Tommaso Rigon

Research

Contact Department of Statistical Science

Duke University Information

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Applied Bayesian Modeling, Bayesian clustering, Bayesian Nonparametrics, Computational

Interests Statistics, Functional Data Analysis

Postdoctoral Associate Current

POSITION Duke University, Department of Statistical Sciences, Durham, US (from 02/2020 to present)

Past academic Research Associate

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

Research Affiliate

de Castro Statistics Initiative, Collegio Carlo Alberto, Turin, Italy (from 09/2017 to 12/2019)

Past business Intern

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

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., 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. (2020). Tractable Bayesian density regression via logit stick-breaking priors. *Journal of Statistical Planning and Inference*, in press
- 2. Lijoi, A., Prünster, I. and **Rigon, T.** (2020). The Pitman–Yor multinomial process for mixture modeling. *Biometrika*, in press
- 3. Durante, D. and **Rigon, T.** (2019). Conditionally conjugate mean-field variational Bayes for logistic models. *Statistical Science* **34**(3), 472–485
- 4. **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
- 5. Durante, D., Canale, A. and **Rigon, T.** (2019). A nested expectation-maximization algorithm for latent class regression models. *Statistics & Probability Letters* **146**, 97–103

Refereed conference proceedings, publications in monographs, discussions

- 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
- 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
- 8. 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)

Submitted and working papers

- 9. Lijoi, A., Prünster, I. and **Rigon, T.** (2020+). Sampling hierarchies of discrete random structures. Revision submitted
- 10. **Rigon, T.** (2020+). An enriched mixture model for functional clustering. Submitted, arXiv:1907.02493
- 11. Lijoi, A., Prünster, I. and **Rigon, T.** (2019). Finite-dimensional discrete random structures and Bayesian clustering. *Collegio Carlo Alberto*, working paper. Submitted
- 12. **Rigon, T.**, Scarpa, B. and Petrone, S. (2020+). Enriched Pitman–Yor processes. Submitted, arXiv:2003.12200
- 13. Legramanti, S., **Rigon, T.** and Durante, D. (2020+). Bayesian testing for exogenous partition structures in stochastic block models. Submitted

CONFERENCES PRESENTATION

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

Bocconi University, Milan, Italy

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

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 1R01ES027498 funded by the National Institutes 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; 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; Statistical Methods & Applications; Social Indicators Research; Statistics & Probability Letters

Positions in Academic Societies

 \bullet 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 Summer Schools and workshops

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