

Short CV with publications

PERSONAL DATA

Name: **Sonia Migliorati**

Birth place: Brescia (Italy)

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EDUCATION

Laurea (M. Sc.) in Economics (1991), University of Brescia, Italy

Ph. D. in Statistics (1994), University of Trento, Italy

ACADEMIC RECORD

1996-2000: Assistant Professor (Ricercatore) of Statistics, University of Milano, Italy

2000-2005: Associate Professor of Statistics, Department of Statistics, University of Milano-Bicocca, Italy

2005- 2012: Professor of Statistics, Department of Statistics, University of Milano-Bicocca, Italy

2012-present: Professor of Statistics, Department of Economics, Management and Statistics (DEMS), University of Milano-Bicocca, Italy

TEACHING EXPERIENCE

Multivariate statistics, statistical models, Bayesian statistics.

OTHER ACTIVITIES

Coordinator of the BSc in “Statistical and Economic Sciences” and of the MSc in “Statistics and Economics”, University of Milano-Bicocca.

MAIN RESEARCH INTERESTS

Compositional data (distributions on the simplex), Regression models for bounded responses, statistical assessment of practical significance, eco-toxicological data models (Dose-response curves, species sensitivity distributions, models for mixtures).

RECENT PUBLICATIONS

Peer-reviewed journal articles (in reverse chronological order)

(2017) Migliorati, S; Di Brisco, A; Ongaro, A. “A New Regression Model for Bounded Responses”, *Bayesian Analysis*, DOI:10.1214/17-BA1079.

(2017) Scarduelli, L; Giacchini, R; Parenti, P; Migliorati, S; Di Brisco, A; Vighi, M. “Natural variability of biochemical biomarkers in the macro-zoobenthos: Dependence on life stage and environmental factors”, *Environmental Toxicology and Chemistry*, DOI:10.1002/etc.3893.

(2016) Migliorati, S., Ongaro, A., & Monti G.S. “A structured Dirichlet mixture model for compositional data: inferential and applicative issues”, *Statistics & Computing*, DOI: 10.1007/s11222-016-9665-y.

(2016) Villa, S; Migliorati, S; Monti, G; Holoubek, I; Vighi, M. “Risk of POP mixtures on the Arctic food chain”, *Environmental Toxicology and Chemistry*, DOI:10.1002/etc.3671.

(2015) Monti, G.S., Migliorati, S., Hron, K., Hřůzová, K., & Fišerová, E. “Log-ratio approach in curve fitting for concentration-response experiments”, *Environmental and Ecological Statistics* 22 (2), 275-295.

(2013) Ongaro, A., & Migliorati, S. “A generalization of the Dirichlet distribution”, *Journal of Multivariate Analysis*, 114, 412-426.

(2012) Villa, S., Migliorati, S., Monti, G.S., & Vighi, M. “Toxicity on the luminescent bacterium *Vibrio fischeri* (Beijerinck). II: Response to complex mixtures of heterogeneous chemicals at low levels of individual components”, *Ecotoxicology and Environmental Safety*, 86, 93-100.

(2012) Sala, S., Migliorati, S., Monti, G.S., & Vighi M “SSD-based rating system for the classification of pesticide risk on biodiversity”, *Ecotoxicology*, 21(4), 1050-1062.

(2009) Vighi, M., Migliorati, S., & Monti, G.S. “Toxicity on the luminescent bacterium *Vibrio Fischeri* (Beijerinck). I: QSAR equation for narcotics and polar narcotics”, *Ecotoxicology and Environmental safety*, 72(1), 154-161.

(2009) Marasini, D., & Migliorati, S. “On the use of inferential confidence intervals”, *Statistica e Applicazioni*, 7(1), 3-14.

(2006) Marasini, D., & Migliorati, S. “Combining information from several groups in estimating characteristics of immigrant people”, *Statistical Methods & Applications*, 15(1), 107-127.

Book chapters and conference proceedings

(2017) Ascari, R., Migliorati, S., & Ongaro, A.” The Extended Flexible Dirichlet model: a simulation study”. In *Proceedings of the 17th Applied Stochastic Models and Data Analysis International Conference with the 6th Demographics Workshop*.

- (2017) Migliorati, S., Di Brisco, A., & Ongaro, A. “ The Flexible Beta Regression Model”. In Proceedings of the 17th Applied Stochastic Models and Data Analysis International Conference with the 6th Demographics Workshop.
- (2017) Ascari, R., Migliorati, S., & Ongaro, A. (2017). “A special Dirichlet mixture model in a Bayesian perspective”. In Cladag 2017 Book of Short Papers (pp.1-6). CLADAG 11th Scientific Meeting of the CLAssification and Data Analysis Group of SIS, Universitas Studiorum.
- (2017) Di Brisco, A, Migliorati, S. “A Special Dirichlet Mixture Model for Multivariate Bounded Responses” . In Cladag 2017 Book of Short Papers. CLADAG 11th Scientific Meeting of the CLAssification and Data Analysis Group of SIS, Universitas Studiorum.
- (2017) Monti, G; Migliorati, S. “Compositional approach to the analysis of species abundance data”. pp.141-151. In The 7th International Workshop on Compositional Data Analysis. Proceedings book - ISBN:978-84-947240-0-8
- (2015) Migliorati, S., & Ongaro, A. Inferential issues in the Extended Flexible Dirichlet model. In ASMDA 2015 Proceedings (pp.665-678). Skiadas, CH. Published by ISAST: international Society for the Advancement of Science and Technology.
- (2014) Ongaro A., Migliorati S. A Dirichlet Mixture Model for Compositions Allowing for Dependence on the Size. In: Advances in Latent Variables: Methods, Models and Applications, Springer.
- (2013) Ongaro A, Migliorati S . A new mixture model for composition and size. In: Advances in Latent Variables. Milan:Vita e Pensiero.
- (2012) Migliorati, S., Monti, G.S., & Ongaro, A. “Point and interval estimation for the Flexible Dirichlet model”, in Proceedings of the 2nd Stochastic Modeling Techniques and Data Analysis International Conference (SMTDA2012), Chania, Greece.
- (2011) Ongaro, A., Migliorati, S., & Monti, G.S. “A new multivariate distribution as a basis for compositional data”, in Proceedings of Applied Stochastic Models and Data Analysis *International* Conference (ASMDA 2011), Roma : Ets.
- (2010) Migliorati, S., & Ongaro, A. “Adjusting p -values when n is large in the presence of nuisance parameters”, in C.H. Skiadas (edited by), Advances in Data Analysis. Boston : Birkhauser.
- (2010) Migliorati, S., Monti, G.S., & Ongaro, A. “The Flexible Dirichlet family: some inferential issues”, in Proceedings of Stochastic Modeling Techniques and Data Analysis International Conference (SMTDA2010), Chania, Greece.
- (2008) Ongaro, A., Migliorati, S., & Monti, G.S. A new distribution on the simplex containing the Dirichlet family. In Proceedings of CODAWORK'08, The 3rd Compositional Data Analysis Workshop, May 27-30, University of Girona.
- (2008) Migliorati S, Monti G.S, Ongaro A. E-M algorithm: an application to a mixture-model for compositional data. In: Atti della XLIV Riunione Scientifica. University of Calabria, June 25-27 2008.

(2007) Migliorati, S., & Ongaro, A. (2007). Standard packages outputs when n is large: when and how should they be adjusted?. In Proceedings of Applied Stochastic Models and Data Analysis International Conference (ASMDA 2007), Greece.