

CURRICULUM VITAE

January 22, 2026

PERSONAL INFORMATION

NAME: Maria Giovanna Ranalli
 DATE OF BIRTH: 14 September 1974
 NATIONALITY Italian

CONTACT INFORMATION

Dipartimento di Scienze Politiche
 Sezione di Statistica
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 ITALIA

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ACTUAL POSITION

OCTOBER 2013 – TODAY. Associate Professor of Statistics, University of Perugia (Italy)

National habilitation for Full Professor in Statistics obtained on March 31st, 2017.

PREVIOUS ACADEMIC POSITIONS

MAY 2005 – SEPTEMBER 2013. Assistant Professor in Statistics, University of Perugia (Italy).

SEPTEMBER 2003 - MARCH 2004 and NOVEMBER 2004 - MAY 2005. Department of Statistics, Colorado State University, Fort Collins, CO. Post-Doctoral Fellow in STARMAP (Space-Time Aquatic Resources Modeling and Analysis Program), STAR Research Assistance Agreements awarded by the US Environmental Protection Agency to Colorado State University and Oregon State University. Director N.Scott Urquhart.

December 2002 – August 2003. Dipartimento di Scienze Statistiche, University of Perugia, Italy. Post-Doctoral Fellow in the project *Sampling spatial data and latent variables models*. Director Prof. Giuseppe Cicchitelli.

OTHER RESEARCH EXPERIENCES

November 2024, Dept. of Statistics, Universidad Federal de Pernambuco, Brasil. Visiting Professor.

August – October 2016, Dept. of Statistics, Colorado State University, Fort Collins, CO (US). Visiting research fellow.

Spring 2001, Center for Applied Statistics, University of Lancaster, UK, Visiting Postgraduate Student. Supervisor B.J. Francis.

Fall-Spring 1995/1996, Department of Probability and Statistics, University of Sheffield, UK, Erasmus student.

EDUCATION

January 2003 PhD in *Mathematics and Statistics for economic and social research*, Department of Statistical Sciences, University of Perugia, Italy. Dissertation on "Nonparametric methods for descriptive inferences on finite populations"; advisor Prof. G.E. Montanari.

April 1999 BA in *Economics* with a curriculum in Statistics, *summa cum laude*, University of Perugia, Italy. Dissertation on "Auxiliary information for regression estimation in survey sampling", advisor Prof. G.E. Montanari (in Italian).

TEACHING

Academic Years 2019/20 – Today: *Statistics, Degree in Political Science* (University of Perugia).

Academic Years 2016/17 – Today: *Opinion and electoral polls, Degree in Political Science* (University of Perugia).

Academic Years 2012/13 – Today: *Data analysis for communication, Master degree in Communication* (University of Perugia).

Academic Years 2009/10 – 2012/13: *Statistics and evaluation methods, Faculty of Political Science, Master degree in Communication* (University of Perugia).

Academic Years 2006/07 – 2009/2010: *Survey Sampling*, Faculty of Economics (University of Perugia).

Academic Year 2008/09 – *Statistics and evaluation methods, Faculty of Political Science, Degree in Communication* (University of Perugia).

Academic Years 2006/07 – 2009/2010: *Introduction to Computer Science*, Faculty of Political Sciences (University of Perugia).

Academic Year 2007/08: *Statistical Methods for Marketing Research*, Faculty of Economics (University of Urbino).

Academic Years 2006/07 and 2007/08: *Statistics*, Graduate course in Design and Communication School (University for Foreigners of Perugia).

POST GRADUATE TEACHING

Academic Years 2023/24 – Today: Finite population inference using modern regression techniques, PhD school in Mathematics, Computer Science and Statistics (University of Florence, 12 hours).

Academic Years 2023/24 – Today: Finite population inference using modern regression techniques, PhD school in Economics (University of Perugia, 12 hours).

Academic Years 2015/16 – 2022/23: *Statistical Inference*, PhD school in Economics (University of Perugia, 12 hours).

Academic Years 2014/15 – 2022/23: *Analysis of data from complex surveys*, PhD school in Economics (University of Perugia, 18 hours).

Academic Years 2007/08 – 2013/14: *Theory of sample surveys*, PhD school in Mathematics and Statistics (University of Perugia, 18 hours).

November 2024: *Finite population inference using modern regression techniques*, PhD programme in Statistics, Master in Statistics, Dept. of Statistics, Universidad Federal de Pernambuco, Brasil (8 hours).

December 2023: *Data analysis and interpretation for journalism*. Centro Italiano di Studi Superiori per la Formazione e l'Aggiornamento in Giornalismo Radiotelevisivo – Rai (14 hours).

December 2021: *Data analysis and interpretation for journalism*. Centro Italiano di Studi Superiori per la Formazione e l'Aggiornamento in Giornalismo Radiotelevisivo – Rai (14 hours).

December 2019: *Data analysis and interpretation for journalism*. Centro Italiano di Studi Superiori per la Formazione e l'Aggiornamento in Giornalismo Radiotelevisivo – Rai (14 hours).

March 2018: *Latent variable models in inference for finite populations*, Université Pierre et Marie Curie, P6 Laboratoire de Probabilités, Statistique et Modélisation, Paris Sorbonne, Erasmus+ (10 hours).

