



Antonietta Mira

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Contact data

Associate Professor

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Biography

Born in Pavia, Italy, 1967.

- Degree in Economics, Summa cum Laude, University of Pavia, Italy, 1991.
- Doctorate in Methodological Statistics, University of Trento, Italy, 1995.
- Master of Science in Statistics, University of Minnesota, MN, USA 1996.
- Philosophy Doctorate in Statistics, University of Minnesota, MN, USA, 1998.
- Assistant Professor in Statistics, University of Insubria, since 1994.
- Current position: Associate Professor in Statistics, University of Insubria, since 2000.

Qualifications and awards

L.J. Savage Thesis Award 1998 for an outstanding doctoral dissertation in the area of Bayesian Econometrics and Statistics (for information about the award see:

<http://www.stat.duke.edu/sites/savage.html>

Dissertation Fellowship, 1997/98, University of Minnesota

Research Assistantship, University of Minnesota. Supported by the National Science Foundation

1991 AIESEC Award for the best dissertation in quantitative methods, University of Pavia, Italy

Research interests

- Markov Chain Monte Carlo Methods and their efficiency
- Computational Statistics
- Metropolis-Hastings algorithms
- Perfect simulation; Slice Sampler
- Bayesian analysis; decision making with prior information
- Nonparametric Bayesian Change Point Problems
- Asymptotic convergence; measure of skewness; tests for symmetry

Teaching experience and appointments

Undergraduate and graduate courses in introductory and advanced statistics (both classical and Bayesian approach) at the University of Insubria, Varese, Italy

Masters and Doctoral courses in introductory and advanced statistics at the USI (Università della Svizzera Italiana), Lugano, Switzerland

Doctoral courses in computational statistics at the Università L. Bocconi, Milano, Italy

Master course in probability and statistics at the University of Pavia, IUSS (Institute of Advanced Studies) for the Master in Complexity and its interdisciplinary applications

Member of the Scientific and Organizing Committee of the second joint IMS-ISBA world conference

Member of the Scientific Committee of the International University M.Sc. Degree in Complexity and its interdisciplinary applications

All publications are in English.

Representative publications

A. Mira and S. Petrone **Bayesian hierarchical nonparametric inference for change point problems**
1996, *Bayesian Statistics 5* , pp. 693-703

R. Bellazzi, C. Larizza, A. Riva, A. Mira and S. Fiocchi **Distributed intelligent data analysis in diabetic patients management**

1996 , ***Journal of the American Medical Informatics Association*** , pp. 194 - 198

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

A. Mira and C.J. Geyer **On non-reversible Markov chains**
Fields Institute Communications Volume 26: Monte Carlo Methods
2000, pp. 93-108 Providence , RI : American Mathematical Society, N. Madras (Ed.)

A. Mira **Distribution-free test for symmetry based on Bonferroni's measure** 1999, ***Journal of Applied Statistics*** , V. 26, No. 8, pp. 959 - 971

A. Mira **Ordering and improving the performance of Monte Carlo Markov chains** ***Statistical Science***, 2001, Vol. 16, n. 4, pp. 340-350

A. Mira and P.J. Green **Invited discussion of 'The art of data augmentation' by David A. van Dyk and Xiao-Li Meng** ***Journal of Computational and Graphical Statistics***, 2001, Vol 10:1, pp. 94 - 98

P. J. Green and A. Mira **Delayed Rejection in Reversible Jump Metropolis-Hastings** ***Biometrika*** , 2001 - vol 88, no. 3

A. Mira **On Metropolis-Hastings algorithms with delayed rejection**
Metron, 2001, Vol. LIX, n. 3-4, pp. 231-241

A. Mira, J. Møller and G. O. Roberts **Perfect Slice Sampler**
Journal of the Royal Statistical Society Ser. B, volume 63 (2001),
part 3, pp. 593 - 606

A. Mira e G. Nicholls, Bridge estimation of the probability density at a
point, *Statistica Sinica*, Vol. 14, N. 2, pp. 603-612

A. Mira, Efficiency of finite state space Monte Carlo Markov chains,
Statistics & Probability Letters, 2001, Vol. 54:4, pp. 405-411

A. Mira e L. Tierney, Efficiency and Convergence Properties of Slice
Samplers. *Scandinavian Journal of Statistics*, 2002, Vol. 29:1, pp. 1-12

D. Bressanini, A. Morosi, S. Tarasco e A. Mira, Delayed Rejection
Variational Monte Carlo, *Journal of Chemical Physics*, 2004, Vol. 121,
n. 8, pp. 3446-3451

A. Mira e G. Roberts, Invited discussion of 'Slice sampling' by R. Neal,
Annals of Statistics, 2003, Vol. 31:3, pp. 705-767

point, *Statistica Sinica*, Vol. 14, N. 2, pp. 603-612

density at a point, *Statistica Sinica*, Vol. 14, N. 2, pp. 603-612

A. Mira **Efficiency increasing and stationarity preserving
probability mass transfers for MCMC**
Statistics and Probability Letters, 2001, Vol. 54:4, pp. 405-411

A. Mira and L. Tierney **On the use of auxiliary variables in Markov
chain Monte Carlo sampling**
Scandinavian Journal of Statistics, 2002, Vol. 29:1, pp. 1-12

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

A. Mira and G. Roberts **Invited discussion of 'Slice sampling' by R.
Neal** *Annals of Statistics* 2003, Vol. 31:3, pp. 705-767

A. Mira and G. Nicholls **Bridge estimation of the probability density
at a point** *Statistica Sinica* 2004, Volume 14, Number 2, pp. 603-612

D. Bressanini, A. Morosi, S. Tarasco and A. Mira **Delayed Rejection
Variational Monte Carlo** *Journal of Chemical Physics* 2004, Vol. 121,
n. 8, pp. 3446-3451

A. Mira **MCMC methods to estimate Bayesian parametric models**

Handbook of Statistics Vol 25. "Bayesian Statistics: Modelling and Computation", D.K. Dey and C.R. Rao Ed. 2005, pp. 419-439

F. Audrino, G. Barone-Adesi and A. Mira **The stability of factor models of interest rates**