

Botond Szabo — Curriculum Vitae

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Personal Data

Full name: Botond Tibor Szabo

Date of birth: 4th of June, 1985

Place of birth: Marosvásárhely, Romania

Citizenship: Hungarian

Marital status: married (children: two girls and one boy)

Research Interest

Statistics (Nonparametric Bayesian Statistics, Adaptation, Asymptotic Statistics, Bayesian statistics, Scalable statistical methods, Causal inference, Uncertainty quantification), Machine learning (variational inference, distributed methods, deep learning), Inverse problems (pde constrained inverse problems), Information theory.

Current Position

Associate Professor (tenured)

Bocconi University, Department of Decision Sciences

September 2021 to present

Milano, Italy.

Fellow

Bocconi Institute for Data Science and Analytics (BIDSA)

October 2021 to present

Milano, Italy.

Past Positions

Associate Professor (tenured)

Vrije Universiteit Amsterdam, Department of Mathematics

September 2020 to September 2021

Amsterdam, The Netherlands.

Associate Professor

University of Leiden, Institute of Mathematics

January 2019 to September 2020

Leiden, The Netherlands.

Assistant Professor

University of Leiden, Institute of Mathematics

February 2016 to December 2018

Leiden, The Netherlands.

Postdoctoral Researcher

University of Amsterdam, Department of Mathematics

Supervisor: Harry van Zanten

February 2015 to February 2016

Amsterdam, The Netherlands.

Assistant Professor

Budapest University of Technology, Department of Stochastics

September 2014 to October 2017

Budapest, Hungary.

Postdoctoral Associate

Center for Research in Economics and Statistics

Supervisor: Judith Rousseau.

March 2014 to August 2014

Paris, France.

Research Assistant

Vrije University Amsterdam, Department of Mathematics
Supervisor: Harry van Zanten.

April 2009 to August 2009

Amsterdam, The Netherlands.

Education

Ph.D.**Eindhoven University of Technology (TU/e)**

Field: Mathematical Statistics.

Thesis: *Adaptation and confidence in nonparametric Bayes.*

Advisers: Prof.dr. Harry van Zanten and Prof.dr. Aad van der Vaart.

February 2010 to February 2014

Eindhoven, The Netherlands

Diploma (B.Sc. and M.Sc.),**Eötvös Loránd University (ELTE)**

Applied Mathematics (Final grade: 5 (out of 5))

Minor: Statistics, Stochastic Processes, Actuarial Science, Finance, Operation research.

Thesis: *Bayesian adaptation using conditionally Gaussian priors.*

Advisers: dr. Vilmos Prokaj, Prof.dr. Harry van Zanten and Prof.dr. Aad van der Vaart.

September 2004 to June 2010

Budapest, Hungary

M.Sc.,**VU University Amsterdam**

Stochastics and Financial Mathematics (cum laude)

Minor: Portfolio Theory, Statistical Genetics, Financial Mathematics.

Thesis: *Bayesian adaptation using conditionally Gaussian priors.*

Advisers: Prof.dr. Harry van Zanten, Prof.dr. Aad van der Vaart.

September 2008 to July 2009

Amsterdam, The Netherlands

Longer Research Visits

Visiting Professor

Collegio Carlo Alberto, Department of Statistics

Host: Matteo Ruggiero.

Tasks: Giving a short course on the asymptotic properties of Bayesian methods.

December 2019

Torino, Italy.

Fellow

Harvard University, Department of Statistics

Collaborator: Natesh Pillai.

Topics: Bayesian post selection inference; Fundamental understanding of distributed methods.

September 2018 to October 2018

Cambridge, United States.

Visiting Researcher

University of Sydney, Department of Statistics

Collaborator: Lamiae Azizi.

Tasks: Giving a short course on the asymptotic properties of Bayesian methods; talk at the research seminar, working on the theoretical validation of various Bayesian methodologies.

April 2017

Sydney, Australia.

Visiting PhD-Student

Cambridge University, Statistics Laboratory

Supervisor: Richard Nickl.

Topic: Adaptive and honest confidence sets.

December 2013 to February 2014

Cambridge, United Kingdom.

