Antonietta Mira

Full Professor of Statistics
This part-time position is currently held at the Department of Science and High Technology
of the Università degli Studi dell'Insubria, Como
Professor of Statistics, Faculty of Economics, Università della Svizzera italiana - USI, Lugano

Education

- Ph. Doctorate in Computational Statistics, University of Minnesota, Minneapolis, MN, USA, 1998
- Master of Science in Statistics, University of Minnesota, Minneapolis, MN, USA, 1996
- Ph. Doctorate in Methodological Statistics, University of Trento, Italy, 1995
- Degree in Economics, summa cum laude, University of Pavia, Italy, 1991

Honors

- Fellow of the *Institute of Mathematical Statistics* (IMS), since 2022
- Fellow of the *International Society for Bayesian Analysis* (ISBA), since 2016
- Fellow of *Istituto Lombardo Accademia di Scienze e Lettere*, since 2016
- *Winner of the 6th edition of The Amerigo Four Freedoms Award* with the book: "The data pandemic. Here is the vaccine" (Mondadori education, 2020, with A. Massarenti)
- *Winner of the Italian national prize for science popularization (for the STEM area)* with the same book
- Visiting Fellow of the *Isaac Newton Institute for Mathematical Sciences* (Cambridge, UK), 2014, 2016
- Visiting Fellow of the *Queensland University of Technology* (Australia), 2024, 2023, 2015
- Public lecture for the *Festival of the Swiss Academy of Science 200-year anniversary*, October 2015
- *Opening lecture of the academic year 2011-12*, Università della Svizzera italiana (USI)
- *Savage Thesis Award* for an outstanding doctoral dissertation in Bayesian Econometrics/Statistics, 1998
- *Dissertation Fellowship*, University of Minnesota, 97/98

Main research interests

As a Data Scientist, by definition my research interests are very varied. Indeed, Data science is an interdisciplinary field that combines several core disciplines to extract knowledge and insights from data ranging from statistics, which is my core field, computer science, mathematics, machine learning, all the way to data engineering, and big data technologies.

These core disciplines intersect specific knowledge domain expertise that pose the relevant resarch questions that I try to answer. With the motivation of making valuable progress and contributing to the improvement of people everyday life, in my career I have embraced the following application fields, as the list of publications can attest: health and life science, social science, bio-medical science, genomics, physics, education, ecology, economics, finance, and sport science.

From a more methodological point of view, my core research area is statistical learning with a focus on theory and applications of Markov Chain Monte Carlo methods and other computational algorithms used to estimate parameters of complex modes in large data contexts. I value the Bayesian parametric and non-parametric methodology that allows to incorporate, in a transparent and coherent way, expert prior opinions in the inferential process. More recently my work positions itself at the interface between Machine Learning, Physics and Statistics and I very much value the long last research collaboration with colleague physicists.

Science dissemination

I have dedicated considerable time and energy towards the dissemination of science. The results are the publication of two award-winning books, with another book in preparation; successful fundraising; and the creation of a conference show where I perform mathematical magic and explain the mathematics that creates the mystic. Finally, through television, radio and journalistic media, I am committed to enhancing the culture of data science.

Master, PhD Students and Post-docs supervised

Master students
G. Pilot, L. Agnelli, D. Raffo, G. Accogli, M. Huynh, B. Chowdhury, M. Choudhary

Ph.D students
P. Tenconi, R. Solgi (post-doc, Harvard University, USA 2014-16); F. Macaluso (Financial industry); C. Legnazzi (Financial industry); F. Bianchi (post-doc Glasgow University and USI); C. Ghiringhelli (post-doc, Cattolica University); F. Denti (assistant professor, U. of Padova); F. Ravenda; C. Hassan (visiting scholar, QUT, Brisbane); A. Bassi (ETHZ); A. Di Noia (joint PhD with ETHZ)

