# Daniele Durante: Curriculum Vitae

CONTACT INFORMATION	Department of Decision Sciences  Bocconi University  Via Röntgen, 1, 20136 Milan  ⊠: daniele.durante@unibocconi.it  web: https://danieledurante.github.io/web/		
RESEARCH INTERESTS	Bayesian Methods, Bayesian Computation, Bayesian Nonparametrics, High–Dimensional Inference, Statistical Learning, Network Science, Categorical Data, Shrinkage		
CURRENT ACADEMIC POSITIONS	Assistant Professor Bocconi University, Department of Decision Sciences  09/2017 — Present		
	Research Affiliate Bocconi Institute for Data Science and Analytics [BIDSA]		
Past Academic	Post–Doctoral Research Fellow University of Padova, Department of Statistical Sciences		
Positions	Adjunct Professor		
	Visiting Research Scholar  Duke University, Department of Statistical Sciences  03/2014 — 02/2015		
EDUCATION	University of Padova, Department of Statistical Sciences		
	<ul> <li>Ph.D. in Statistical Sciences. Department of Statistical Sciences</li> <li>Ph.D. Thesis Topic: Bayesian nonparametric modeling of network data</li> <li>Advisors: Bruno Scarpa and David B. Dunson</li> </ul>		
	<ul> <li>M.Sc. in Statistical Sciences. Department of Statistical Sciences</li> <li>M.Sc. Thesis Topic: Locally adaptive Bayesian covariance regression</li> <li>Advisors: Bruno Scarpa and David B. Dunson</li> </ul>		
	B.Sc. in Statistics, Economy and Finance. Department of Statistics 2007 — 2010		
Awards	National Scientific Qualification for Associate Professor in Statistics [13/D1] 2018  Mitchell Award. International Society for Bayesian Analysis 2018		
	Doctoral Thesis Award in Statistics. Italian Statistical Society 2018		
	Theory–Methods Editor's Invited Paper [JASA]. American Statistical Association 2017		
	Byar Award. Biometrics Section. American Statistical Association 2015		
	Lifetime Members Junior Award. International Society for Bayesian Analysis 2014		
	Laplace Award. Bayesian Statistical Sciences Section. American Statistical Association 2013		
EDITORIAL ACTIVITY	Associate Editor Biometrika 08/2019 — Present		
	Journal of Computational and Graphical Statistics 09/2018 — Present		
	Referee		

Journal of the Royal Statistical Society, B; Annals of Statistics; Annals of Applied Statistics; Journal of the Royal Statistical Society, C; Biometrics; Biometrika; Bayesian Analysis; Journal of the American Statistical Association; Computational Statistics & Data Analysis; Statistics and Computing; Journal of Computational and Graphical Statistics; Journal of Multivariate Analysis; Network Science; Journal of Machine Learning Research; Statistica Neerlandica.

# SERVICE TO PROFESSION

## Positions in Scientific Societies

Chair of the J-ISBA Section. International Society for Bayesian Analysis	
Chair of the Y-SIS Section. Italian Statistical Society	2018
Laplace Award committee member. American Statistical Association	2018
Chair—Elect of the J-ISBA Section. International Society for Bayesian Analysis	2017
Secretary of the Y-SIS Section. Italian Statistical Society	2017

## Membership to Scientific Societies

American Statistical Association [ASA], International Society for Bayesian Analysis [ISBA], Italian Statistical Society [SIS].

#### Organization of Scientific Events

Chair of Stats under the Stars 5. Milan	2019
Chair of Stats under the Stars 1. Padova	
Organizing committee of Stats under the Stars 2. Salerno	2016
Organizing committee of BAYSM2018 meeting. Warwick	2018
Organizing committee of Statistica e Data Science per il Business. Padova	2015
Local committee of SIS2019 Conference. Milan	2019
Scientific committee of SIS2018 Conference. Palermo	
Scientific committee of StartUpResearch. Siena	2017