February 2013: *Use of auxiliary information in model assisted inference for finite populations with parametric and nonparametric models*, PhD school in Statistics (University of Milano-Bicocca, 16 hours).

February 2012: *Nonparametric model assisted inference for descriptive inference of finite populations*, Scuola superiore di statistica e di analisi sociali ed economiche, ISTAT, National Statistical Institute (16 hours).

March 2011: *Use of auxiliary information in model assisted inference for finite populations*, PhD school in Statistics (University of Milano-Bicocca, 16 hours).

November 2009: *Nonparametric model assisted inference for descriptive inference of finite populations*, Scuola superiore di statistica e di analisi sociali ed economiche, ISTAT, National Statistical Institute (16 hours).

April 2009: *Nonparametric model assisted inference for descriptive inference of finite populations*, Scuola superiore di statistica e di analisi sociali ed economiche, ISTAT, National Statistical Institute (16 hours).

December 2008: *Calibration and treatment of nonresponse*, PhD school in Statistics (University of Cassino, 4 hours).

July 2007: *Theory and practice for sample surveys: model assisted approach and nonsampling errors*, School of the Società Italiana di Statistica (University of Milano-Bicocca, 4 hours).

RESEARCH PROJECTS

2024 – 2025 INCLUDE-ALL: social INCLUsion and Digital indicators Estimation At Local Level, PE GRINS - GRINS - GROWING RESILIENT, INCLUSIVE AND SUSTAINABLE" (cod. PE0000018 CUP: J33C22002910001). NextGenerationEU – Bando a Cascata SPOKE 0 E 2. Principal Investigator.

2023 – 2028 Research Project on *Statistical surveys for evaluating the quality of socio-educational services for early childhood*, funded by ConOpera. Principal Investigator.

2019 – 2020 Research Project on *Statistical analysis to evaluate the Common Agricultural Policy*, funded by the CESAR. Principal Investigator.

2017 – 2018 Research Project on *Analysis and Development of the Production Plan of the Grana Padano Consortium*, funded by the Grana Padano Consortium. Co-Director.

2014 – 2017 Research Project of National Interest on *Household wealth and youth unemployment: new survey methods to meet current challenges* SURWEY - Grant #2012F42NS8 awarded by the Italian Department of Scientific Research and Technology. PI – National Coordinator <http://www.sp.unipg.it/surwey/>

2013 – 2015 Research project on *Development of statistical models for the analysis of air pollutant and particular matter*, funded by the local Environmental Protection Agency. Director.

2010 – 2014 Member of the statistical advisory committee for the Board for The Revision of the DRG system at the National Department of Health.

2009 – 2011 *Equity in the access of health services for disabled in the Region Umbria: an analysis for the performance of the Health Regional System*. Funded by the Region Umbria. Director Prof. M. Giannoni (University of Perugia).

2008 – 2010 Research Project of National Interest, funded by the Italian Department of Scientific Research and Technology on *Efficient use of auxiliary information at the design and at the estimation stage of complex surveys: methodological aspects and applications for producing official statistics*. Director Prof. Giorgio E. Montanari (University of Perugia). 2007 – 2008 *Evaluation of the economic impact on the local development of cultural events and exhibitions*. Funded by the Foundation Cassa di Risparmio di Perugia. Directors Proff. B. Bracalente and L. Ferrucci (University of Perugia).

2006 – 2008 Member of the statistical advisory committee for the Board for Elderly at the Department of Health of the Region Umbria.

2007 "Progetto Mattoni" of the Italian National Health System *Reference Hospitals*, National Department of Health, director Dr. Alessandro Ghirardini.

2003 – 2006 STARMAP - *Space-Time Aquatic Resources Modeling and Analysis Program*, Science to achieve results research assistance agreement awarded by the U.S. Environmental Protection Agency (EPA) to Colorado State University and Oregon State University. Director Prof. N. Scott Urquhart.

2002 – 2004 *Statistical methods for combining data from different sources*, Research Project of National Interest, funded by the Italian Department of Scientific Research and Technology. Director Prof. A. Zuliani.

2001 – 2002 *Statistical Methods for Criminology*, Young Researchers' Project funded by the University of Perugia. Director.

RESEARCH INTERESTS

SURVEY STATISTICS

Inference for finite populations; Regression estimation; Calibration; Generalized Calibration; Nonparametric regression for model assisted survey sampling; Unit nonresponse; Latent variable models for nonresponse; Variance estimation; Bootstrap methods; Multiple Frame Surveys; Analysis of survey data; Analytic inference.

SMALL AREA ESTIMATION

Nonparametric regression methods; M-quantile and Robust methods; Latent Markov Models; Finite Mixture Models; Latent Class Models; Benchmarking; Bayesian Hierarchical Modeling; Logistic Mixed Models; EBP; Model Based Direct Estimator.

STATISTICAL MODELS

Quantile and M-quantile regression models; Nonparametric regression models; Penalized splines; Splines for spatial data; Robust models for non-normal data; Spatio-temporal models for high frequency data; Finite Mixtures; Latent Class models.

APPLICATIONS

Official data; Labor Force Survey; Poverty mapping; Households panel data; Households Health Survey data; Environmental data; High frequency air quality data.