Post-Docs
A. Caimo (2016: Lecturer, School of Mathematical Science, Dublin Institute of Technology); R. Dutta (since 2018 Assistant Professor, Warwick University); Stefano Peluso (associate professor, Bicocca University); Anthony Ebert; Spyros Balafas (assistant professor, San Raffaele University); Angela Andreella (assistant professor, Venezia University); Wei Zhang

Professional Service

Grant evaluations for the EU

- **Reviewer for ERC Sinergy Grant**, 2024

- **Reviewer for ERC Consolidator Grant**, 2022

- **Member of the Evaluation Board of call FP7-HEALTH-Innovation**, for the European Commission, 2013

Awards, fellowships and research evaluations

- **Member of the Lambert Prize Jury** (Swiss Statistical Society award), 2021, 2022, 2023

- Member of the (International Society for Bayesian Analysis) **ISBA Fellows Committee**, 2019-22

- **Member of the jury** for two fellowships (40k Euro each) of the S+T+ARTS Regional Center (for Italy in a European project) "Repairing the present", 2022

- **Chair of the international Savage Award Selection Committee** of the ISBA, 2018-19

- **Member of the Savage Award Selection Committee** of the ISBA, 2003-05 and 2010-11

- **Member of the Lindley Prize Committee**, 2007-08

Scientific and advisory board memberships

- **Advisory board of the Swiss Statistical Society**, since 2020

- **Member of the Federal Statistical Committee**, Switzerland, 2020-23

- **International Statistical Literacy Project country coordinator** for Switzerland, since 2020

- **Chair of the Scientific Advisory Committee** for QUT Centre for Data Science, since 2019

- **Advisory board for the Harvard Data Science Review**, since 2019

- **Advisory board of CoSInES** (COmputational Statistical INference for Engineering and Security) EPSRC funded 4-year project (£3M), since 2019

- **Advisory board of Bayes4Health** (New Approaches to Bayesian Data Science: Tackling Challenges from the Health Sciences) EPSRC founded 4 year project (£3M), since 2019

- **Strategic Advisory Board for the Centre for Doctoral Training (CDT) in Distributed Algorithms** funded by EPSRC, since 2019

- Member of the **Scientific and Strategic Board** of Consorzio AlmaLaurea, 2020-24

- **Member of the Institute of Mathematical Statistics (IMS), Task Force on the Ph.D. Curriculum in Statistics and Probability**, 2019-21

- **Member of the ISBA Continuing Education Committee**, 2019-21

- **Member of Joint IMS/Bernoulli Society Publications Management Committee**, 2018-21

- Member of the **Advisory Board** of Consorzio AlmaLaurea, 2018-20

- **Member of the Institute of Mathematical Statistics Council**, 2017-20

- **Member of the Scientific Committee** of the *Osservatorio di Pavia*, since 2014

- **Co-founder and Co-director** of the Interdisciplinary Institute of Data Science, USI, 2015-2017

- **Board member of the ISBA Section on Bayesian Computation**: 2013-14 and 2015-16

- **Member of the ISBA council**: elected for the term 2011-13. ISBA website http://bayesian.org/

- **Scientific advisor** of the Ideatorio (USI) for the exhibit *Numb3d by Numb3rs*, 2014-18

- **Member of the scientific program committee** of the master *Methods for Management of Complex Systems*, of the IUSS (Institute for advance studies) of Pavia, 2003-07

Invited lectures at international conferences and seminars (since 2020)

Events/Lectures specifically aimed at science popularization are marked with ⋆

2025

- Co-organizer and speaker at the workshop at the *Isaac Newton Institute for Mathematical Sciences* (Cambridge, UK) on "Accelerating inference via probabilistic prediction", August