Shorter Research visits

Cambridge (Richard Nickl), Chicago (Chao Gao), Harvard (Natesh Pillai), Kings College London (Kolyan Ray), Oxford (Judith Rousseau), Padova (Antonio Canale), Paris Dauphin (Judith Rousseau), Paris Sorbonne (Ismael Castillo)

Supervision of Postdocs

- Thibault Randrianarisoa (Bocconi, 2022-2024)
- Bernhard Stankewitz (Bocconi, 2023-)
- Yichen Zhu (Bocconi, 2023-)

Supervision of PhD Students

- Nicola Gorini (Bocconi, jointly with Carlo Baldassi, co-supervisor), 2024-
- Francesco Pozza (Padua, jointly with Daniele Durante and Bruno Scarpa, co-supervisor), 2021-2023
- Dennis Niemann (VU Amsterdam, jointly with Harry van Zanten, promotor), 2020-
- Lasse Vuursteen (Delft, jointly with Aad van der Vaart and Harry van Zanten, promotor), 2019-2024
- Geerten Koers (Delft, jointly with Aad van der Vaart, promotor), 2019-2023
- Azeem Zaman (Harvard, supervised one thesis project, informal advisory role), 2018-2022
- Stefan Franssen (Delft, jointly with Aad van der Vaart, promotor), 2018-2023
- Wouter Loon (Leiden, jointly with Mark van der Rooij and Marjolein Fokkema, co-promotor), 2017-
- Amine Hadji (Leiden, jointly with Aad van der Vaart, co-promotor), 2016-2022
- Stéphanie van der Pas (Leiden, supervised two thesis projects jointly with Aad van der Vaart, informal advisory role), 2015-2017

PhD thesis committee

Aimilia Savva (University of Cyprus, 2023), Geerten Koers (TU Delft, 2023), Stefan Franssen (TU Delft, 2023), Amine Hadji (Leiden University, 2023), Francesco Gaffi (Bocconi University, 2023), Thibault Randrianarisoa (Sorbonne University, 2022), Azeem Zaman (Harvard University 2022), Magnus Munch (Leiden University, 2021), Amenah AL-Najafi (University of Szeged, 2021), Jenovah Rodrigues (University of Edinburgh, 2020), Dong Yan (Leiden University, 2020), Nurzhan Nurushev (VU Amsterdam, 2019).

Associate Editor

- Annals of Statistics (2022-)
- Bayesian Analysis (2016-)
- Journal of Statistical Planning and Inference (2017-2021)

Referee Service

Grant proposal reviewer: ERC (European Research Council), FWF (Austrian Science Fund), OTKA (Hungarian Science Fund); FONDECYT (Chilean Science Fund)

Conference reviewer: NeurIPS (2016, 2020), ICLR (2023)

Journal reviewer: The American Statistician; Annales de l'Institut Henri Poincaré; Annals of Statistics; Bernoulli; Biometrika; Bayesian Analysis; Electronic Journal of Statistics; IEEE Transactions on Information Theory, Information and Inference: A Journal of the IMA; Inverse Problems; Journal of American Statistical Association; Journal of Business and Economic Statistics; Journal of Machine Learning Research; Journal of Multivariate Analysis; Journal of Royal Statistical Society B; Journal of Statistical Planning and Inference; Mathematics of Computation; Mathematical Reviews; Probability Theory and Related Fields; Sankhya - The Indian Journal of Statistics; Scandinavian Journal of Statistics; SIAM/ASA Journal on Uncertainty Quantification; SIAM Journal on Mathematics of Data Science; Statistical Science; Statistics Surveys; Stochastic Processes and their Applications, Synthese

Organization Service

Scientific Program Committees:

- Bayesian Nonparametrics (BNP) Conference 2025 conference in Irvine, California
- EURANDOM 25th anniversary meeting (2024)
- International Society of Bayesian Analysis (ISBA) World Meeting 2022 conference in Montreal (chair)
- Institute of Mathematical Statistics (IMS) World congress 2022 (Contributed Talk Program Committee)
- 1st Bayesian Nonparametrics network workshop 2022 in Cyprus
- 22nd European Young Statisticians Meeting 2021 in Athene (International Organizing Committee)
- 1st International Conference on Econometrics and Statistics (EcoSta) 2018 conference in Hong Kong

Seminar Organizations:

- Interdisciplinary seminar between Physicists, Cosmologists and Statisticians (2019 -2021)
- (International) Bayes club (2017-)
- LUXs seminar (2019 - 2020).
- Reading group: statistics for astronomy (2020)
- Statistics for Structures Seminar/Thematic Statistics Seminar (2015 - 2022)

