

GUIDO CONSONNI

LIST OF PUBLICATIONS

Articles in Journals

51. Consonni, Guido; Egidi, Leonardo (2025). Assessing replication success via skeptical mixture priors. *TEST*. Advance online publication.
10.1007/s11749-025-00985-7
50. Castelletti, Federico; Consonni, Guido; Della Vedova Marco (2024). Joint structure learning and causal effect estimation for categorical graphical models. *Biometrics*, **80**.
10.1093/biomtc/ujae067
49. Bourazas, Konstantinos; Consonni, Guido; Deldossi, Laura (2024). Bayesian sample size determination for multi-site replication studies. *TEST*. **33**, 697–716.
10.1007/s11749-023-00916-4
48. Castelletti, Federico; Consonni, Guido (2024). Bayesian sample size determination for causal discovery. *Statistical Science*. **39**, 305-321.
10.1214/23-STS905
47. Pawel, Samuel; Consonni, Guido; Held, Leonard (2023). Bayesian approaches to designing replication studies. *Psychological Methods*. Advance online publication.
10.1037/met0000604
46. Castelletti, Federico, Consonni, Guido (2023). Bayesian graphical modelling for heterogeneous causal effects. *Statistics in Medicine*, **42**, 15-32.
10.1002/sim.9599
45. Castelletti, Federico; Consonni, Guido (2021). Bayesian causal inference in probit graphical models. *Bayesian Analysis*, **16**, 1113 - 1137.
10.1214/21-BA1260
44. Castelletti, Federico; Consonni, Guido (2021). Bayesian inference of causal effects from observational data in Gaussian graphical models. *Biometrics*. **77**, 136-149.
10.1111/biom.13281
43. Peluso, Stefano; Consonni, Guido (2020). Compatible Priors for Model Selection of High-Dimensional Gaussian DAGs. *Electronic Journal of Statistics*. **14**, 4110–4132.
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42. Castelletti, Federico; La Rocca, Luca; Peluso, Stefano; Stingo, Francesco; Consonni, Guido (2020). Bayesian learning of multiple directed networks from observational data. *Statistics in Medicine*. **39**, 4745–4766.
10.1002/sim.8751
41. Petrakis, Nikolaos; Peluso, Stefano; Fouskakis, Dimitris; Consonni, Guido (2020). Objective methods for graphical structural learning. *Statistica Neerlandica*. **74**, 420-438.
40. Paci, Lucia; Consonni, Guido (2020). Structural learning of contemporaneous dependencies in graphical VAR models. *Computational Statistics & Data Analysis*. **144**, 106880
10.1016/j.csda.2019.106880
39. Castelletti, Federico; Consonni, Guido (2020). Discovering causal structures in Bayesian Gaussian DAG models. *Journal of the Royal Statistical Society, A*. **183**, 1727-1745.
10.1111/rssa.12550
38. Paroli, Roberta; Consonni, Guido; Alessandro Rosina (2020). The measure of population aging in different welfare regimes: a Bayesian dynamic modeling approach. *European Journal of Population*. **36**, 363–385.
37. Consonni, Guido; Deldossi, Laura; Saggini, Eleonora (2020). Accounting for model uncertainty in individualized designs for discrete choice experiments. *Journal of Quality Technology*. **52**, 81-96.
36. Consonni, Guido; Paroli, Roberta (2020). Objective Bayesian comparison of order-constrained models in contingency tables. *TEST*. **29**, 139-165.
35. Castelletti, Federico; Consonni, Guido (2019). Objective Bayes model selection of Gaussian interventional essential graphs for the identification of signaling pathways. *Annals of Applied Statistics*. **13**, 2289-2311.
10.1214/19-AOAS1275
34. Consonni, Guido; Fouskakis, Dimitris; Liseo, Brunero; Ntzoufras, Iannis. (2018). Prior distributions for objective Bayesian analysis. *Bayesian Analysis*. **13**, 627–679.
10.1214/18-BA1103
33. Castelletti, Federico, Consonni, Guido; Della Vedova, Marco L.; Peluso, Stefano (2018). Learning Markov equivalence classes of directed acyclic graphs: an objective Bayes approach. *Bayesian Analysis*. **13**, 1231-1256.
10.1214/18-BA1101
32. Consonni, Guido; La Rocca, Luca; Peluso, Stefano (2017). Objective Bayes covariate-adjusted sparse graphical model selection. *Scandinavian Journal of Statistics*. **44**, 741-764.
31. Consonni, Guido; Paroli, Roberta (2017). Objective Bayesian comparison of constrained analysis of variance models. *Psychometrika*, **82**, 589-609.