2024
- Keynote, International Bayesian Statistical Conference, Gold Coast, Australia, January
- Invited seminar at The Hebrew University, Jerusalem, May
- Keynote, 31st World Meeting of the International Society for Bayesian Analysis, Venezia, July
- ⋆ Conference-Show on Mathematical Magic, Auditorium Santa Margherita, Venezia, July
- Organizer and chair of the Round table discussion on *European Data Market and AI, perspectives*, at the joint ISBA - Cini Foundation event, Venezia, 7 July
- Speaker, Conference on Models and learning in Clustering and Classification, Catania, August
- Keynote, Conference of the Australian Women in Mathematics Special Interest Group (WIMSIG) of the Australian Mathematical Society, Sydney, October
- Invited speaker at the 2024 Conference of the International Indian Statistical Association, Cochin University of Science and Technology, India, December

2023
- ⋆ International Conference on Statistics, Probability, Data Science and Related Areas (ICSPDS2023) in conjunction with the XXXXII Annual Convention of the Indian Society for Probability and Statistics (ISPS), Cochin, 4-6 January
- Bayesian Inference on Epidemics, BayesComp satellite conference, Levi, Finland, March
- ⋆ Conference-show on Mathematical+Magic, for the pi-day, Comprensorio scolastico di Cantello, (Varese), March
- ⋆ Invited presentation at the "Giornata delle Donne in Matematica", Camerino University, May 11
- ⋆ Queensland University of Technology, public lecture on *Data Science Meets Life Science: Some Success Stories*, Brisbane June
- Queensland University of Technology, research seminar on *Bayesian Estimation of Data Intrinsic Dimensions*, Brisbane June
- ⋆ Eni, Milano, public lecture on Environmental awareness and the value of data: opportunities and fears. With Telmo Pievani, July
- ⋆ University of Wollongong, "2023 Data Science and Statistic Lecture", August

- University of Wollongong, research seminar, August
- ⋆ Interview for Ticino (CH) local newspaper "La Regione", title: *From data to knowledge*
- ⋆ *Il Dataverso – La realtà aumentata dei numeri*, Festival della Statistica e della Demografia, October
- Invited seminar on *Statistical Science meets Life Science* at Stockholm University, October
- ⋆ Conference-Show on Mathematical Magic, Piccolo Teatro Strehler, Milan, December

2022
- ⋆ Opening of the Academic year of the Italian National Academy of Science Educational Section, Milan Area, invited participant to the round table discussion on "The role of school in promoting individual and social responsibility", January
- SISSA, invited talk on "Bayesian statistical models for Covid-19 count data", Trieste, February
- ⋆ Italian Embassy in Switzerland, round table on the theme "Science. Feminine noun", 8 March
- ⋆ Keynote speaker in the sixth edition of the Mathematical Dialogues organized by the editor "il Mulino" on the topic "More is different. Numbers to welcome uncertainty", Roma, March
- ⋆ Science and Philosophy Festival, invited speaker, Foligno, April
- ⋆ Keynote speaker in the fourth edition of the public debate organized by the editor "il Mulino" on the topic "Rationality", Bologna, May
- ⋆ Invited speaker at the National Assembly of the consumer and user cooperatives on the topic: Making decisions in an uncertain world by cooperating, May
- ⋆ Le vie della parola: Ragione, Bologna, May
- Keynote speaker, CCDA2022 - Challenges for categorical data analysis, Perugia, May
- ⋆ CICAP Fest, Padova, June
- Meeting of the Italian Statistical Society, contributed session on "Methods for Complex Data", Caserta, June
- CECAM-HQ-EPFL - Building pandemic models on the fly: how to develop data-based models when time is at a premium and good data are scarce, Lausanne, September
- ⋆ M^3= MateMagicaMente, the 3 M's of the prestige, Ghislieri College, Pavia, October
- Meeting of the International Indian Statistical Association, Bangalore, December