#### Sessions Organized at Conferences

Session organized at COMPSTAT2020. Bologna	2020
Session organized [with J-ISBA] at IV COBAL. Lima	2019
Session organized [with Y-SIS] at ERCIM2018. Pisa	2018
Session organized [with J-ISBA] at ISBA2018. Edinburgh	2018
Session organized [with J-ISBA] at JSM2017. Baltimore	2017

## Outreach Videos and Multimedia Projects

The Geometry of Relationships. TEDX talk. Montebelluna	2018
My Statistician Friend. International Year of Statistics ASA. United States	2013
The Statistical Calendar. ISTAT. Rome	2012

# SERVICE TO UNIVERSITY

#### Positions in Bocconi Boards and Committees

Coordinator of the DEC Seminars Series	<b>2019</b> — Present
Coordinator of the BIDSA Seminars Series	2018 - Present
Program committee member of the MSc in DS&BA	2018 — Present
Faculty board member of the Ph.D. in Statistics	2017 — Present
Mentor at the IGIER-BIDSA Visiting Student Initiative	2019 Present

Doctoral thesis committee member of the Ph.D. in Statistics: Marta Crispino [2018], Michele Peruzzi [2019], Amir Khorrami Chokami [2019] and Tommaso Rigon [2020]

# **Bocconi Students Supervised**

Sirio Legramanti [**Ph.D.**], Augusto Fasano [**Ph.D.**], Marta Guidolin [**MSc**], Alessandro Zito [**MSc**], Guglielmo Gattiglio [**BSc**], Leonardo Natale [**BSc**]

# **Bocconi Events and Projects**

Invited speaker for the Bocconi Snack News project [Bologna]	2019
Invited speaker for the Bocconi Ph.D. BEAT program	2019
Chair of the hackathon Stats under the Stars 5	2019

#### **Bocconi Innovation in Teaching**

In 2019, I have proposed and then developed in collaboration with BUILT a platform for online data—analytics challenges that can be used by Bocconi students as a gaming and learning experience in the context of the Data Science courses. See Bocconi Data Science Challenges.

## Collaborations with the Bocconi Magazine Via Sarfatti 25

L'algoritmo della luna che prevede il futuro [N.10, 2019], Come studiare le reti di connessione [N.03, 2018], Il cervello? Un social network biologico. Comprenderlo aiuterà l'AI [N.12, 2017]

## FUNDINGS AND GRANTS

Unit coordinator (CO-PI) of the PRIN [MIUR] project "Unfolding the SEcrets of LongEvity: Current Trends and future prospects [SELECT]". PI: Stefano Campostrini 2019 — 2021

Member of the research group of the ERC project "Individual Decisions and Macroeconomic Robustness [INDIMACRO]". PI: Massimo Marinacci 2017 — 2019

Member of the research group of the project funded by the University of Padova "Bayesian Inference on Brain Network Data". PI: Bruno Scarpa 2016 — 2017

Member of the research group of the ONR project "Bayesian Learning for High-Dimensional Low Sample Size Data". PI: David Dunson 2014 — 2017