SELECTED PUBLICATIONS

PAPERS IN PEER REVIEWED INTERNATIONAL JOURNALS

- [1] Benedetti, R., Neri, A., Porreca, E., & Giovanna Ranalli, M. (2026). Improving Estimates on Housing Wealth With Survey and Administrative Data. *Review of Income and Wealth*, 72(1), e70048.
- [2] Alfò M., Marino M.F., Ranalli M.G., Salvati N., (2025). Iqmix: an R Package for Longitudinal Data Analysis via Linear Quantile Mixtures, *The R Journal*, 17(3), 188-211.
- [3] Ranalli, M.G. (2025). Machine learning methods for estimation in Official Statistics, *Journal of Official Statistics*, Invited paper for the 40th anniversary of JOS, 41(3), 912-920.
- [4] Ranalli, M.G. (2025). Comments on "Trends and Directions in Sample Survey Theory and Methods", *Survey Methodology*, 51(1), 131-139.
- [5] Ranalli, M.G., Pennoni, F., Bartolucci, F., Mira, A. (2025). When non-response makes estimates from a census a small area estimation problem: the case of the survey on graduates' employment status in Italy. *Advances in Data Analysis and Classification*, 19, 515-543.
- [6] Cantarella, M., Neri, A., Ranalli, M.G. (2024). Estimating the distribution of household wealth: methods for adjusting survey data estimates using national accounts and rich list data. *Review of Income and Wealth*, 70 (3), 551-580. Rivista di **Classe A** Anvur; WoS JIF (2024): Q2 (Economics); Scopus (2024): Q2 (Statistics and Probability).
- [7] De Novellis, G., Doretti, M., Montanari, G. E., Ranalli, M. G., Salvati, N. (2024). Performance evaluation of nursing homes using finite mixtures of logistic models and M-quantile regression for binary data. *Statistical Methods & Applications*, 1-29.
- [8] D'Alò, M, Fasulo, A., Isidori, F. Ranalli, M.G. (2024). Small area estimation of severe functional limitation from iItalian data of the European Health Interview survey. *Rivista italiana di economia, demografia e statistica*, LXXVIII (1), 31-42.
- [9] De Novellis, G., Tanzi, P. M., Ranalli, M. G., Stanghellini, E. (2024). Leveraged finance exposure in the banking system: Systemic risk and interconnectedness. *Journal of International Financial Markets, Institutions and Money*, 90, 101890.

[10] Ranalli, M. G., Salvati, N., Petrella, L., Pantalone, F. (2023). M-quantile regression shrinkage and selection via the Lasso and Elastic Net to assess the effect of meteorology and traffic on air quality. *Biometrical Journal*, 65(8), 2100355.

[11] Di Zio, M., Liseo, B., Ranalli, M. G. (2023). Bayesian Ideas in Survey Sampling: The Legacy of Basu. *Sankhya A*, 1-24.

[12] Cantarella, M., Neri, A., Ranalli, M. G. (2023). Estimating the distribution of household wealth: methods for adjusting survey data estimates using national accounts and rich list data. *Review of Income and Wealth*.

[13] Ranalli, M. G., Matei, A., Neri, A. (2023). Generalised calibration with latent variables for the treatment of unit nonresponse in sample surveys. *Statistical Methods & Applications*, 32(1), 169-195.

[14] Ciliberti, S., Severini, S., Ranalli, M. G., Biagini, L., Frascarelli, A. (2022). Do direct payments efficiently support incomes of small and large farms?. *European Review of Agricultural Economics*, 49(4), 796-831 <https://doi.org/10.1093/erae/jbac013>

[15] Chambers, R. L., Fabrizi, E., Ranalli, M. G., Salvati, N., Wang, S. (2022). Robust regression using probabilistically linked data. *Wiley Interdisciplinary Reviews: Computational Statistics*, e1596 <https://doi.org/10.1002/wics.1596>

[16] Crocchianti, S., Del Sarto, S., Ranalli, M. G., Moroni, B., Castellini, S., Petroselli, C., & Cappelletti, D. (2021). Spatiotemporal correlation of urban pollutants by long-term measurements on a mobile observation platform. *Environmental Pollution*, 268, 115645 <https://doi.org/10.1016/j.envpol.2020.115645>

[17] Salvati N., Fabrizi E., Ranalli M.G., Chambers R.L. (2021) Small area estimation with linked data. *Journal of the Royal Statistical Society Series B*. <https://doi.org/10.1111/rssb.12401>

[18] Alfò M., Marino M.F., Ranalli M.G., Salvati N., Tzavidis N. (2020) M-quantile regression for multivariate longitudinal data with an application to the Millennium Cohort Study. *Journal of the Royal Statistical Society Series C*. <https://doi.org/10.1111/rssc.12452>

[19] Del Mar Rueda, M., Ranalli, M. G., Arcos, A., Molina, D. (2020). Population empirical likelihood estimation in dual frame surveys. *Statistical Papers*, 1-18 <https://doi.org/10.1007/s00362-020-01200-5>

[20] Cotrufo, M. F., Ranalli, M. G., Haddix, M. L., Six, J., & Lugato, E. (2019). Soil carbon storage informed by particulate and mineral-associated organic matter. *Nature Geoscience*, 12(12), 989-994, <https://doi.org/10.1038/s41561-019-0484-6>