2021
- ⋆ TEDx Varese, "The courage to change one's mind, between emotions and data", June
- ⋆ Eccles Foundation, conference on "Mate+Magic+Mind: how numbers govern our thinking", with G. Vallortigara, June, online
- ⋆ "Statisticall" - Statistics Festival, round table discussion on *Ethics, research and communication after the pandemic*: organizer and chair. Treviso, September
- ⋆ 8th United Nations Global Forum on Gender Statistics on the topic: Building forward fairer with gender data at the centre, online 1 October
- 8th Global Forum on Gender Statistics invitation to talk in the session: "Building forward better: gender statistics to guide the recovery and the SDGs decade of action", online, October
- Research seminar to honor Hansruedi Künsch, ETH Zurich, 19 November
- ⋆ TecDay Lugano organized by the Swiss Academy of Engineering Sciences (SATW) on: "MateMagicaMente: le 3M del prestigio", December
- Joint Statistical Meeting of the American Statistical Association, *Storytelling on COVID-19 Impact Using Experts' Prior Knowledge and Data from Social Media, Official Clinical Data, Digital Phenotype from Smartphones' Raw Sensor Data, and Emergency Departments* session co-organizer, online
- ⋆ Faculty of Bioethics, Ateneo Pontificio Regina Apostolorum, invited speaker at the "Interdisciplinary conference on the Covid-19 pandemic", online
- ⋆ Philosophy and Science Festival, invited round table discussion on *To know is to discern*, with G. Parisi (Nobel Laureate in Physics 2021) , E. Boncinelli and A. Massarenti, online
- ⋆ Istituto Lombardo Accademia di Scienze e Lettere, Invited talk on "The Coronadata pandemic" May, online
- ⋆ Eccles Foundation and Swiss Philosophy National Congress satellite event. Title of the presentation: "Data-driven, but free to choose", online

	–	CECAM Workshop - Making Sense of Descriptors for Machine Learning: Molecules, Solids, and Everything Else, Zurich
2020	–	Bayes Comp 2020, University of Florida, Gainesville, Florida, January 6-12
	⋆	Conference show *Mathematical+Magic*, organized by PalermoScienza, Palermo, February
	–	Final COSTNET meeting (supported by EU COST action), Ribno, Slovenia, March, 25-27, online
	–	CECAM webinar: Modeling the pandemic is difficult: hopes and doubts about model building with A. De Gaetan, May, online
	⋆	Active citizenship, lecture for high school teachers organized by Mondadori, June, online
	–	Joint Statistical Meeting of the American Statistical Association, Philadelphia, August 2-6, online
	⋆	Riemann International School of Mathematics, November, speaker in short course on *Mathematics, Philosophy and Pandemic: from uncertainty to critical thinking*, November, online
	⋆	Polytechnique University, Lecco, November, online

Editorial boards

- **Guest member of the Editorial Committee** of the *Annual Review of Statistics and its Application* (IF 3.857), 2020

- **Guest editor, special issue** "The application of biostatistics in cancers", *Cancers* (open access, IF: 6.64), 2022

- **Co-Editor**, *Bayesian Analysis* (IF 2.42, 6th highest among 117 Stats and Probab. journals), 2008-16

- **Guest Editor** for a special issue of the *International Journal of Approximate Reasoning*, 2016

- **Chief Guest Editor** for a special issue of the journal *Statistics and Computing*, 2015

- **Chief Guest Editor** for a special issue of the journal *Statistics and Computing*, 2014

- **Associate Editor** of the *Journal of Computational and Graphical Statistics*, 2006-08

- **Associate Editor** for *Statistica Sinica*, 2005-08

Organization of Conferences and Science Dissemination Events

Science Dissemination Events are marked with a ⋆.

- **Chair of the scientific and of the organising committee** of a Satellite Workshop of the ISBA World meeting, Lugano, USI, 25-28 June 2024

- **Member of the scientific committee** of the joint ISBA - Cini Foundation event on Algorithms, Privacy and Legal Aspects, Venezia, 7 July 2024

- ⋆ **Member of the scientific and organizing committee** of the event *Lugano Longevity Summit*, Aula Magna USI, Lugano, March 2024

- ⋆ **Member of the scientific and organizing committee** of the event *Noi vs. Loro: il cervello razzista*, Aula Magna USI, Lugano, March 2023

- ⋆ **Chair of the scientific committee and member of the organizing committee** of *Appassionatamente*, Festival Cervello e Cinema, Lugano Lux Art House, November 2023