Local/Scientific organizers of Workshops/conferences:

- "Workshop on Theory for Scalable, Modern Statistical Methods" in 2023
- 60th Birthday conference for Aad van der Vaart in 2019.
- Young European Statisticians (YES) X workshop on "Deep learning" in 2019.
- YES IX workshop on "Scalable statistical methods" in 2018.
- Lorentz center workshop on "Uncertainty quantification in complex, nonparametric statistical models" in 2018.
- YES VIII (Young European Statistician) workshop on "Uncertainty quantification" in 2017.

Administrative service

- Member of various committees at Bocconi (PhD faculty board, PhD executive committee, several PhD and postdoc admission committee, visiting students initiative) (2022-)
- International Society of Bayesian Analysis (ISBA) Vice Chair, Program Chair, Past Chair (2020-2022)
- Member of various committees for ISBA: Savage Award Committee (2022-2023), Lindley Prize Committee (2023-2024), Prize Committee (2024-2026)

- Member of the European Regional Committee (ERC) of the Bernoulli Society (2021-2025)
- Board member and webmaster of the Mathematical statistics section of the (Dutch) Association for Statistics and Operations Research (VvSOR) (2017 - 2020)
- Coordinator of MiDaS (Complex Data Modeling Research Network (MiDaS)) (2020-2021)
- Member of the Board of Examiners of the Mathematics and Business Analytics master and bachelor programs at Vrije Universiteit (VU) Amsterdam (2021)
- Information and Representation Committee at VU Amsterdam (2020-2021)
- Secretary of the Board of Examiners of the Statistical Science master at Leiden University (2019 - 2020)

Grants

- "European Research Council (ERC) Starting Grant 2021" (1.492.500 euro).
- "Innovational Research Incentives Scheme VENI 2016" (250.000 euro).
- "Institute of Mathematical Statistics IMS Travel Award 2016" (700 dollar).
- "New Researcher Travel Grant for ISBA 2016", (1000 euro).
- "Junior Travel Award for ISBA 2014", (250 euro).
- "World Meeting of the International Society for Bayesian Analysis Early Career Researchers Travel Grant 2012", (500 euro).

Awards and Prizes

- "Research Ceremony Award 2023" (Bocconi University)
- "Research Profile Award (Bocconi University)" for 2022-24, 2024-2026.
- "Excellence in Research Award (Bocconi University)" in 2022, 2023.
- "L'Espresso: I professori del pianeta Stemm 2023" Included in the list of 10 "Emerging professors in science, technology, technology and physics in Italy" in 2023 by the magazine L'Espresso.
- "Savage Award in Theory & Methods: Honorable Mention" (Runner up for the best PhD dissertation in the field of Bayesian statistics and econometrics in the category Theory & Methods 2016).
- "Van Zwet Award" (Award for the best PhD dissertation in the Netherlands in Statistics and Operation Research 2015).
- Hungarian Students' Scholarly Circle (OTDK) first prize in the local (2009), second prize in the national (2011) competition. Title: *Investigating the boundedness property of direction-length mixed graphs*. Supervisor: Dr. Tibor Jordán.
- "Excellent student of the faculty" award, (2009), Eötvös Loránd University.

Invited Conference and Workshop Talks

- *International Society of Bayesian Analysis (ISBA) satellite workshop, Lugano, Switzerland (2024)*
- *Workshop on heterogeneous and distributed data, Warwick, UK (2024)*