[21] Del Sarto, S., Marino, M. F., Ranalli, M. G., Salvati, N. (2019). Using finite mixtures of M-quantile regression models to handle unobserved heterogeneity in assessing the effect of meteorology and traffic on air quality. *Stochastic Environmental Research and Risk Assessment*, <https://doi.org/10.1007/s00477-019-01687-x>

[22] Sobotka, F., Salvati, N., Ranalli, M. G., Kneib, T. (2019). Adaptive Semiparametric M-Quantile Regression, *Econometrics and Statistics*, <https://doi.org/10.1016/j.ecosta.2019.03.001>

[23] Marino, M.F., Ranalli, M.G., Salvati N., Alfò, M. (2019). Semiparametric Empirical Best Prediction for Small Area Estimation of Unemployment Indicators. *Annals of Applied Statistics*, <https://doi.org/10.1214/18-AOAS1226>

[24] Bertarelli, G., Ranalli, M. G., Bartolucci, F., D'Alò, M., Solari, F. (2018). Small area estimation for unemployment using latent Markov models. *Survey Methodology*, 44(2), 167-192.

[25] Ranalli, M. G., Montanari, G. E., Vicarelli, C. (2018). Estimation of small area counts with the benchmarking property. *Metron*, 76(3), 349-378.

[26] Cagini, L., Andolfi, M., Becattini, C., Ranalli, M. G., Bartolucci, F., Mancuso, A., Vannucci, J., Agnelli, G., Puma, F. (2018). Bedside sonography assessment of extravascular lung water increase after major pulmonary resection in non-small cell lung cancer patients. *Journal of thoracic disease*, 10(7), 4077.

[27] Becattini, C., Giustozzi, M., Ranalli, M. G., Bogliari, G., Cianella, F., Verso, M., Vedovati, M. C. (2018). Variation of renal function over time is associated with major bleeding in patients treated with direct oral anticoagulants for atrial fibrillation. *Journal of Thrombosis and Haemostasis*, 16(5), 833-841.

[28] Rueda, M. D. M., Arcos, A., Molina, D., Ranalli, M. G. (2018). Estimation Techniques for Ordinal Data in Multiple Frame Surveys with Complex Sampling Designs. *International Statistical Review*, 86(1), 51-67.

[29] Alfò, M., Salvati, N., Ranalli, M. G. (2017). Finite mixtures of Quantile and M-quantile regression models. *Statistics and Computing*, 27-2, 547-570.

[30] Ranalli, M. G., Rocco, G., Jona Lasinio, G., Moroni, B., Castellini, S., Crocchianti, S., Cappelletti, D. (2016). Functional exploratory data analysis for high-resolution measurements of urban particulate matter. *Biometrical Journal*, 58-5, 1229–1247

[31] Del Sarto, S., Ranalli, M. G., Cappelletti, D., Moroni, B., Crocchianti, S., Castellini, S. (2016). Modelling spatio-temporal air pollution data from a mobile monitoring station. *Journal of Statistical Computation and Simulation*, 86-13, 2546–2559

[32] Ranalli, M.G., Arcos, A., Rueda, M. D. M., Teodoro, A. (2016). Calibration estimation in dual frame surveys. *Statistical Methods and Applications*, 25-3, 321-349

[33] Fabrizi, E., Montanari, G.E. and Ranalli, M.G. (2016), A hierarchical latent class model for predicting disability small area counts from survey data. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 179, 103–131

[34] Pucci, G., Ranalli, M. G., Battista, F., Schillaci, G. (2016). Effects of β -Blockers With and Without Vasodilating Properties on Central Blood Pressure Systematic Review and Meta-Analysis of Randomized Trials in Hypertension. *Hypertension*, 67(2), 316-324.

[35] Molina, D., del Mar Rueda, M., Arcos, A., Ranalli, M. G. (2015). Multinomial logistic estimation in dual frame surveys. *SORT-Statistics and Operations Research Transactions*, 39(2), 309-336.

[36] Matei A., Ranalli M.G. (2015) Dealing with nonresponse in survey sampling: a latent modeling approach, *Survey Methodology*, 41, 145-164.

[37] Arcos, A., Molina, D., Ranalli, M.G., Rueda, M.d.M. (2015), Frames2: A Package for Estimation in Dual Frame Surveys, *R journal*, 7 (1), 52–72

[38] Dreassi, E., Ranalli, M.G., Salvati, N. (2015). Semiparametric M-quantile Regression for Count data. *Statistical methods in medical research* 23 (6), 591-610

[39] Tzavidis, N., Ranalli, M. G., Salvati, N., Dreassi, E., Chambers, R. (2015). Robust small area prediction for counts. *Statistical methods in medical research*, 24 (3), 373-395.

[40] Gnaldi, M., Ranalli, M. G. (2015) Measuring University Performance by Means of Composite Indicators: A Robustness Analysis of the Composite Measure Used for the Benchmark of Italian Universities. *Social Indicators Research*, doi: 10.1007/s11205-015-1116-1.

[41] Montanari, G.E. and Ranalli M.G. (2012) Calibration inspired by semiparametric regression as a treatment for nonresponse, *Journal of Official Statistics*, 28 (2), 239-277.