- **Member of the scientific committee of the Bayes Comp, 2023** Levi, Finland, March 2023

- **Member of the scientific and organizing committee of the Bayes Comp satellite meeting on "Approximate Generalized Directions in Computing", 2023** Levi, Finland, March 2023

- **Member of the scientific committee of the "One World Approximate Bayesian Computation"** that starting April 2020 has organized 39 webinars on ABC and related likelihood free inference topics

- **Member of Scientific Committee, ICMS (International Centre for Mathematical Sciences) meeting 2022**, Connections between Interacting Particle Dynamics and Data Science, Isle of Skye, May 2022

- ⋆ **Chair of the scientific committee and member of the organizing committee** of *Notturnamente*, Festival Cervello e Cinema, November 2022

- **Member of Scientific Committee, SSES 2022** conference in Fribourg

- **Member of scientific committee** of a one week doctorate winter school on *Lifting Inference with Kernel Embeddings*, Like22, Bern, 2022

- ⋆ **Member of the scientific and organizing committee** of *Pillole per la Mente*, 2020, 2021, 2022, online events

- **Member of scientific and organizing committee** of a one week doctorate winter school on *Contemporary methods in spatial statistics in R with applications to life and social sciences*, jointly organized by University of Pavia (prof. S. Figini) and USI, December 2021

- **Member of organizing committee** of the one week workshop on *End-to-end Bayesian learning methods*, 2021, supported by CIRM, Centre International de Rencontres Mathématiques

- **Scientific Committee** of the *International Conference on Data Analytics for Business and Industry], online, 2020*

- **DADSI one day full immersion on Approximate Bayesian Computation**, *Lugano, USI, July 15, 2019*

- **Member of the scientific program committee** *of the meeting of the Italian Statistical Society, 2018*

- **Member of the scientific program committee and of the organizing committee** *of the joint workshop Swiss National Supercomputing Center and dell'InterDisciplinary Institute of Data Science, on* Data Science with [a] Spark*, September 2016*

- **Member of the scientific committee** *of the international (6 days) workshop on* Challenges and Advances in High Dimensional and High Complexity Monte Carlo Computation and Theory*, Banff (Canada), International Research Station for Mathematical Innovation and Discovery, (March 2012). Workshop fully supported by BIRS (Banff Intern. Research Station)*

- **Member of the scientific committee** *of the (3 days) workshop on* Advances in Markov Chain Monte Carlo: Theory, Methodology and Applications*, Edimburgo (April 2012). Workshop fully funded by the International Centre for Mathematical Sciences*

- **Member of the scientific program committee (co-chair) and of the organizing committee (chair)** *of the second (2005), third (2008), fourth (2011), fifth (2014) and sixth (2016) joint international meeting IMS/ISBA, Institute of Mathematical Statistics/International Society for Bayesian Analysis Meeting*

- **Member of the scientific committee** *of the second Festival of Statistics and Demography, Treviso, Italy, 2016*

- **Member of the scientific program committee and of the organizing committee** *of the second Greco Italian Meeting on Statistics, Sardegna, Italy, 2010*

- **Member of the scientific program committee** *of the 9th world meeting of ISBA, Australia 2008*

- **Member of the scientific program committee** *of the eight* "Valencia/ISBA World Meeting on Bayesian Statistics"*, Spain, 2006*

Conference sessions organizations

- **ISBA world conference 2022**, Invited Session co-organizer (with C. Robert) on *Advances in Approximate Bayesian Computation*, Montreal, Canada

- **United Nations World Data Forum**, session on *The legacy of COVID-19: Mobilizing gender data to deliver better science*, Bern, 2021 (online)

- **Joint Statistical Meeting of the American Statistical Association, Denver, 2019** on Approximate Bayesian Computation

- **Italian Statistical Meeting on Smart Statistics for Smart Applications, Milano, 2019** on *Bayesian methods for species sampling and privacy*

