <i>Statistical Science</i>
2020 - 2021	Member of the Seminar on Stochastic Processes (SSP 2021) tutorial committee
2020 - present	Board member of the Ph.D. in Statistics and Computer Science. Bocconi University
2019 - present	Co-organizer of the Statistics Seminar Series of Bocconi University.
2020	Co-organizer of the Webinar Series “Junior Bayes Beyond the Borders”, sponsored by ISBA.
2018	Organizer of invited session on “Scalable Inferences for Hierarchical Models” at BayesComp2018, UPF, Barcelona, Spain.
2015 - present	Reviewer for (selected): Journal of the Royal Statistical Society (series B); Annals of Statistics, Biometrika; Journal of the American Statistical Association; Statistical Science; Bayesian Analysis; Annals of Applied Statistics; Statistics and Computing; Journal of Computational and Graphical Statistics; Computational Statistics & Data Analysis; Journal of Machine Learning Research.
2014 - present	Visiting research periods at the Athens University of Economics and Business, University of Warwick, Duke University, Chalmers University of Technology
2017	Invited participant to the Isaac Newton Institute scientific programme on “Scalable inference; statistical, algorithmic, computational aspects”, University of Cambridge, UK.
2016-2017	Referee for Neural Information Processing Systems (NIPS) and International Conference on Machine Learning (ICML) conference proceedings.

IT SKILLS

R, Python, C, MatLab, Maple, Wolfram Mathematica, **LaTeX**, Microsoft Office Programs, Adobe Photoshop.

LANGUAGES

Italian (mother tongue); **English** (fluent). **IELTS certificate with band score 8.0/9** (July 2012).