[42] D'Alò M., Di Consiglio L., Falorsi S., Ranalli M.G., Solari, F. (2012) Use of spatial information in small area models for unemployment rate estimation at sub-provincial areas in Italy, *Journal of the Indian Society of Agricultural Statistics, Special issue on small area estimation (Invited)*, 66 (1), 43-54.

[43] Neri, A. and Ranalli M.G. (2011) To misreport or not to report? The case of the Italian Survey on Household Income and Wealth, *Statistics in Transition*, 12 (2), 281-300.

[44] Montanari G.E., Ranalli M.G., Eusebi, P. (2011) Latent variable modeling of disability in people aged 65 or more, *Statistical Methods and Applications*, 20-1, 49-63.

[45] Bracalente B., C Chirieleison, M Cossignani, L Ferrucci, M Gigliotti, MG Ranalli (2011) The economic impact of cultural events: the Umbria Jazz music festival, *Tourism Economics*, 17 (6), 1235-1255

[46] Salvati N., Ranalli M.G. and Pratesi (2011) Small area estimation of the mean using nonparametric M-quantile regression: a comparison when a linear mixed model does not hold, *Journal of Statistical Computation and Simulation*, 81-8, 945-964

[47] Salvati N., Chandra H., Ranalli M.G., Chambers R. (2010) Small Area Estimation Using a Nonparametric Model Based Direct Estimator. *Computational Statistics and Data Analysis*, 54-9, 2159-2171

[48] Pratesi, M., Ranalli M.G. and Salvati N. (2009). Nonparametric M-quantile Regression using Penalized Splines. *Journal of Nonparametric Statistics*, 21-3, 287-304.

[49] Pratesi, M., Ranalli M.G. and Salvati N. (2008). Semiparametric M-quantile regression for estimating the proportion of acidic lakes in 8-digit HUCs of the Northeastern US. *Environmetrics*, 19-7, 687-701.

[50] Opsomer, J.D., G. Claeskens, M.G. Ranalli, G. Kauermann and F.J. Breidt (2008): Nonparametric small area estimation using penalized spline regression. *Journal of the Royal Statistical Society, Series B*, 70, 265-286.

[51] Breidt, F.J., J.D. Opsomer, A.A. Johnson and M.G. Ranalli (2007): Semiparametric model-assisted estimation for natural resource surveys, *Survey Methodology*, 33, 35-44.

[52] Wang, H. and Ranalli, M.G. (2007): Low-Rank Smoothing Splines on Complicated Domains. *Biometrics*, 63, 209-217.

[53] Montanari G.E. and Ranalli, M.G. (2006): A mixed model-assisted regression estimator that uses variables employed at the design stage, *Statistical methods and applications*, 15-2, 139-149.

[54] Montanari, G.E. and Ranalli M.G. (2005): Nonparametric model calibration estimation in survey sampling, *Journal of the American Statistical Association*, 100, 1429-1442.

[55] Montanari, G.E. and Ranalli, M.G. (2002): Asymptotically Efficient Generalised Regression Estimators, *Journal of Official Statistics*, 18-4, 577-590.

Books

[56] Nicolini G., Marasini, D., Montanari, G.E., Pratesi, M., Ranalli M.G. and Rocco E. (2012). *Metodi di Stima in presenza di errori non campionari*, Springer-Verlag (in Italian). ISBN 978-88-470-2795-4.

EDITED BOOKS

[57] Mecatti, F., Conti, P.L., Ranalli, M.G. (2014). *Contributions to Sampling Statistics*. Springer-Verlag. ISBN 978-3-319-05319-6.

EDITED SPECIAL ISSUES

[58] Ranalli, M. G., Beaumont, J. F., Bertarelli, G., Shlomo, N. (2024). Foreword to the special issue on "Survey Methods for Statistical Data Integration and New Data Sources: tools and real data applications for official statistics". *METRON*, 82(1), 1-3.

[59] Ranalli, M. G., Beaumont, J. F., Bertarelli, G., Shlomo, N. (2023). Foreword to the special issue on "Survey Methods for Statistical Data Integration and New Data Sources". *METRON*, 81(1), 1-3.

[60] Opsomer, J. D., Ranalli, M. G., Dickson, M. M. (2017). Foreword to the special issue on "Advances in Survey Statistics". *Metron*, 75(3), 245-247.

[61] Fassò, A., El-Shaarawi, A., Ranalli, M. G. (2016). Advanced methods for space-time environmental data. *Statistical Methods and Applications*, 25(1), 1-4.

CHAPTERS IN BOOKS

[62] Pantalone, F., Ranalli, M.G. (2021) Including spatial information in estimation from complex survey data, in *Spatial Econometric Methods in Agricultural Economics Using R*, Taylor & Francis Inc. ISBN:978-1-498-76681-4.

[63] Stanghellini, E., Ranalli, M. G. (2017) Population size estimation using a categorical latent variable. In *Capture-Recapture Methods for the Social and Medical Sciences* - Dankmar Bohning, Peter G.M. Van der Heijden, John Bunge Eds, Chapman and Hall/CRC Taylor and Francis ISBN:9781498745314. pp.279-292.

[64] Del Sarto, S., Ranalli, M. G., Bakar, K. S., Cappelletti, D., Moroni, B., Crocchianti, S., Castellini, S. (2016). Bayesian spatio-temporal modeling of urban air pollution dynamics. In *Topics on Methodological and Applied Statistical Inference Series: Selected Papers of the Statistical Societies*, T. Di Battista, E. Moreno, W. Racugno (Eds.). Springer-Verlag.