30. Consonni, Guido; Deldossi, Laura (2016). Objective Bayesian model discrimination in follow-up experimental designs. *Test*, **25**, 397-412.
29. Consonni, Guido; Forster, Jonathan J.; La Rocca, Luca (2013). The whetstone and the alum block: balanced objective Bayesian comparison of nested models for discrete data. *Statistical Science*, **28**, 398-423.
28. Altomare, Davide; Consonni, Guido; La Rocca, Luca (2013). Objective Bayesian search of Gaussian directed acyclic graphical models for ordered variables with non-local priors. *Biometrics*, **69**, 478-487.
27. Consonni, Guido; Massam, Hélène (2012). Parametrizations and reference priors for multinomial decomposable graphical models. *Journal of Multivariate Analysis*, **105**, 380-396.
26. Consonni, Guido; La Rocca, Luca (2012). Objective Bayes factors for Gaussian directed acyclic graphical models. *Scandinavian Journal of Statistics*, **39**, 743-756.
25. Consonni, Guido; Moreno, Elias; Venturini, Sergio (2011). Testing Hardy-Weinberg equilibrium: an objective Bayesian analysis. *Statistics in Medicine*, **30**, 62-74.
24. Consonni, Guido; Lupparelli, Monia (2009). Bayesian model comparison based on expected posterior priors for discrete decomposable graphical models. *Journal of Statistical Planning and Inference*, **139**, 4165-4175.
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22. Tarantola, Claudia; Consonni, Guido; Dellaportas, Petros (2008). Bayesian clustering for row effects models. *Journal of Statistical Planning and Inference*, **138**, 2223-2235.
21. Consonni, Guido; Veronese, Piero (2008). Compatibility of prior specifications across linear models. *Statistical Science*, **23**, 332-353.
20. Consonni, Guido; La Rocca, Luca (2008). Intrinsic tests for the equality of two correlated proportions. *Journal of the American Statistical Association*, **103**, 1060-1069.
19. Consonni, Guido; Pistone, Giovanni (2007). Algebraic Bayesian analysis of contingency tables with possibly zero-probability cells. *Statistica Sinica*, **17**, 1355-1370.
18. Consonni, Guido; Marin, Jean-Michel (2007). Mean-field variational approximate Bayesian inference for latent variables models. *Computational Statistics and Data Analysis*, **52**, 790-798.
17. Consonni, Guido; Leucari, Valentina (2006). Reference priors for discrete graphical models. *Biometrika*, **93**, 23-40.

16. Di Scala, Lilla; La Rocca, Luca; Consonni, Guido (2004). A Bayesian hierarchical model for the evaluation of a website. *Journal of Applied Statistics*, **31**, 15-27.
15. Consonni, Guido; Veronese, Piero; Gutiérrez-Peña, Eduardo (2004). Reference priors for natural exponential families having a simple quadratic variance function. *J. Multivariate Analysis*, **88**, 335-364.
14. Roverato, Alberto; Consonni, Guido (2004). Compatible prior distributions for DAG models. *Journal of the Royal Statistical Society B*, **66**, 47-61.
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12. Bottolo, Leonardo; Consonni, Guido; Dellaportas, Petros; Lijoi, Antonio (2003). Bayesian analysis of extreme values by mixture modeling. *Extremes*, **6**, 25-47.
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6. Consonni, Guido; Veronese, Piero (1989). Some remarks on the use of improper priors for the analysis of exponential regression models. *Biometrika*, **76**, 101-106.
5. Consonni, Guido; Veronese, Piero (1989). A note on coherent invariant distributions as non-informative priors for exponential and location-scale families. *Communications in Statistics. Theory and Methods*, **18**, 2883-2908
4. Consonni, Guido; Dawid, A. Philip (1985). Decomposition and Bayesian analysis of invariant normal linear models. *Linear Algebra and its Applications*, **70**, 21-49.
3. Consonni, Guido; Scarsini, Marco (1982). The study of concordance within the framework of surface variability theory (in Italian). *Statistica*, **42**, 69-77.
2. Consonni, Guido (1980). Bayesian analysis of a discrimination problem in the nonparametric setting (in Italian). *Rivista di Matematica per le Scienze Economiche e Sociali*, **4**, 89-102. [Corrections *ibidem* 1983, **6**, 108].

1. Consonni, Guido (1980). An inferential procedure on personal income distribution in a partial exchangeability setting (in Italian). Part I, *Giornale degli Economisti e Annali di Economia*, **39**, 651-669. Part II, *ibidem* **39**, 777-802.

Articles in Books

7. Consonni, Guido; Castelletti, Federico (2025). Causal Reasoning and Artificial Intelligence. In *Humane Artificial Intelligence* (Giuseppe Riva, Massimo Chiriatti editors). Vita e Pensiero, Milano. To appear.

6. Consonni, Guido; La Rocca, Luca (2011). Moment priors for Bayesian model choice with applications to directed acyclic graphs (with discussion). In *Bayesian Statistics 9* (J.M.Bernardo, M.J. Bayarri, J.O. Berger, A.P. Dawid, D. Heckerman, A.F.M.Smith, M. West editors). (With discussion and rejoinder). Oxford University Press, Oxford, 119-144.

5. Leucari, Valentina; Consonni, Guido (2003). Compatible priors for causal Bayesian networks. In *Bayesian Statistics 7* (J.M.Bernardo, M.J. Bayarri, J.O. Berger, A.P. Dawid, D. Heckerman, A.F.M.Smith, M. West editors), 597-606. Oxford University Press, Oxford.

