# 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
- 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
- 14. **Rigon, T.**, Herring, A. H., Dunson, D. B. (2020+). A generalized Bayes framework for probabilistic clustering. 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)