- *SIAM Uncertainty Quantification (UQ) 24 conference, Trieste, Italy (2024)*
- *International Conference on Statistics and Data Science, Lisbon, Portugal (2023)*
- *BAYesian Young Statisticians Meeting (BAYSM) 2023 invited Discussant, online (2023)*
- *Chalmers AI Research (CHAIR) Center workshop on Structured Learning, Gothenburg, Sweden (2023)*
- *WESA 2023: Workshop on Eco-Stat Asymptotics, Verona, Italy (2023)*
- *Joint Statistical Meeting, Toronto, Canada (2023)*
- *Mathematical and Statistical Methods for Metrology Workshop, plenary speaker, Torino, Italy (2023)*
- *Bayesian Computation (Bayescomp) Conference, Levi, Finland (2023)*
- *Non-Linear and High Dimensional Inference (IHP), Paris, France (2022)*
- *Cantab Capital Institute for the Mathematics of Information workshop, Cambridge, UK (2022)*
- *International Symposium on Nonparametric Statistics, Paphos, Cyprus (2022).*
- *Mathematical Methods for Statistics, Luminy, France (2021)*
- *ISBA 2020 World meeting, Kunming, China (2021).*
- *Oberwolfach workshop on “Foundations of Bayesian Inference for Complex Statistical Models”, Online (2021)*
- *Zoom Conference on Uncertainty Quantification, Online, (2020).*
- *Applied Inverse Problems conference, Grenoble, France (2019)*
- *32nd European Meeting of Statistician, Palermo, Italy (2019).*
- *12th Conference on Bayesian Nonparametrics, Oxford, United Kingdom (2019).*
- *11th International Conference on Computational and Methodological Statistics (ERCIM) conference, Pisa, Italy (2018).*
- *ISBA 2018 World meeting, Edinburgh, United Kingdom (2018).*
- *2nd International Conference on Econometrics and Statistics (EcoSta) conference, Hongkong, China (2018).*
- *International one day workshop for Bayesian Nonparametrics, Seoul, South Korea (2018).*
- *Young European Statisticians IX workshop on “Scalable Statistics: on Accuracy and Computational Complexity”, Eindhoven, The Netherlands (2018).*
- *10th ERCIM conference, London, UK (2017).*
- *11th Conference on Bayesian Nonparametrics, Paris, France (2017).*
- *Workshop on Statistical Foundations of Uncertainty Quantification for Inverse Problems, Cambridge, England (2017).*
- *1st EcoSta conference, Hongkong, China (2017).*
- *LMS/Turing workshop on Inverse Problems and Data Science, Edinburgh, United Kingdom (2017).*

- *Emerging Applications of Data Assimilation in the Geosciences workshop* tutorial and panel discussion, Leiden, Netherlands (2017).
- *Institute of Mathematical Statistics (IMS) World Meeting*, Toronto, Canada (2016).
- *Conference on Probability and Statistics in high dimensions*, Barcelona, Spain (2016).
- *ISBA 2016 World meeting*, Cagliari, Italy (2016).
- *SAMSI workshop on Bayesian Nonparametrics*, Raleigh, USA (2015).
- *10th Conference on Bayesian Nonparametrics*, Raleigh, USA (2015).
- *VvS + OR day*, Utrecht, The Netherlands (2015).
- *7th ERCIM conference*, Pisa, Italy (2014).
- *6th ERCIM conference*, London, United Kingdom (2013).
- *9th Conference on Bayesian Nonparametrics*, Amsterdam, The Netherlands (2013).
- *Hilversum meeting*, Hilversum, The Netherlands (2011).
- *Stochastics -Theoretical and Applied Research (STAR) lecture day*, Eindhoven, The Netherlands (2010).

Selected Contributed Talks

- *ISBA 2024 World Meeting*, Venice, Italy (2024).
- *30th European Meeting of Statistician*, Amsterdam, The Netherlands (2015).
- *ISBA 2014 World Meeting*, Cancun, Mexico (2014).
- *29th European Meeting of Statistician*, Budapest, Hungary (2013).

Seminar Talks

2023: Karlsruhe; **2022:** Vienna, ELTE Budapest, NeEDS (online), Warwick, Milano Bicocca; **2021:** Eindhoven, Edinburgh, Bocconi Milano, Singapore (online); **2020:** UvA Amsterdam, VU Amsterdam, Gothenburg (online), Cambridge, Leiden; **2019:** Szeged, ENSEA Paris, Delft, Barcelona, Cambridge, Padua, Leiden; **2018:** Berlin, Harvard, Princeton, Rutgers, Kings College London, Bocconi Milano, BME Budapest; **2017:** UvA Amsterdam, Fudan Shanghai, Sydney, Delft; **2016:** ELTE Budapest, Cambridge, Paris 6, Leiden; **2015:** VU Amsterdam, Eindhoven, CWI Amsterdam; **2014:** BME Budapest, Rennes, Cambridge; **2012:** Turin, VU Amsterdam, ELTE Budapest; **2011:** Eindhoven