#### **PUBLICATIONS**

Citations from Google Scholar • TOTAL: 276 • — • H-INDEX: 8 • — • 110-INDEX: 8

#### Refereed Journals

- 1. Legramanti, S., **Durante**, **D.** and Dunson, D. B. (2019+) Bayesian cumulative shrinkage for infinite factorizations. *Biometrika*. In Press.
- 2. **Durante**, **D.** (2019) Conjugate Bayes for probit regression via unified skew-normal distributions. *Biometrika*, 106, 765–779.
- 3. **Durante**, **D.** and Rigon, T. (2019) Conditionally conjugate mean-field variational Bayes for logistic models. *Statistical Science*, 34, 472–485.
- 4. **Durante**, **D.**, Canale, A. and Rigon, T. (2019) A nested expectation–maximization algorithm for latent class models with covariates. *Statistics & Probability Letters*, 146, 97–103.
- 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, 225–247.
- 6. Canale, A., **Durante**, **D.** and Dunson, D. B. (2018) Convex mixture regression for quantitative risk assessment. *Biometrics*, 74, 1331–1340.
- 7. Russo, M., **Durante**, **D.** and Scarpa, B. (2018). Bayesian inference on group differences in multivariate categorical data. *Computational Statistics & Data Analysis*, 126, 136–149.
- 8. Canale, A., **Durante**, **D.**, Paci, L. and Scarpa, B. (2018) Connecting statistical brains. Significance, 15, 38–40.
- 9. **Durante**, **D.** and Dunson, D. B. (2018) Bayesian inference and testing of group differences in brain networks. *Bayesian Analysis*, 13, 29–58.
- 10. **Durante, D.,** Dunson, D. B. and Vogelstein, J. T. (2017) Nonparametric Bayes modeling of populations of networks. *Journal of the American Statistical Association*, 112, 1516–1530 (with discussion).
- 11. **Durante, D.,** Mukherjee, N. and Steorts, R. C. (2017) Bayesian learning of dynamic multilayer networks. *Journal of Machine Learning Research*, 18, 1–29.
- 12. Wang, L., **Durante**, **D.**, Jung, R. E. and Dunson, D. B. (2017) Bayesian network-response regression. *Bioinformatics*, 33, 1859–1866.
- 13. **Durante**, **D.** (2017) A note on the multiplicative gamma process. *Statistics & Probability Letters*, 122, 198–204.
- 14. **Durante, D.,** Paganin, S., Scarpa, B. and Dunson, D. B. (2017) Bayesian modelling of networks in complex business intelligence problems. *Journal of the Royal Statistical Society: Series C*, 66, 555–580.
- 15. **Durante, D.** and Dunson, D. B. (2016) Locally adaptive dynamic networks. *Annals of Applied Statistics*, 10, 2203–2232.
- 16. **Durante**, **D.** and Dunson, D. B. (2014) Nonparametric Bayes dynamic modelling of relational data. *Biometrika*, 101, 883–898.
- 17. **Durante**, **D.** and Dunson, D. B. (2014) Bayesian dynamic financial networks with timevarying predictors. *Statistics & Probability Letters*, 93, 19–26.
- 18. **Durante**, **D.**, Scarpa, B. and Dunson, D. B. (2014) Locally adaptive factor processes for multivariate time series. *Journal of Machine Learning Research*, 15, 1493–1522.

#### International Conference Proceedings, Book Chapters and Discussions [PEER-REVIEWED]

- 1. **Durante**, **D.** and Guindani, M. (2019+) Bayesian methods in brain networks. Wiley StatsRef-Statistics Reference Online. In Press.
- Aliverti, E. and Durante, D. (2019) Spatial modeling of brain connectivity data via latent distance models with nodes clustering. Statistical Analysis and Data Mining: The ASA Data Science Journal, 12, 185–196.
- 3. **Durante**, **D.** (2017) Discussion of "Sparse graphs using exchangeable random measures". Journal of the Royal Statistical Society: Series B, 79, 55–56.
- 4. **Durante**, **D.** and Dunson, D.B. (2014) Bayesian logistic Gaussian process models for dynamic networks. *Proceedings of Machine Learning Research*, 33, 194–201. [AISTAT]
- 5. **Durante**, **D.**, Scarpa, B. and Dunson, D. B. (2013) Locally adaptive Bayesian multivariate time series. *Advances in Neural Information Processing Systems*, 26, 1664–1672. [NIPS]

#### National Conference Proceedings, Book Chapters and Discussions [PEER-REVIEWED]

- 1. **Durante**, **D.** and Dunson, D. B. (2016) Bayesian nonparametric modeling of dynamic international relations. *Proceedings of the XLVIII Conference of the Italian Statistical Society*.
- 2. **Durante**, **D.** and Dunson, D. B. (2015) Bayesian regression with network predictors. *Proceedings of the XLVII Conference of the Italian Statistical Society*.
- 3. Durante, D., Vidotto, D. and Vettori, S. (2015) La bussola del ricercatore statistico. In Campostrini S., Ghellini, G. and Tuzzi, A. [Eds.] Con Senso di Misura, Riflessi Statistici da Alcuni Allievi di Lorenzo Bernardi. CLEUP, 25–36.
- 4. **Durante, D.** (2014) Analysis of Italian financial market via Bayesian dynamic covariance models. In Lanzarone, E. and Ieva, F. [Eds.] *The Contribution of Young Researchers to Bayesian Statistics*. Springer, 63, 171–177.
- 5. **Durante**, **D.** (2012) Qualitative latent variables: a comparison between SEM and LCA. *Quaderni di Statistica*, 14, 97–100.