- **ISI World Statistics Congress, 2017**, Invited Session Organizer on *Models and algorithms for network data*, Marrakech, Marocco, July

- **ISBA World Meeting, 2016**, session sponsored by BayesComp, *At the interface between posterior and molecular simulation*

- **ISBA World Meeting, 2016**, session sponsored by Junior-ISBA and SIS-Bayes (Società Italiana di Statistica), *Methodological and computational advances for complex networks systems*

- **Organizes a session** on "MCMC for Bayesian nonparametrics", V IMS-ISBA joint meeting, Chamonix (FR), 2014

- **Organizes a session** on "MCMC applications in finance" at the CFE 2010, (Computational and Financial Econometrics), London

- **Organizes a session** on "Efficient MCMC algorithms to estimate Bayesian financial econometric models" at the CFE 2011, London

- **Organizes an invited session for the Joint Statistical meeting of the American Statistical Association** held in Salt Lake City (USA), title of the session: *Adaptive Monte Carlo methods*, 2007

Publications

Peer-reviewed articles

- S. Petrone and A. Mira, Bayesian hierarchical nonparametric inference for change-point problems. *Bayesian Statistics 5*, pp. 693-703, J. M. Bernardo, J.O. Berger, A. P. Dawid, A. F. M. Smith (Eds.), Clarendon Press, Oxford, 1996

- R. Bellazzi, C. Larizza, A. Riva, A. Mira and S. Fiocchi, Distributed intelligent data analysis in diabetic patient management. *Journal of the American Medical Informatics Association*, pp. 194-198 Edited by J. J. Cimino , Hanley & Belfus, 1996

- A. Mira, Distribution-free test for symmetry based on Bonferroni's measure. *Journal of Applied Statistics*, Vol. 26, No. 8, pp. 959-972, 1999

- L. Tierney and A. Mira, Some adaptive Monte Carlo methods for Bayesian inference. *Statistics in Medicine*, Vol. 18, pp. 2507-2515, 1999

- A. Mira and C. J. Geyer, On non-reversible Markov chains. *Fields Institute Communications*, Vol. 26: Monte Carlo Methods, pp. 95-110. Published by the American Mathematical Society, 2000

- A. Mira, J. Möller and G.O. Roberts, Perfect Slice Samplers. *Journal of the Royal Statistical Soc. Ser. B*, Vol. 63, No. 3, pp. 593-606, 2001

- P.J. Green and A. Mira, Delayed rejection in reversible jump Metropolis-Hastings, *Biometrika*, Vol. 88, No. 4, pp. 1035-1053, 2001

- A. Mira, Efficiency of finite state space Monte Carlo Markov chains, *Statistics & Probability Letters*, Vol. 54, No. 4, pp. 405-411, 2001

- A. Mira, On Metropolis-Hastings algorithms with delayed rejection, *Metron*, Vol. LIX, No. 3-4, pp. 231-241, 2001

- A. Mira and P.J. Green, Invited discussion of 'The art of data augmentation' by David A. van Dyk and Xiao-Li Meng. *J. of Computational and Graphical Statistics*, Vol 10, No. 1, pp. 94-98, 2001

- A. Mira, Ordering and improving the performance of Monte Carlo Markov chains, *Statistical Science*, Vol. 16, No. 4, pp. 340-350, 2001

- A. Mira and L. Tierney, Efficiency and Convergence Properties of Slice Samplers. *Scandinavian Journal of Statistics*, Vol. 29, No. 1, pp. 1-12, 2002

- A. Mira and D. Sargent, A new strategy for speeding Markov chain Monte Carlo algorithms *Statistical Methods & Applications*, Vol. 1:12, pp. 49-60, 2003

- A. Mira and G. Roberts, Invited discussion of 'Slice sampling' by R. Neal, *Annals of Statistics*, Vol. 31, No. 3, pp. 705-767, 2003