Submitted Manuscripts

- [1] Szabo B., Hadji, A. & van der Vaart (2023) Adaptation using spatially distributed Gaussian Processes
<https://arxiv.org/pdf/2312.14130>
- [2] Durante, D., Pozza, F. & Szabo, B. (2023) Skewed Bernstein-von Mises theorem and skew-modal approximations. *under major revision for Annals of Statistics*
<https://arxiv.org/abs/2301.03038>,
- [3] Horiguchi, A., Ma, L. & Szabo, B.T. (2023) Sampling depth trade-off in function estimation under a two-level design.
<https://arxiv.org/abs/2310.02968>

- [4] Koers, G., Szabo, B. & van der Vaart, A. (2023) Misspecified Bernstein-Von Mises theorem for hierarchical models. *under major revision for Bernoulli*, <https://arxiv.org/abs/2308.07803>
- [5] Hadji, A., Hesselink, T., & Szabo, B.T. (2022) Optimal recovery and uncertainty quantification for distributed Gaussian process regression. *under major revision for Annales de l'Institut Henri Poincare*, <https://arxiv.org/abs/2205.03150>
- [6] Franssen, S. & Szabo, B.T. (2022) Uncertainty Quantification for nonparametric regression using Empirical Bayesian neural networks. *under revision for Journal of Machine Learning Research*, <https://arxiv.org/abs/2204.12735>,
- [7] Zaman, A. & Szabo, B.T. (2022) Distributed Nonparametric Estimation under Communication Constraints. <https://arxiv.org/abs/2204.10373>

Published or Accepted Journal Papers

- [8] van Loon, W., Fokkema, M., Szabo, B., & de Rooij, M. (2024) View selection in multi-view stacking: Choosing the meta-learner *Advances in Data Analysis and Classification*.
- [9] Nieman, D., Szabo, B.T. & van Zanten, J.H. (2023) Uncertainty quantification for sparse spectral variational approximations in Gaussian process regression. *Electronic Journal of Statistics* 17 (2): 2250-2288.
- [10] Szabo, B.T., Vuursteen, L. & van Zanten, J.H. (2023) Optimal high-dimensional and nonparametric distributed testing under communication constraints. *Annals of Statistics* 51 (3): 909-934.
- [11] Szabo, B.T. & van Zanten, J.H. (2022) Distributed function estimation: adaptation using minimal communication. *Mathematical Statistics and Learning* 5 (3/4): 159-199.
- [12] Nieman, D. Szabo, B.T., & van Zanten, J.H. (2022) Contraction rates for sparse variational approximations in Gaussian process regression. *Journal of Machine Learning Research* 23 (205) :1-26.
- [13] Ray, K. & Szabo, B. (2022) Variational Bayes for high-dimensional linear regression with sparse priors. *Journal of the American Statistical Association* 117 (539): 1270-1281.
- [14] van Loon, W., de Vos, F., Fokkema, M., Szabo, B., Koini, M., Schmidt, R., de Rooij, M. (2022) Analyzing hierarchical multi-view MRI data with StaPLR: An application to Alzheimer's disease classification. *Frontiers in Neuroscience, section Brain Imaging Methods* (16).
- [15] Szabo, B.T., Vuursteen, L. & van Zanten, J.H. (2022) Optimal distributed composite testing in high-dimensional Gaussian models with 1-bit communication.. *IEEE Transactions on Information Theory* 68 (6), 4070-4084
- [16] van Erven, T. & Szabo, B. (2021) Fast exact Bayesian inference for sparse signals in the normal sequence model. *Bayesian Analysis* 16 (3), 933-960.
- [17] Hadji, A. & Szabo, B.(2021) Can we trust Bayesian uncertainty quantification from Gaussian process priors with squared exponential covariance kernel? *SIAM/ASA Journal on Uncertainty Quantification* 9 (1), 185-230
- [18] Szabo, B. T. & van Zanten, J.H. (2020) Adaptive distributed methods under communication constraints. *Annals of Statistics* 48 (4), 2347-2380.
- [19] Rousseau, J., & Szabo, B. T. (2020) Asymptotic frequentist coverage properties of Bayesian credible sets for sieve priors. *Annals of Statistics* 48 (4), 2155-2179.

