

Curriculum Vitae Ruggero Bellio

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Contact Information

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Education

University of Padova, Italy	Statistics	<i>Laurea</i>	1996
KVL Frederiksberg (Copenhagen), Denmark	Visiting Research Student		1998-1999
University of Padova, Italy	Statistics	PhD	2000

Academic Position

University of Udine, Italy	Research Fellow/Assistant Professor	2000-2007
University of Udine, Italy	Associate Professor	2007-2021
University of Udine, Italy	Professor	2021-present

Teaching

University courses on Probability, Statistical Inference, Statistical Modelling, Business Analytics.
Short courses on Likelihood Methods, Mixed Models, Robust Statistics.

Professional Service

Co-Editor (Methods): Statistical Methods and Applications, 2016-2019.

Associate Editor: Statistical Methods and Applications, 2012-2015.

Referee (main journals): Applied Statistics, Applied Stochastic Models in Business and Industry, Biometrika, Brazilian Journal of Probability and Statistics, Communications in Statistics-Simulation and Computation, Computational Statistics and Data Analysis, Electronic Journal of Applied Statistical Analysis, Journal of Applied Statistics, Journal of the American Statistical Association, Journal of the Royal Statistical Society Series B, Psychometrika, Metron, Scandinavian Journal of Statistics, SpringerPlus, Stat, Statistica Sinica, Statistical Methods and Applications, Statistical Science, Statistics and Computing, Structural Equation Modeling, Technometrics, Test, The Canadian Journal of Statistics, The R Journal.

Scientific Committee Member: Workshop on Composite Likelihood Methods (Warwick, UK, 2008), 45th SIS Conference (Padova, IT, 2010), 28th IWSM (Palermo, IT, 2013), 36th IWSM (Trieste, IT, 2022).

Research Interests

Item Response Theory; Likelihood Methods & Asymptotics; Mixed Models and their Applications; Statistical Computing; Statistical Methods for Data Mining & Business Analytics.

Invited Talks

At meetings: BIRS Composite Likelihood Workshop, Banff (CA, 2012); Italian Statistical Society Meeting, Rome (IT, 2001); Workshop on Inference and Asymptotics, Ascona (CH, 2000).

In other Departments: Frediksberg (DK), Copenhagen (DK), Aarhus (DK), Perugia (IT), Padova (IT), Zurich (CH), Uppsala (SE), Bologna, London School of Economics (UK), WU Vienna (AT), The Alan Turing Institute London (UK).

PhD Student Theses Supervised

Fabio Nonino, University of Padova, 2008 (Co-Supervisor); Nicola Soriani, University of Padova, 2012 (Main Supervisor); Roberta De Vito, University of Padova, 2016 (Main Supervisor); Vincenzo Gioia, University of Udine, in progress (Co-Supervisor); Giuseppe Alfonzetti, University of Padova, in progress (Main Supervisor); Andrea Panarotto, University of Padova, in progress (Co-Supervisor).

Main refereed publications in international journals

- Lambardi di San Miniato, M., Bellio, R., Grassetti, L. and Vidoni, P. (2022). Separable spatio-temporal kriging for fast virtual sensing. *Applied Stochastic Models in Business and Industry*, accepted for publication (<https://onlinelibrary.wiley.com/doi/full/10.1002/asmb.2697>).
- Bellio, R., Kosmidis, I., Salvan, A. and Sartori, N. (2022). Parametric bootstrap inference for stratified models with high-dimensional nuisance specifications. *Statistica Sinica*, accepted for publication (https://www3.stat.sinica.edu.tw/ss_newpaper/SS-2021-0027_na.pdf).
- De Vito, R., Bellio, R., Trippa, L. and Parmigiani, G. (2021). Bayesian multi-study factor analysis for high-throughput biological data. *Annals of Applied Statistics*, **15**, 1723–1741.
- Bellio, R., Ceschia, S., Di Gaspero, L. and Schaerf, A. (2021). Two-Stage multi-neighborhood simulated annealing for uncapacitated examination timetabling. *Computers & Operations Research*, **132**, 105300.
- Battauz, M. and Bellio, R. (2021). Shrinkage estimation of the three-parameter logistic model. *British Journal of Mathematical and Statistical Psychology*, **74**, 591–609.
- Bellio, R. and Soriani, N. (2021). Maximum likelihood estimation based on the Laplace approximation for p_2 network regression models. *Statistica Neerlandica*, **75**, 24–41.
- Grassetti, L., Bellio, R., Di Gaspero, L., Fonseca, G. and Vidoni, P. (2020). An extended RAPM analysis for lineup management in basketball based on play-by-play data. *IMA Journal of Management Mathematics*, **32**, 385–409.
- De Vito, R., Bellio, R., Trippa, L. and Parmigiani, G. (2019). Multi-study factor analysis. *Biometrics*, **75**, 337–346.
- Pierce, D.A. and Bellio, R. (2017). Modern likelihood-frequentist inference. *International Statistical Review*, **85**, 519–541.
- Bartolucci, F., Bellio, R., Salvan, A. and Sartori, N. (2016). Modified profile likelihood for fixed-effects panel data models. *Econometric Reviews*, **35**, 1271–1289.
- Bellio, R. and Coletto, M. (2016). Simple outlier labelling based on quantile regression, with application to the steelmaking process. *Applied Stochastic Models in Business and Industry*, **32**, 228–242.
- Bellio, R. and Guolo, A. (2016). Integrated likelihood inference in small sample meta-analysis for continuous outcomes. *Scandinavian Journal of Statistics*, **43**, 191–201.
- Bellio, R., Ceschia, S., Di Gaspero, L., Schaerf, A. and Urli, T. (2016). Feature-based tuning of simulated annealing applied to the curriculum-based course timetabling problem. *Computers & Operations Research*, **65**, 83–92.
- Pierce, D.A. and Bellio, R. (2015). Beyond first-order asymptotics for Cox regression. *Bernoulli*, **21**, 401–419.
- Francescato, M.P., Cettolo, V. and Bellio, R. (2014). Assembling more O₂ uptake responses: Is it possible to merely stack the repeated transitions? *Respiratory Physiology & Neurobiology*, **200**, 46–49.
- Francescato, M.P., Cettolo, V. and Bellio, R. (2014). Confidence intervals for the parameters estimated from simulated O₂ uptake kinetics: effects of different data treatments. *Experimental Physiology*, **99**, 187–195.
- Bellio, R., Di Gaspero, L. and Schaerf, A. (2012). Design and statistical analysis of a hybrid local search algorithm for course timetabling. *Journal of Scheduling*, **15**, 49–61.
- Battauz, M. and Bellio, R. (2011). Structural modeling of measurement error in generalized linear models with Rasch measures as covariates. *Psychometrika*, **76**, 40–56.
- Battauz, M., Bellio, R. and Gori, E. (2011). Covariate measurement error correction for multilevel models with application to educational data. *Journal of Educational and Behavioral Statistics*, **36**, 283–306.

