#### TOMMASO RIGON

Information

Contact Department of Economics, Management & Statistics

University of Milano-Bicocca Building: U07, Room: 2034

Via Bicocca degli Arcimboldi, 8, 20126, Milan, Italy

Email: tommaso.rigon@unimib.it
Website: https:tommasorigon.github.io

*Orcid:* orcid.org/0000-0002-9224-543X

Research Interests Applied Bayesian Modeling, Bayesian clustering, Bayesian Nonparametrics, Computational

Statistics, Functional Data Analysis, Mixture Models, Species Sampling Models

RESEARCH NETWORKS Member of the Datalab at the University of Milano-Bicocca, of BayesLab 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/o1, 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, USA (from 02/2020 to 09/2020)

Research Associate

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

**Research Affiliate** 

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

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

[2022] National Scientific Qualification for Associate Professor in Statistics (13/D1)

[2021] Young Talents Award. University of Milano-Bicocca & Accademia Nazionale dei Lincei

[2021] Savage Award (Theory and Methods). American Statistical Association (ASA) & International Society for Bayesian Analysis (ISBA)

[2017] Best Ph.D. student in Statistics. Bocconi University

[2015] Ph.D. fellowship. Bocconi University

#### **Data competitions**

- [2018] Best objective prediction. Stat under the Stars 4
- [2017] Young-CLADAG data contest. Classification and Data Analysis group
- [2017] Bocconi summer school data competition. Bocconi summer school

#### Travel awards

- [2019] Travel award (accommodation). BNP12 conference Oxford, UK
- [2019] *Travel award* (400£). O'Bayes 2019 conference, Warwick, UK
- [2018] ISBA travel award (250\$). ISBA 2018 world meeting, Edinburgh, UK
- [2017] ISBA travel award (700\$). O'Bayes 2017 conference, Austin, Texas

## SERVICE TO PROFESSION

#### **Editorial activity**

[2022 / Present] Associate Editor of Bayesian Analysis

#### 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 • Journal of Statistical Planning and Inference • NeurIPS • Plos One • Statistical Methods & Applications • Social Indicators Research • Statistics & Probability Letters

#### Positions in Academic Societies

[2022] Member of the committee for the Savage Award, Theory and Methods

[2021/24] Social media manager of the International Society for Bayesian Analysis

[2016/18] Elected member of the board of the young group (ySIS) of the Italian Statistical Society

#### **Organization of Scientific Events**

- [2021] Organizer of the j-ISBA session *Computational and modeling advances for complex biological data* at the 2021 World Meeting of the International Society for Bayesian Analysis conference, virtual
- [2019] 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
- [2019] Member of the organizing committee of Stats under the Stars 5, a hackathon for young Data Scientists, Milan, Italy
- [2017] Member of the local organizing committee of the 10th international workshop on Bayesian inference in stochastic processes (BISP10), Milan, Italy

## Service to University

### Positions in Boards and Committees

- Doctoral thesis committee member of the Ph.D. in Statistics: Ching-Lung Hsu [2022], Chiara Galimberti [2023].
- Social media manager of the Department (DEMS), of the University of Milano-Bicocca.

#### Students Supervised or Co-supervised

- Current Ph.D. students: Luca Presicce [Ph.D.], Davide Agnoletto [M.Sc., Ph.D.], Riccardo Cogo [Ph.D.], Ching-Lung Hsu [Ph.D.], Alessandro Zito [Ph.D.].
- I have supervised and co-supervised about 10 B.Sc. students in both applied and research-oriented theses on a broad range of topics.

# Funding and grants

**Member of the research group** of the grant FAQC 2021 funded by University of Milano-Bicocca. PI: Bernardo Nipoti.

Member of the research group of the LIFEPLAN ERC project, funded by the European Research Council through a 12.6M€ ERC-synergy grant for the years 2020-2026. Global biodiversity research PI: prof. Tomas Roslin. Statistical research PI: prof. David B. Dunson. Corresponding PI: prof. Otso Ovaskainen.