[65] Ranalli, M. G., Breidt, F. J., Opsomer, J. D. (2016) Nonparametric Regression Methods for Small Area Estimation, in *Analysis of Poverty Data by Small Area Estimation* (ed M. Pratesi), John Wiley & Sons, Ltd, Chichester, UK. doi: 10.1002/9781118814963.ch10

[66] Montanari, G.E., Ranalli M.G., Eusebi P. (2009). Multilevel Latent Class Models for evaluation of long term care facilities, in *Data Analysis and Classification: from the exploratory to the confirmatory approach*, Springer series on "Studies in Classification, Data Analysis, and Knowledge Organization" (Carlo Lauro, Francesco Palumbo, Michael Greenacre eds.), pp 249-256.

[67] Montanari, G.E. and Ranalli M.G. (2005): Nonparametric methods in survey sampling, in *New Developments in Classification and data Analysis*, M. Vichi, P. Monari, S. Mignani, A. Montanari (Eds.), Springer-Verlag, Berlin, pp 203-210.

SELECTED TECHNICAL REPORTS AND OTHER PAPERS

[68] Neri, A. and Ranalli M.G. (2012) To misreport or not to report? The measurement of household financial wealth, (in Italian), Temi di Discussione n. 870, Banca d'Italia.

SELECTED CONFERENCE PROCEEDINGS

[69] Ranalli, M.G., Mecatti, F. (2012): Comparing Recent Approaches For Bootstrapping Sample Survey Data: A First Step Towards A Unified Approach, *JSM Proceedings*, Survey research Methods Section. Alexandria, VA: American Statistical Association.

[70] Montanari G.E. and Ranalli M.G. (2009): *Multiple and ridge model calibration for sample surveys*, proceedings of the Workshop in Calibration and estimation in surveys, Ottawa, October 2007, Statistics Canada.

BOOK REVIEWS

[71] Ranalli, M.G. (2012) Data Analysis. What Can be Learned from the Past 50 Years, by Peter J. Huber, *Journal of Official Statistics*, 28-3, 463-466.

SELECTED INVITED LECTURES AND SEMINARS

[1] *When non-response makes estimates from a census a small area estimation problem: The case of the survey on graduates' employment status in Italy*. Relazione Invitata. ITACOSM2025 - 9th ITAlian Conference on Survey Methodology – IASS Satellite Conference Shaping the future of survey statistics in the data-driven era, Bologna, 1-4 July 2025

[2] *Small Area Estimation of latent variables using Item Response Theory models*. Relazione Invitata. Workshop on Survey Sampling, in honour of Professor Yves Tillé on the occasion of his retirement, Faculté de sciences économiques, Université de Neuchâtel, Svizzera, 25-26 June 2025

[3] *Small Area Estimation of latent variables using Item Response Theory models*. Seminario. Dipartimento di Scienze Statistiche, Università di Bologna, 13 March 2025

[4] *Small Area Estimation of latent variables using Item Response Theory models*. Seminario. Departamento de Estatística, Universidad Federal de Pernambuco, Recife, Brasil, 21 November 2024

[5] *Improving estimates from the Survey on Household Income and Wealth using administrative data with measurement error via structural equation models*, Invited talk, CANSSI-CRT Workshop, Modern Methods in Survey Sampling, University of Ottawa, Canada, July 8-10, 2024

[6] *Small Area Estimation of Educational Poverty using Item Response Theory models*, Invited talk, 52nd Scientific Meeting of the Italian Statistical Society, University of Bari, Italy, June 2024

[7] *Latent Variable models in inference for finite populations*, Webinar, International Association of Survey Statisticians, 31 January 2024

[8] *Using Integrated Data Sources For Small Area Estimation Within Italian Social Surveys To Monitor SDG Indicators*, Invited talk, ISI World Statistics Congress, Ottawa, Canada, 17 July 2023

[9] *Model-Assisted Indirect Small Area Estimation*, Invited talk, ISI World Statistics Congress, Ottawa, Canada, 19 July 2023

[10] *Latent Variable models in inference for finite populations*, Keynote address, ITACOSM 2023, Università della Calabria, 7 June 2023

[11] *Small area estimation: recent advances and challenges for Official Statistics*, Master Class, ISTAT, Rome, 29 May 2023

[12] *Small Area Estimation of Educational Poverty with latent variable models*, Invited talk, CMStatistics 2022, London, 17 December 2022

[13] *Empirical Best Prediction for Small Area Estimation of categorical variables using Finite Mixtures of Multinomial Logistic Models*, Invited talk, CFE-CMStatistics 2021, London-Online, Dec. 18-20, 2021

[14] *Empirical Best Prediction for SAE of categorical variables using Finite Mixtures of Multinomial Logistic Models*, Invited talk, SAE2020, Napoli, 20-24 September 2021

[15] *Le metodologie di campionamento e scomposizione della devianza nelle rilevazioni nazionali dell'Invalsi*, Webinar, INVALSI e ISTAT, 19 November, 2020

[16] *L'indagine sierologica su Covid-19. Piano di indagine e possibili strategie di monitoraggio del contagio*, Webinar, Università della Calabria, 18 May 2020