- [20] van Loon, W., Fokkema, M., Szabo, B., & de Rooij, M. (2020) Stacked penalized logistic regression for selecting views in multi-view learning. *Information Fusion* 61, 113-123.
- [21] Mariucci, E., Ray, K., & Szabo, B. T. (2020) A Bayesian nonparametric approach to log-concave density estimation. *Bernoulli* 26 (2), 1070-1097.
- [22] Castillo, I. & Szabo, B. (2020) Spike and slab empirical Bayes sparse credible sets. *Bernoulli* 26 (1), 127-158.
- [23] Szabo, B. T. & van Zanten, J.H. (2019) An asymptotic analysis of distributed nonparametric methods. *Journal of Machine Learning Research* 20 (87), 1-30.
- [24] van der Pas, S., Szabo, B. T., & van der Vaart, A.W. (2017) Uncertainty quantification for the horseshoe. **Discussion paper.** *Bayesian Analysis* 12 (4), 1221-1249.
- [25] van der Pas, S., Szabo, B. T., & van der Vaart, A.W. (2017) Adaptive posterior contraction rates for the horseshoe *Electronic Journal of Statistics* 11 (2) 3196 – 3225
- [26] Rousseau, J. & Szabo, B. T. (2017) Asymptotic behaviour of the empirical Bayes posterior associated to maximum marginal likelihood estimator. *The Annals of Statistics* 45 (2), 833-865.
- [27] Nickl, R. & Szabo, B. T. (2016) A sharp adaptive confidence ball for self-similar functions. *Stochastic Processes and their Applications* 126 (12), 3913-3934.
- [28] Knapik, B. T., Szabo, B. T., van der Vaart, A. W., & van Zanten, J. H. (2016). Bayes procedures for adaptive inference in nonparametric inverse problems. *Probability Theory and Related Fields* 164 (3), 771-813.
- [29] Szabo, B. T., van der Vaart, A. W., & van Zanten, J. H. (2015) Frequentist coverage of adaptive nonparametric Bayesian credible sets. **Discussion paper.** *Annals of Statistics*, 43 (4), 1391 – 1428.
- [30] Szabo, B. T., van der Vaart, A. W., & van Zanten, J. H. (2015). Honest Bayesian confidence sets for the L2-norm. *J. Statistical Planning and Inference*, 166, 36-51.
- [31] Szabo, B. T., van der Vaart, A. W., & van Zanten, J. H. (2013). Empirical Bayes scaling of Gaussian priors in the white noise model. *Electronic Journal of Statistics*, 7, 991-1018.
- [32] Turanyi, T., Nagy, T., Zsely, I. Gy., Cserhati, M., Varga, T., Szabo, B. T., Sedyo, I., Kiss, P. T., Zempleni, A., and Curran, H. J. (2012). Determination of rate parameters based on both direct and indirect measurements. *International Journal of Chemical Kinetics*, 44(5), 284-302.
- [33] Varga, L., Szabo, B., Zsely, I. Gy., Zempleni, A., & Turanyi, T. (2011). Numerical investigation of the uncertainty of Arrhenius parameters. *Journal of mathematical chemistry*, 49(8), 1798-1809.

Discussions and Rejoinders

- [34] Ray, K. & Szabo, B.T. (2024) Discussion of “Martingale posterior distributions” by Fong, Holmes and Walker. *Journal of the Royal Statistical Society Series B: Statistical Methodology*.
- [35] Ray, K., Szabo, B.T., & van der Vaart, A.W. (2020) Discussion of “Bayesian regression tree models for causal inference: regularization, confounding, and heterogeneous effects” *Bayesian Analysis* 15 (2020), 1026-1028.
- [36] van der Pas, S., Szabo, B. T., & van der Vaart, A.W. (2017) Rejoinder to discussions to “Uncertainty quantification for the horseshoe”. *Bayesian Analysis* 12 (4), 1270-1274.
- [37] Szabo, B. T., van der Vaart, A. W., & van Zanten, J. H. (2015) Rejoinder to discussions to “Frequentist coverage of adaptive nonparametric Bayesian credible sets”. *Annals of Statistics*, 43 (4), 1463 – 1470.