**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

#### **PUBLICATIONS**

#### Refereed journals

- 1. **Rigon, T.**, Herring, A. H. and Dunson, D. B. (2022). A generalized Bayes framework for probabilistic clustering. *Biometrika*, in press
- 2. Lijoi, A., Prünster, I. and **Rigon, T.** (2022). Finite-dimensional discrete random structures and Bayesian clustering. *Journal of the American Statistical Association (T&M)*, in press
- 3. **Rigon, T.** (2022). An enriched mixture model for functional clustering. *Applied Stochastic Models in Business and Industry*, in press
- 4. Zito, A., **Rigon, T.** and Dunson, D. B. (2022). Inferring taxonomic placement from DNA barcoding aiding in discovery of new taxa. *Methods in Ecology & Evolution*, in press
- 5. Reverberi, C., **Rigon, T.**, Solari, A., Hassan, C., Cherubini, P., GI Genius CADx Study Group and A. Cherubini (2022). Experimental evidence of effective human-AI collaboration in medical decision-making. *Scientific Reports*, **12**(14952)
- 6. Zito, A., **Rigon, T.**, Ovaskainen, O. and Dunson, D. B. (2022). Bayesian modelling of sequential discoveries. *Journal of the American Statistical Association (T&M)*, in press
- 7. Legramanti, S., **Rigon, T.**, Durante, D. and Dunson, D. B. (2022). Extended stochastic block models with application to criminal networks. *Annals of Applied Statistics*, **16**(4), 2369-2395
- 8. Legramanti, S., **Rigon, T.** and Durante, D. (2022). Bayesian testing for exogenous partition structures in stochastic block models. *Sankhya A: The Indian Journal of Statistics*, **84**, 108–126
- 9. Favaro, S., Panero, F. and **Rigon, T.** (2021). Bayesian nonparametric disclosure risk assessment. *Electronic Journal of Statistics*, **15**(2), 5626–5651
- 10. **Rigon, T.** and Durante, D. (2021). Tractable Bayesian density regression via logit stick-breaking priors. *Journal of Statistical Planning and Inference*, **211**, 131–142
- 11. Lijoi, A., Prünster, I. and **Rigon, T.** (2020). Sampling hierarchies of discrete random structures. *Statistics & Computing*, **30**, 1591–1607
- 12. Lijoi, A., Prünster, I. and **Rigon, T.** (2020). The Pitman–Yor multinomial process for mixture modeling. *Biometrika*, **107**(4), 891–906
- 13. Durante, D. and **Rigon, T.** (2019). Conditionally conjugate mean-field variational Bayes for logistic models. *Statistical Science*, **34**(3), 472–485
- 14. **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
- 15. 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

- 16. **Rigon, T.**, Scarpa, B. and Petrone, S. (2022+). Enriched Pitman–Yor processes. Submitted, *arXiv*:2003.12200
- 17. **Rigon, T.** and E. Aliverti (2022+) Conjugate priors and bias reduction for logistic regression models. Submitted, *arXiv*:2202.0873

#### Refereed conference proceedings, publications in monographs, discussions

- 18. Legramanti S., **Rigon, T.** and Durante, D. (2022). Bayesian clustering of brain regions via extended stochastic block models. In *Book of Short Papers of the Italian Statistical Society* (Balzanella, A., Bini, M., Cavicchia, C., Verde, R.) 2022. ISBN: 9788891932310.
- 19. Zito, A., **Rigon, T.** and Dunson, D. B. (2021). Modelling of accumulation curves through Weibull survival functions. In *Book of Short Papers of the Italian Statistical Society* 2021 (Perna, C., Salvati, N. and Schirripa Spagnolo, F., editors). ISBN: 9788891927361
- 20. **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* **16**(1) 301–370
- 21. 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
- 22. **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
- 23. 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. and Scarpa, B., editors)

#### Presentations Seminars

- [2021] University of Crete, Greece
- [2020] Collegio Carlo Alberto, Università degli studi di Torino, Italy

#### **Invited presentations**

- [2022] Statistical methods and models for complex data (invited discussant), Padova, Italy
- [2022] CSDA & EcoSta Workshop on Statistical Data Science (SDS 2022), Bologna, Italy
- [2022] 5th International Conference on Econometrics and Statistics, Tokyo, Japan (hybrid)
- [2022] BNP Networking Event, Nicosia, Cyprus
- [2021] 14th International Conference of the ERCIM WG on Computational and Methodological Statistics, London, UK (hybrid)
- [**2021**] 2021 *ISBA* world meeting, virtual
- [2020] Bayes Comp 2020, Gainesville, Florida, USA
- [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, USA

[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

#### As lecturer

- Computational Statistics 2 (Ph.D.) A.Y. 2020/21, 2021/22 12h
- Statistics 1 (B.Sc.) A.Y. 2020/21, 2021/22, 2022/23 42h
- R for the multivariate statistical analysis (B.Sc.) A.Y. 2020/21, 2021/22, 2022/23 21h

## SDA Bocconi School of Management, Milan, Italy

#### As lecturer

• Supervised machine learning - A.Y. 2021/22 - 8h

## Bocconi University, Milan, Italy

As teaching assistant

- Data analysis (B.Sc.) A.Y. 2016/17
- Statistics for economic and business (M.Sc.) A.Y. 2016/17

## Università degli Studi di Padova, Padova, Italy

## As lecturer

• Data mining (M.Sc.) - A.Y. 2020/21 - 8h

## As teaching assistant

- Introduction to real analysis (B.Sc.) A.Y. 2014/15
- Advanced statistical inference (M.Sc.) A.Y. 2014/15

#### Past business

#### Intern

## POSITIONS

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)

## SUMMER SCHOOLS AND WORKSHOPS

## Summer Schools and workshops

- Start Up 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)

Le dichiarazioni rese nel presente curriculum sono da ritenersi rilasciate ai sensi degli artt. 46 e 47 del D.P.R. 445/2000.

Autorizzo la pubblicazione ai sensi del D.Lgs. n. 33/2013 "Riordino della disciplina riguardante gli obblighi di pubblicità, trasparenza e diffusione di informazioni da parte delle pubbliche amministrazioni" e acconsento all'utilizzo delle informazioni ivi contenute ai sensi del D.L. n. 196/2003 "Codice in materia di protezione dei dati personali".