4. Consonni, Guido; Veronese, Piero (1992). Bayes factors for linear models and improper priors. In *Bayesian Statistics 4* (J. O. Berger, J.M. Bernardo, A. P. Dawid, A.F.M. Smith editors). Oxford University Press, Oxford, 587-594.

3. Consonni, Guido; Veronese, Piero (1988). Invariance and Bayesian predictive analysis with an application to the diallel cross design. In *Bayesian Statistics 3* (J.M.Bernardo, M.H.DeGroot, D.V.Lindley, A.F.M.Smith editors), Oxford University Press, Oxford, 557-567.

2. Consonni, Guido; Veronese, Piero (1987). Coherent distributions and Lindley's paradox. In *Probability and Bayesian Statistics* (R.Viertl editor), Plenum Press, New York, 111-120.

1. Consonni, Guido; Dawid, A. Philip (1985). Invariant normal Bayesian linear models and experimental designs. In *Bayesian Statistics 2* (J.M.Bernardo, M.H.DeGroot, D.V.Lindley, A.F.M.Smith editors), Elsevier Science Publisher B.V. (North Holland), Amsterdam, 629-644.

Discussions

7. Consonni, Guido; Fouskakis, Dimitris (2025). Discussion of the paper “Model Uncertainty and Missing Data: An Objective Bayesian Perspective” by García-Donato, G. et al. *Bayesian Analysis*. To appear.

6. Castelletti, Federico, Consonni, Guido; La Rocca, Luca (2022). Invited discussion of the paper: “Bayesian graphical models for modern biological applications” by Ni, Y.; Baladandayuthapani, V; Vannucci, M. and Stingo, F.. *Statistical Methods and Applications*, **31**, 261-267.
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5. Consonni, Guido; Garcia-Donato, Gonzalo (2020). Invited discussion of the paper: " On a Class of Objective Priors from Scoring Rules" by Leisen, F., Villa, C., Walker, S. G. *Bayesian Analysis*, **15**, 1377-1383.
4. Consonni, Guido; La Rocca, Luca (2014). Discussion of the paper: "Robust Bayesian Graphical Modeling Using Dirichlet t-Distributions" by Finegold, M., Drton, M.. *Bayesian Analysis*, **9**, 561-563.
3. Berti, Patrizia; Consonni, Guido; Pratelli, Luca; Rigo, Pietro (2008). Discussion of the paper: "Gibbs sampling, exponential families and orthogonal polynomials" by Diaconis, P.; Khare, K.; Saloff-Coste, L. *Statistical Science*, **73**, 179-183.
2. Consonni, Guido; Giudici, Paolo (1999). Discussion of the paper "Computationally efficient methods for selecting among mixtures of graphical models" by Heckerman, D. *et al.* In *Bayesian Statistics 6*, (Berger J.O., Bernardo J.M., Dawid, A.P., Smith, A.F.M. eds), Oxford University Press, 649-652.
1. Consonni, Guido; Veronese, Piero (1997). Discussion of the paper "Exponential and Bayesian conjugate families: review and extensions Goutiérrez-Peña, E.; Smith, A.F.M. *Test*, **6**, 71-76.

Conference Proceedings

19. Bourazas, K., Consonni, G., Deldossi, L. (2022). Bayesian sample size determination for Multisite Replication Studies. In Programme and Abstracts, 22nd Annual ENBIS Conference, Trondheim, 26-30 June 2022. Bergquist, B., Tyssedal, J.; Ruckert J. (editors). 38-39
18. Paci, Lucia, Consonni, Guido (2018). A note on objective Bayes analysis for graphical vector autoregressive models In Book of short Papers SIS; Pearson, 1580 – 1585.
17. Consonni, G; Deldossi, L.; Saggini, E. (2017). Accounting for model uncertainty in individualized designs for discrete choice experiments. In Cladag 2017. Book of short papers. Universitas Studiorum.
16. Consonni, Guido; Lupparelli, Monia (2009). Expected posterior priors for model comparison in a class of discrete graphical models. Invited paper. Proceedings of the Sixth Conference on Complex Models and Computational Methods for Estimation and Prediction (SCO2009). M.M. Paganoni, L. M. Sangalli, P. Secchi, S. Vantini (editors). Maggioli, Santarcangelo di Romagna, 127-132.
15. La Rocca, Luca; Consonni, Guido (2009). Non local alternative priors for Gaussian directed acyclic graphical models. Invited paper. Proceedings of the Sixth Conference on Complex Models and Computational Methods for Estimation and Prediction (SCO2009). M.M. Paganoni, L. M. Sangalli, P. Secchi, S. Vantini (editors). Maggioli, Santarcangelo di Romagna, 245-249.
14. Consonni, Guido (2008). Priors for Bayesian model selection: difficulties and remedies. Invited paper. In *Atti della LXIV Riunione Scientifica della Società Italiana di Statistica. Sessioni plenarie e specializzate*. (Cosenza, 25-27 giugno 2008). CLEUP, Padova, 259-266.

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