Tommaso Rigon

CONTACT INFORMATION

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RESEARCH INTERESTS

Applied Bayesian Modeling, Bayesian clustering, Bayesian Nonparametrics, Computational Statistics, Functional Data Analysis, Mixture Models, Species Sampling Models

RESEARCH NETWORKS

Member of the Bayes Lab at the Bocconi Institute for Data Science and Analytics (BIDSA), the "de Castro" Statistics Initiative at Collegio Carlo Alberto, and the MIDAS Complex Data Modeling Research Network.

CURRENT POSITION

Assistant Professor (*Ricercatore* SECS-S*/01, Legge 240/10 tipo* A)
University of Milano-Bicocca, Department of Economics, Management & Statistics (DEMS), Milan, Italy (from 10/2020 to present)

PAST ACADEMIC POSITIONS

Postdoctoral Associate
Duke University, Department of Statistical Sciences, Durham, US (from 02/2020 to 09/2020)

Research Associate
Duke University, Department of Statistical Sciences, Durham, US (from 10/2019 to 02/2020)

Research Affiliate
de Castro Statistics Initiative, Collegio Carlo Alberto, Turin, Italy (from 09/2017 to 09/2020)

PAST BUSINESS POSITIONS

Intern
Groupon, Dublin, Ireland (from 09/2014 to 11/2014)

Business analyst
Bravofly Rumbo Group, Chiasso, Switzerland (from 10/2013 to 07/2014)

Intern
Bravofly Rumbo Group, Chiasso, Switzerland (from 05/2013 to 10/2013)

EDUCATION

Bocconi University, Milan, Italy

Ph.D. in Statistics (*Dottorato di ricerca in Statistica*), Department of Decision Sciences (from 09/2015 to 09/2019, thesis defense 01/2020)

- Thesis Topic: *Finite-dimensional nonparametric priors: theory and applications*
- Advisors: Antonio Lijoi and Igor Prünster
- Ph.D. awarded with honors

Università degli Studi di Padova, Padova, Italy

M.Sc. in Statistical Sciences (*Laurea Magistrale in Scienze Statistiche*), School of Statistics (from 10/2013 to 09/2015)

- Thesis Topic: *Functional telecommunication data: a Bayesian nonparametric approach*
- Advisor: Bruno Scarpa
- Final mark: 110/110 with honors

B.Sc. in Statistics, Economics & Finance (*Laurea Triennale in Statistica, Economia & Finanza*), School of Statistics (from 10/2010 to 04/2013)

- Thesis Topic: *Box-Cox transformation: an analysis based on the likelihood*
- Advisor: Nicola Sartori
- Final mark: 110/110 with honors

AWARDS

Academic awards

[2019] Travel award (accommodation) for the BNP12 conference, Oxford, UK

[2019] Travel award (400£) for the O'Bayes 2019 conference, Warwick, UK

[2018] Best objective prediction at Stat under the Stars 4, Palermo, Italy

[2018] ISBA travel award (250$) for the ISBA 2018 world meeting, Edinburgh, UK

[2017] ISBA travel award (700$) for the O'Bayes 2017 conference, Austin, Texas

[2017] Best Ph.D. student in Statistics at Bocconi University in the Academic Year 2016/2017

[2017] Winner of the Young-CLADAG data contest, Milan, Italy

[2017] Winner of the Bocconi summer school data competition, Como, Italy

Publications

Refereed journals

1. **Rigon, T.** and Durante, D. (2021). Tractable Bayesian density regression via logit stick-breaking priors. *Journal of Statistical Planning and Inference* **211**, 131–142
2. Legramanti, S., **Rigon, T.** and Durante, D. (2020). Bayesian testing for exogenous partition structures in stochastic block models. *Sankhya A: The Indian Journal of Statistics*
3. Lijoi, A., Prünster, I. and **Rigon, T.** (2020). Sampling hierarchies of discrete random structures. *Statistics & Computing*, **30**, 1591–1607
4. Lijoi, A., Prünster, I. and **Rigon, T.** (2020). The Pitman–Yor multinomial process for mixture modeling. *Biometrika*, **107**(4), 891–906
5. Durante, D. and **Rigon, T.** (2019). Conditionally conjugate mean-field variational Bayes for logistic models. *Statistical Science* **34**(3), 472–485
6. **Rigon, T.**, Durante, D. and Torelli, N. (2019). Bayesian semiparametric modelling of contraceptive behavior in India via sequential logistic regressions. *Journal of the Royal Statistical Society, Series A*, **182**(1) 225–247
7. Durante, D., Canale, A. and **Rigon, T.** (2019). A nested expectation-maximization algorithm for latent class regression models. *Statistics & Probability Letters* **146**, 97–103

Submitted and working papers

8. **Rigon, T.** (2020+). An enriched mixture model for functional clustering. Submitted, *arXiv:1907.02493*
9. Lijoi, A., Prünster, I. and **Rigon, T.** (2019). Finite-dimensional discrete random structures and Bayesian clustering. *Collegio Carlo Alberto*, working paper. Submitted
10. **Rigon, T.**, Scarpa, B. and Petrone, S. (2020+). Enriched Pitman–Yor processes. Submitted, *arXiv:2003.12200*
11. **Rigon, T.**, Herring, A. H. and Dunson, D. B. (2020+). A generalized Bayes framework for probabilistic clustering. Submitted, *arXiv:2006.05451*
12. Legramanti, S., **Rigon, T.**, Durante, D. and Dunson, D. B. (2020+). Extended stochastic block models with application to criminal networks. Submitted, *arXiv:2007.08569*
13. Zito, A., **Rigon, T.**, Ovaskainen, O., and Dunson, D. B. (2020+). Bayesian nonparametric modelling of sequential discoveries. Submitted, *arXiv:2011.06629*