- Bellio, R. and Grassetto, L. (2011). Semiparametric stochastic frontier models for clustered data. *Computational Statistics and Data Analysis*, **55**, 71–83.
- Bellio, R. and Brazzale, A. R. (2011). Restricted likelihood inference for generalized linear mixed models. *Statistics and Computing*, **21**, 173–183.
- Battauz, M., Bellio, R. and Gori, E. (2008). Reducing measurement errors in student achievement estimation. *Psychometrika*, **73**, 289–302.
- Bellio, R., Greco, L. and Ventura, L. (2008). Modified quasi-profile likelihoods from estimating equations. *Journal of Statistical Planning and Inference*, **138**, 3059–3068.
- Bellio, R. (2007). Algorithms for bounded-influence estimation. *Computational Statistics and Data Analysis*, **51**, 2531–2541.
- Bellio, R. and Sartori, N. (2006). Practical use of modified maximum likelihoods for stratified data. *Biometrical Journal*, **48**, 876–886.
- Pierce, D. A. and Bellio, R. (2006). The effect of choice of reference set on frequency inferences. *Biometrika*, **93**, 425–438.
- Bellio, R. and Varin, C. (2005). A pairwise likelihood approach to generalized linear models with crossed random effects. *Statistical Modelling*, **5**, 217–227.
- Bellio, R. and Gori, E. (2003). Impact evaluation of job training programmes: selection bias in multilevel models. *Journal of Applied Statistics*, **30**, 893–907.
- Bellio, R. and Sartori, N. (2003). Extending conditional likelihood in models for stratified binary data. *Statistical Methods and Applications*, **12**, 121–132.
- Bellio, R. and Brazzale, A. R. (2003). Higher-order asymptotics unleashed: software design for nonlinear heteroscedastic regression. *Journal of Computational and Graphical Statistics*, **12**, 682–697.
- Bellio, R. (2003). Likelihood methods for controlled calibration. *Scandinavian Journal of Statistics*, **30**, 339–353.
- Bellio, R. and Brazzale, A. R. (2001). A computer algebra package for approximate conditional inference. *Statistics and Computing*, **11**, 17–24.
- Larsen, T., Møller, G. and Bellio, R. (2001). Evaluation of clinical and clinical chemical parameters in periparturient cows. *Journal of Dairy Science*, **84**, 1749–1758.
- Bellio, R., Jensen, J. E. and Seiden, P. (2000). Applications of likelihood asymptotics for nonlinear regressions in herbicide bioassays. *Biometrics*, **56**, 1204–1212.
- Carlsen, C. U., Kröger-Ohlsen, M. V., Bellio, R. and Skibsted, L. H. (2000). Protein binding in deactivation of ferrylmyoglobin by chlorogenate and ascorbate. *Journal of Agricultural Food Chemistry*, **48**, 204–212.
- Sartori, N., Bellio, R., Pace, L. and Salvan, A. (1999). The directed modified profile likelihood in models with many nuisance parameters. *Biometrika*, **86**, 735–742.

Statistical Software (R packages)

- On CRAN (<https://CRAN.R-project.org>): `nlreg`, `likelihoodAsy`
- On GitHub: `S3PL` (<https://github.com/micbtz/S3PL>); `p2model`, `BRTemplate` (<https://github.com/rugbel/>); `MSFA` (<https://github.com/rdevito/MSFA>)
- At <https://ruggerobellio.weebly.com/software.html>: `hoacox`, `glmmREML`, `panelMPL`