Machine Learning Conference Proceedings

- [38] Randrianarisoa, T. & Szabo B. (2023) Variational Gaussian processes for linear inverse problems. *Advances in Neural Information Processing Systems (NeurIPS)*.
- [39] Vuursteen, L., Szabo, B., van der Vaart, A. & van Zanten, H. (2023). Optimal testing using combined test statistics across independent studies. *Advances in Neural Information Processing Systems (NeurIPS)*.
- [40] Szabo, B.T. (2021) Product vs mixture of experts: On distributed Gaussian Process regression. *Oberwolfach reports, 22/2021, p 12-14*
- [41] Ray, K., Szabo, B.T. & Clara, G. (2020) Spike and slab variational Bayes for high dimensional. logistic regression. *Advances in Neural Information Processing Systems (NeurIPS)*.
- [42] Ray, K. & Szabo, B. (2019) Debaised Bayesian inference for average treatment effects. *Advances in Neural Information Processing Systems (NeurIPS), 11929-11939*.

Book Chapters

- [43] Szabo, B. T. (2015). On Bayesian based adaptive confidence sets for linear functionals. *Bayesian Statistics from Methods to Models and Applications. 91–105*.

R Packages

- [44] Clara, G., Szabo, B.T. and Ray, K. (2020) sparsevb (Variational Bayes for high-dimensional linear and logistic regression)
- [45] de Rooij, S., van Erven, T., Szabo, B.T. (2019) SequenceSpikeSlab (Exact Bayesian model selection methods for the sparse normal sequence model)

Column Articles and Other Conference Proceedings

- [46] Szabo, B. T. (2023) The missing mathematical story of Bayesian uncertainty quantification for big data. *European Dissemination Agency (17), 22–25*
- [47] Szabo, B. T. (2023) Understanding the uncertainty in AI. *Via Sarfatti 25, 2023 (2), 60-61*
- [48] Szabo, B. T. (2016) Confidence in Bayesian Uncertainty Quantification? *Nieuw Archief voor Wiskunde, 53-54*.
- [49] Szabo, B. T. (2014) Asymptotic behaviour of confidence sets based on empirical Bayes methods in L_2 -norm. *Proceedings of the 18th European Young Statistician Meeting, 113-117*.
- [50] Berg, J. B. van den, Castro, R. M., Draisma, J., Evers, J. H. M., Hendriks, M., Khimshiashvili, G., Krehel, O., Kryven, I., Mora, K., Szabo, B. T. & Zwiernik, P. W. (2012). Non-imaging optics for LED-lighting. *Proceedings of the 84th European Study Group Mathematics with Industry*.

Teaching Experience

Bocconi University, Milano, Italy

Sept. 2021 to present

Lecturer

- Mathematical Statistics within BSc in Mathematics and Computing for Artificial Intelligence
- Statistical Theory I and II within PhD in Statistics and Computer Science
- Optimization within the MSc in Data Science and Business Analytics (in 2023)

Vrije Universiteit Amsterdam, The Netherlands

Sept. 2020 to Sept. 2021

Lecturer

- Sets and Combinatorics within BSc in Business Analytics
- Bachelor project: business case supervision within BSc in Business Analytics
- Statistics and Probability withing BSc in Mechanical Engineering

Leiden University, The Netherlands

Jan. 2017 to 2020

Lecturer

- Quantitative Research (at Leiden University College, mandatory course in various BSc programs)
- Bayesian Statistics within Mastermath (combined MSc in mathematics programs of Dutch Universities)
- Statistics within BSc in Physics and Astronomy
- Mathematical Statistics withing BSc in Mathematics

Budapest University of Technology, Hungary

Sept. 2014 to Feb. 2015

Lecturer

- Calculus A2 within BSc in Architecture.

Instructor

- Probability Theory within BSc in Mathematics.

University of Amsterdam, The Netherlands

Sept. 2015 to Dec. 2015

Lecturer

- Stochastics and Financial Mathematics program of the Seminar Mathematics.

Instructor

- Asymptotic Statistics within Mastermath.

Eindhoven University of Technology, The Netherlands

April 2010 to November 2012

Instructor

- Probability Theory and Statistics within BSc in Computer Sciences,
- Calculus within various BSc programs
- Introduction to derivative pricing within BSc in Mathematics

Eötvös Loránd University, Budapest, Hungary

September 2007 to December 2009

Instructor

- Probability Theory and Statistics courses within BSc in Astronomy and Computer Sciences

Language Skills

Hungarian (native speaker), English (fluent), German (intermediate), Dutch (beginner), Italian (beginner).