- [17] *Comparing calibration and mass imputation methods when nonresponse depends on the variable of interest*, Invited Session - IP101 on Advances in survey statistics for treating non-ignorable nonresponse. 62nd ISI World Statistics Congress - Kuala Lumpur 18-23 August 2019
- [18] *Design-based indirect small area estimation*, Joint work with L-C. Zhang (University of Southampton and Statistics Norway), Invited talk, Current Trends in Survey Statistics 2019, Institute for Mathematical Sciences National University of Singapore, Singapore, 13-16 August 2019
- [19] *Semi-Parametric Empirical Best Prediction for small area estimation of unemployment indicators*, Méthodes Avancées pour l'Analyse de Sondages Complexes, Université de Franche-Comté - Laboratoire de Mathématiques de Besançon — May 15, 2019
- [20] *A hybrid approach for integrating macro and micro sources*, Invited seminar at the Expert Group for Linking Micro and Macro Statistics - EG-LMM, Bank of Italy, Rome March 21-22, 2019.
- [21] *Ways to deal with micro-macro gaps*, Invited seminar at the OECD-Eurostat Expert Group On Disparities in a National Accounts Framework - EG DNA, Luxembourg, December, 4, 2018.
- [22] *Paradigm shift in the production of Official Statistics and the role of research*, Master Class, ISTAT, Rome, November, 21, 2018.
- [23] *Imputation and reweighting approaches for integrating macro and micro sources*, Invited seminar at the Expert Group for Linking Micro and Macro Statistics - EG-LMM, European Central Bank, Frankfurt am Main, September 18, 2018.
- [24] *Estimation of the parameters of the Asymmetric Laplace Distribution under informative sampling*, Invited talk, Small Area Estimation and Other Topics of Current Interest in Surveys, Official Statistics, and General Statistics, East China Normal University, Shanghai, June 16-18, 2018.
- [25] *Latent variable models in estimation from complex surveys*, Invited talk, CRM-CANSSI Workshop on Statistical Inference for complex surveys Université de Montréal, May 30 – June 1, 2018.
- [26] *Dealing with non-ignorable nonresponse in survey sampling*, Webinar, ISTAT, Rome, May, 3, 2018.
- [27] *A hierarchical latent class model for predicting disability small area counts from survey data*, Seminar, Laboratoire de Probabilités, Statistique et Modélisation, Université Pierre et Marie Curie, Paris 6, Sorbonne, Paris, France, March, 30, 2018.
- [28] *Modèles de Markov latent et modèles de mélanges finis pour l'estimation pour petits domaines*, 9e Colloque Francophone sur les sondages, Invited talk, Université du Québec en Outaouais (UQO), Canada, October 11-14, 2016.
- [29] *Time Series Small Area Estimation for Unemployment Rates using Latent Markov Models*, Invited talk, 44th Annual Meeting of the Statistical Society of Canada, Brock University, May 29 – June 1, 2016
- [30] *Time Series Small Area Estimation for Unemployment Rates using Latent Markov Models*, Invited talk, CFE-CMStatistics 2015 – London, Dec 12-14, 2015
- [31] *Handling nonignorable nonresponse using generalized calibration with latent variables*, Seminar, ENSAI, Rennes, Nov. 28th, 2014
- [32] *Robust Small Area Predictors for Counts*, Southampton Statistical Sciences Research Institute 10th Anniversary Symposium, Invited lecture, University of Southampton, Dec 17th, 2013
- [33] *Handling nonignorable nonresponse using generalized calibration with latent variables*, Invited talk, 59th ISI World Statistics Conference Hong Kong, Aug. 30th, 2013

- [34] *Adjusting for nonignorable nonresponse using a latent variable modeling approach*, Seminar, Dpto. de Estadística e I.O. – Universidad de Granada, Granada, Apr. 30th, 2012
- [35] *Nonparametric regression in inference for finite populations*, Series of invited lectures, Keynote Speaker, Banocoss 2011, Third Baltic Nordic Conference on Survey Statistics, 13-17 June, Norrfällsviken, Sweden.
- [36] *Small area estimation for a latent variable: the case of disability in the Italian National Health Interview Survey*, Seminar, Institut de Statistique, Faculte de sciences économiques, Neuchatel, Dec. 2nd, 2010
- [37] *Non parametric regression model-assisted estimation for finite environmental populations*, Invited communication, Statistische woche, German Statistical Society, Wuppertal, 5-8 October, 2009.
- [38] *Recent developments in calibration estimation*, invited lecture at the XLIV Meeting of the Italian Statistical Society, Università della Calabria, 27 June 2008.
- [39] *Small area estimation for a latent variable*, seminar at the Statistics Department of the Katholieke Universiteit of Leuven, Leuven, 22 November 2007.
- [40] *Multiple model calibration*, invited lecture at WCES - Workshop on Calibration and Estimation in Surveys at Statistics Canada, Ottawa, 31 October 2007.
- [41] *Small area estimation when the variable of interest is latent*, invited lecture at SAE 2007, IASS satellite conference on Small area estimation, Università di Pisa, 3 September 2007.
- [42] *Calibration inspired by semiparametric regression as a treatment for nonresponse*, invited lecture at the 56th Session of International Statistical Institute, Lisbon, 22-29 August 2007.
- [43] *Calibration inspired by semiparametric regression as a treatment for nonresponse*, invited lecture at the Banocoss 2007, Second Baltic-Nordic conference on Survey Sampling, Kuusamo, Finland, 2-7 June 2007.
- [44] *Low-rank smoothing splines for unusual spatial structures: smoothing estuaries and stream networks*, invited lecture at WNAR and IMS annual meeting, Fairbanks, Alaska, USA, 22 June 2005.
- [45] *Low rank smoothing splines on complex domains*, invited lecture at the Environmental Protection Agency, Atlantic Ecology Division, Narragansett, Rhode Island, USA, 1 March 2005.
- [46] *Low-rank smoothing splines for complex domains and manifold recovery*. Seminar at the Department of Statistics, University of Virginia, Charlottesville, USA, 4 March 2005.
- [47] *Nonparametric model calibration in survey sampling*, seminar at the Department of Statistics, Iowa State University, Ames, 18 February 2004.
- [48] *Auxiliary information and Regression Estimation in Survey Sampling*, invited lecture at the 6th Austrian, Hungarian, Italian and Slovenian Meeting of Young Statisticians, Ossiach, Austria, October 6, 2001.