Refereed conference proceedings, publications in monographs, discussions

14. **Rigon, T.**, Aliverti, E., Russo, M., and Scarpa, B. (2021). A discussion on: "Centered partition processes: Informative priors for clustering" Paganin, S., Herring, A. H., Olshan, A. F., Dunson, D. B., et al. (2021) in *Bayesian Analysis*
15. Aliverti, E., Paganin, S., **Rigon, T.** and Russo, M. (2019). A discussion on: "Latent nested nonparametric priors" by Camerlenghi, F., Dunson, D. B., Lijoi, A., Prünster, I. and Rodríguez, A in *Bayesian Analysis* **14**(4), 1303–1356
16. **Rigon, T.** (2018). Logit stick-breaking priors for partially exchangeable count data. In *Book of Short Papers of the Italian Statistical Society 2018* (Abbruzzo, A., Piacentino, D., Chiodi, M., and Brentari, E., editors). ISBN: 9788891910233
17. Caponera, A., Denti, F., **Rigon, T.**, Sottosanti, A. and Gelfand, A. (2018). Hierarchical spatio-temporal modeling of resting state fMRI data. In *Studies in Neural Data Science* (Canale, A., Durante, D., Paci, L., Scarpa, B., editors)

Presentations

Seminars

[**2020**] *Collegio Carlo Alberto*, Università degli studi di Torino, Italy

Invited presentations

[**2020**] *Bayes Comp 2020*, Gainesville, Florida, US

[**2019**] *The IISA International Conference on Statistics*, Mumbai, India

[**2019**] *12th International Conference of the ERCIM WG on Computational and Methodological Statistics*, London, UK

[**2018**] *11th International Conference of the ERCIM WG on Computational and Methodological Statistics*, Pisa, Italy

[**2018**] *JSM 2018: Joint Statistical Meetings*, Vancouver, Canada

[**2018**] *49th Scientific meeting of the Italian Statistical Society*, Palermo, Italy

[**2017**] *The IISA International Conference on Statistics*, Hyderabad, India

Contributed presentations

[**2019**] *12th International Conference on Bayesian Nonparametrics*, Oxford, UK

[**2018**] *BAYSM 2018: Bayesian Young Statisticians Meeting*, Warwick, UK

[**2018**] *YES IX Scalable Statistics: on Accuracy and Computational Complexity*, Eindhoven, Netherlands

Poster presentations

[**2019**] *O'Bayes 2019*, Warwick, UK

[**2018**] *2018 ISBA world meeting*, Edinburgh, UK

[**2017**] *O'Bayes 2017*, Austin, US

[**2017**] *10th international workshop on Bayesian inference in stochastic processes (*BISP10*)*, Milan, Italy

[**2017**] *Italian Statistical Society (SIS) Bayes 2017*, Rome, Italy

[**2016**] *2016 ISBA world meeting*, Cagliari, Italy

Teaching

University of Milano-Bicocca, Milan, Italy

- Statistics 1 (B.Sc.) - Academic Year 2020/2021
- R for the multivariate statistical analysis (B.Sc.) - Academic Year 2020/2021

Bocconi University, Milan, Italy

As teaching assistant

- Data analysis (B.Sc.) - Academic Year 2016/2017
- Statistics for economic and business (M.Sc.) - Academic Year 2016/2017

Università degli Studi di Padova, Padova, Italy

As academic tutor

- Introduction to real analysis (B.Sc.) - Academic Year 2014/2015
- Advanced statistical inference (M.Sc.) - Academic Year 2014/2015

Funding and grants

Member of the research group of the grant R01ES027498 funded by the National Institute of Environmental Health Sciences of the United States National Institutes of Health. PI: Amy H. Herring

Service to profession

Referee service (alphabetical order)

Annals of Statistics; Bayesian Analysis; Bernoulli; Biometrics; Biometrika; Computational Statistics & Data Analysis; Electronic Journal of Statistics; European Journal of Operational Research; IEEE Transactions on Neural Networks and Learning Systems; Journal of Computational & Graphical Statistics; Journal of the American Statistical Association; Plos One; Statistical Methods & Applications; Social Indicators Research; Statistics & Probability Letters

Positions in Academic Societies

- Elected member of the board (2016-2018) of the young group (ySIS) of the Italian Statistical Society

Organization of Scientific Events

- Organizer of the ySIS session *think outside of the black-box: statistical reasoning in applications* of the SIS2019: Smart Statistics for Smart Applications conference, Milan, Italy (06/2019)
- Member of the organising committee of Stats under the Stars 5, a hackathon for young Data Scientists, Milan, Italy (06/2019)
- Member of the local organising committee of the 10th international workshop on Bayesian inference in stochastic processes (BISP10), Milan, Italy (11/2017)

Summer schools and workshops

Summer Schools and workshops

- *StartUp Research*, Certosa di Pontignano, Italy (06/2017)
- *Bocconi Summer School in Advanced Statistics and Probability*, Como, Italy (07/2017)
- *J. T. Schwartz International School for Scientific Research*, Lipari, Italy (07/2013)