- A. Mira and P. Tenconi, Bayesian estimate of credit risk via MCMC with delayed rejection, *Stochastic Analysis, Random Fields and Applications IV*, pp. 277-291, in the series "Progress in Probability", Birkhäuser Verlag, Basel, 2004

- A. Mira and G. Nicholls, Bridge estimation of the probability density at a point, *Statistica Sinica*, Vol. 14, No. 2, pp. 603-612, 2004

- D. Bressanini, A. Morosi, S. Tarasco and A. Mira, Delayed Rejection Variational Monte Carlo, *Journal of Chemical Physics*, Vol. 121, No. 8, pp. 3446-3451, 2004

- F. Audrino, G. Barone-Adesi and A. Mira, The stability of factor models of interest rates, *Journal of Financial Econometrics*, Vol. 3, No. 3, pp. 422-44, 2005

- A. Mira, chapter title "MCMC methods to estimate Bayesian parametric models" in the book: *Bayesian Statistics: Modelling and Computation*, Vol. 25, pp. 419-439, edited by D.K. Dey and C.R. Rao, *Handbook of Statistics*, 2005

- F. Bartolucci, L. Scaccia and A. Mira, Efficient Bayes factor estimation from reversible jump output, *Biometrika*, Vol. 93, 1, pp. 41-52, 2006

- H. Haario, M. Laine, A. Mira and E. Saksman, DRAM: Efficient Adaptive MCMC, *Statistics and Computing*, Vol. 16, pp. 339-354, 2006

- A. Mira, Stationarity preserving and efficiency increasing probability mass transfers made possible, *Computational Statistics*, Vol. 21, No. 3-4 (double issue), pp. 509-522, 2007

- A. Mira and A. Baddeley, Deriving Bayesian and frequentist estimators from time-invariance estimating equations: a unifying approach (with discussion). In *Bayesian Statistics 8*, J. M. Bernardo, at al, eds., Oxford University Press, pp. 325-348, 2007

- F. Leisen and A. Mira, An extension of Peskun ordering to continuous time Markov chains, *Statistica Sinica*, Vol. 18, pp. 1641-1651, 2008

- A. Mira and F. Leisen, Covariance ordering for discrete and continuous time Markov chains, *Statistica Sinica*, Vol. 19, pp. 651-666, 2009

- Mantovani V., Lepore V., Mira A. and Berglin E., Non-inferiority randomized trials, an issue between science and ethics: the case of the SYNTAX study, *Scandinavian Cardiovascular Journal*, Vol. 44, No. 6, pp. 321-324, 2010

- A. Mira, Invited discussion of 'Approximating Max-Sum-Product Problems Using Multiplicative Error Bounds' by Y. Wexler and C. Meek in *Bayesian Statistics 9*, pp. 465-470, J. M. Bernardo, M. J. Bayarri, O. Berger, A. P. Dawid, D. Heckerman, A. F. M. Smith and M. West (Eds.), Oxford University Press, 2011

- A. Mira and H. Haario, discussion of "Riemann manifold Langevin and Hamiltonian Monte Carlo methods" by M. Girolami and B. Calderhead, *J. of the Royal Statistical Society*, Vol. 73, No. 2, pp. 190-191, 2011

- M. Filippone, A. Mira and M. Girolami, Invited discussion of "Sampling Schemes for Generalized Linear Dirichlet Process Random Effects Models" by M. Kyung, J. Gill, and G. Casella, *Statistical Methods and Applications*, Vol. 20, No. 3, pp. 295-297, 2011

- JM. Cornuet, JM. Marin, A. Mira and C. Robert, Adaptive Multiple Importance Sampling, *Scandinavian Journal of Statistics*, Vol. 39, Issue 4, pp. 798-812, 2012

- F. Rigat and A. Mira, Parallel hierarchical sampling: a practical general-purpose multiple-chains algorithm. *Computational Statistics & Data Analysis*, Vol. 56, pp. 1450-1467, 2012

- A. Mira, R. Solgi and D. Imparato, Zero Variance Markov Chain Monte Carlo for Bayesian Estimators. *Statistics and Computing*, Vol 23:5, pp. 653-662, 2013