PROFESSIONAL AFFILIATIONS AND EDITORIAL ACTIVITIES

MEMBER OF THE METHODOLOGY ADVISORY BOARD FOR ISTAT – ITALIAN NATIONAL STATISTICAL OFFICE (2016 – TODAY).

MEMBER OF THE ADVISORY COMMITTEE FOR ISTAT – ITALIAN NATIONAL STATISTICAL OFFICE – FOR THE COVID-19 SURVEY (2020).

MEMBERSHIPS IN PROFESSIONAL SOCIETIES:

ISI – International Statistical Society, Elected Fellow
International Association of Survey Statisticians
Società Italiana di Statistica (Italian statistical society)

Vice-President of International Association of Survey Statisticians (2021-2023)
President of S2G, the Survey research section of the Italian Statistical Society (2019-2021)
President Elect of S2G, the Survey research section of the Italian Statistical Society (2018-2019)
Elected member of the Council of S2G, the Survey research section of the Italian Statistical Society (2009-2014)
Elected Officer of IASS, International Association of Survey Statisticians (2015-2019).

COMMITTEES

Scientific committee – 2nd ITACOSM, Italian Conference on Survey Methodology, Pisa, June 2011
Scientific committee – Graybill 2013 "Survey Statistics" – Fort Collins (CO) June 2013.
Scientific committee – CLADAG, Classification and data analysis group, University of Modena-Reggio Emilia, September, 2013
Scientific committee – 3rd ITACOSM, Italian Conference on Survey Methodology, Milan, June 2013
Scientific committee – 47th Meeting of the Italian Statistical Society, University of Cagliari, Cagliari, June, 2014
Scientific committee – 5th ITACOSM, Italian Conference on Survey Methodology, Bologna, June 2017
Scientific committee – 6th ITACOSM, Italian Conference on Survey Methodology, Florence, June 2019
Scientific committee – 50th Meeting of the Italian Statistical Society, University of Pisa, Pisa, June, 2021
Scientific committee – 7th ITACOSM, Italian Conference on Survey Methodology, Perugia, June 2022 – Chair
Short course committee – WSC – World Statistics Congress of the ISI, 2021 Le Hague
Organizing committee – SAE Small Area Estimation Conference, Pisa, June 2007
Organizing committee – 1st ITACOSM, Italian Conference on Survey Methodology, Siena, June 2009
Member of the Waksberg Award Committee appointed by Survey Methodology and the American Statistical Association (2021-2022)
Chair of the Waksberg Award Committee appointed by Survey Methodology and the American Statistical Association (2023)

ASSOCIATE EDITOR

Journal of the Royal Statistical Society, Series C (ed. Wiley) January 2024 – Today
Statistical Methods and Applications (ed. Springer) January 2024 – Today
Journal of the American Statistical Association (ed. Taylor and Francis) January 2023 – Today
Journal of Survey Statistics and Methodology (ed. Oxford Academic) January 2023 – today
Journal of Official Statistics (ed. Statistics Sweden) May 2018 – today
Statistical Methods and Applications (ed. Springer) January 2014 – November 2019
Journal of the Royal Statistical Society, Series A (ed. Wiley) January 2017 – December 2021
Biometrical Journal (ed. Wiley) September 2011 – December 2018
Metron (ed. Springer) January 2014 – December 2018

ADVISORY BOARD MEMBER

Metron (ed. Springer) January 2019 – today
Rivista di Statistica Ufficiale June 2019 – today

MANUSCRIPT REFEREEING FOR MORE THAN 100 DIFFERENT INTERNATIONAL JOURNALS AMONG WHICH:

Annals of Applied Statistics, *Biometrics*, *Biometrika*, *Journal of the American Statistical Association*, *Journal of the Royal Statistical Society (Series A, B and C)*, *Multivariate Behavioral Research*, *Statistical Modelling*, *Statistics and Computing*.

PROJECT EVALUATION ACTIVITY FOR NSF AND THE ITALIAN MINISTRY OF RESEARCH AND EDUCATION.

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Perugia, January 22, 2026

Maria Giovanna Ranalli