- R. Solgi and A. Mira, A Bayesian Semiparametric Multiplicative Error Model with an Application to Realized Volatility, *Journal of Computational and Graphical Statistics*, 22:3, pp. 558-583, 2013

- M. Girolami and A. Mira, invited discussion of "A Vine-copula Based Adaptive MCMC Sampler for Efficient Inference of Dynamical Systems" by D. Schmidl, C. Czado, S. Hug and F. J. Theis, *Bayesian Analysis*, Vol. 8, No. 1, pp. 27-32, 2013

- T. Papamarkou, A. Mira and M. Girolami, Zero Variance Differential Geometric MCMC Algorithms, *Bayesian Analysis*, Vol. 9, No. 1, pp. 97-128, 2014

- A. Caimo and A. Mira, Delayed rejection algorithm to estimate Bayesian social networks, *Journal of Methodological and Applied Statistics*, 16(1), 33 - 44, 2014

- S. Peluso, F. Corsi and A. Mira, A Bayesian High-Frequency Estimator of the Multivariate Covariance of Noisy and Asynchronous Returns, *Journal of Financial Econometrics,* Vol. 13, No. 3, pp. 665-697, 2015

- A. Caimo and A. Mira, Efficient computational strategies for doubly intractable problems with applications to Bayesian social networks, *Statistics and Computing*, Vol. 25, pp. 113-125, 2015

- S. Peluso, A. Mira and P. Muliere, Reinforced Urn Processes for Credit Risk Models, *Journal of Econometrics*, Vol. 184, Issue 1, pp. 1-12, 2015

- A. Mira, The strength of uncertainty: statistics as guide in the world of probable. *Rivista Italiana di Medicina Legale e del Diritto in Campo Sanitario*, 37(4):1437-1448, 2015

- N. Friel, A. Mira and C. Oates, Exploiting Multi-Core Architectures for Reduced-Variance Estimation with Intractable Likelihoods, *Bayesian Analysis*, Vol. 11, N. 1, pp 215-245, 2016

- M. Byshkin, A. Stivala, A. Mira, R. Krause, G. Robins and A. Lomi, Auxiliary Parameter Markov Chain Monte Carlo for Exponential Random Graph Models, *Journal of Statistical Physics*, Vol. 165, Issue 4, pp 740-754, 2016

- S. Peluso, A. Mira, and P. Muliere, Robust Identification of Highly Persistent Interest Rate Regimes. *International Journal of Approximate Reasoning*, 83:102-117, 2017

- S. Peluso, A. Mira, P. Muliere, Learning vs Earning Trade-Off with Missing or Censored Observations: the Two-Armed Bayesian Nonparametric Beta-Stacy Bandit Problem. *Electronic Journal of Statistics*, 11:3368-3406, 2017

- R. Dutta, M. Schoengens, J.P. Onnela, A. Mira, Abcpy: A user-friendly, extensible, and parallel library for approximate Bayesian computation. In *Proceedings of the Platform for Advanced Scientific Computing Conference* (p. 8). ACM, 2017

- V. Amati, A. Lomi, A. Mira, Social Network Modelling. *Annual Review of Statistics and its Applications*. Volume 5(1), pp 343-369, 2018

- B. Buonaguidi, A. Mira, Some optimal variance stopping problems revisited with an application to the Italian Ftse-Mib Stock Index. *Sequential Analysis*, 37, pp 90-101, 2018

- NJ Tierney, HJ Reinhold, A. Mira, M.Weiser, R. Burkart, C. Benvenuti, A. Auricchio, Novel relocation methods for automatic external defibrillator to improve out-of-hospital cardiac arrest coverage under limited resources, *Resuscitation*, 125, 83-89, 2018

- R. Dutta, A. Mira, J.P. Onnela, Bayesian inference of spreading processes on networks. *Proc. Royal Society. A*, 474(2215), 20180129, 2018

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