# **Edited Books**

- 1. Argiento, R., **Durante D.** and Wade, S. [Eds.] (2019) Bayesian Statistics and New Generations. Springer Proceedings in Mathematics and Statistics, Springer.
- 2. Canale, A., **Durante D.**, Paci, L. and Scarpa, B. [Eds.] (2018) Studies in Neural Data Science. Springer Proceedings in Mathematics and Statistics, Springer.

### Manuscripts Under Review and In Preparation

- 1. Fasano, A., **Durante, D.** and Zanella, G. (2019) Asymptotically exact variational Bayes for high–dimensional binary regression models. *arXiv:1911.06743* [Submitted]
- 2. Fasano, A., Rebaudo, G., **Durante, D.** and Petrone, S. (2019) A closed-form filter for binary time series. arXiv:1902.06994 [Submitted]
- 3. Rigon, T. and **Durante**, **D.** (2019) Tractable Bayesian density regression via logit stick-breaking priors. arXiv:1701.02969 [Submitted]

# Presentations

# Seminars

[2019] Department of Statistics, Computer Science and Applications, University of Florence. Italy —— Computer, Electrical and Mathematical Science and Engineering Division, King Abdullah University of Science and Technology [KAUST]. Saudi Arabia

[2018] Department of Computer and Information Science, Linköpings Universitet. Sweden — Department of Statistical Sciences, University of Padova. Italy

[2017] School of Mathematics and Statistics, University College of Dublin. Ireland ——

Department of Statistical Science, **Duke University**. USA —— Department of Statistical Science, **University College of London**. UK —— Department of Decision Sciences, **Bocconi University**. Italy —— School of Basic Sciences, **EPFL**. Switzerland

[2016] Department of Statistical Science, Università Cattolica. Italy —— Department of Mathematics and Statistics, Lancaster University. UK

#### **Invited Presentations**

- [2020] EAC-ISBA 2020 [International Society for Bayesian Analysis]. Dali, China
- [2020] ISNPS 2020 Symposium on Nonparametric Statistics. Paphos, Cyprus
- [2019] IISA 2019 Conference [International Indian Statistical Association]. Mumbai, India
- [2019] ERCIM 2019 Conference on Computational and Methodological Statistics. London, UK
- [2019] 44th Spring Lecture Series. Fayetteville, USA
- [2018] ERCIM 2018 Conference on Computational and Methodological Statistics. Pisa, Italy
- [2018] SIS 2018 Conference [Italian Statistical Society]. Palermo, Italy
- [2018] The Mathematics of Subjective Probability [MSP] 2018 Conference. Milan, Italy
- [2017] IISA 2017 Conference [International Indian Statistical Association]. Hyderabad, India
- [2017] ERCIM 2017 Conference on Computational and Methodological Statistics. London, UK
- [2017] Workshop on Bayesian Inference and Stochastic Processess BISP10. Milan, Italy
- [2017] 11th Conference on Bayesian Nonparametrics BNP11. Paris, France
- [2017] ARS'17 International Workshop on Social Network Analysis. Naples, Italy
- [2016] Workshop on Network Science and its Applications SNAW02. Cambridge, UK
- [2016] ISBA 2016 [International Society for Bayesian Analysis]. Sardinia, Italy
- [2016] SIS 2016 Conference [Italian Statistical Society]. Salerno, Italy
- [2015] SIS 2015 Conference [Italian Statistical Society]. Treviso, Italy
- [2015] JSM 2015 Conference [American Statistical Association]. Seattle, USA
- [2015] ARS'15 International Workshop on Social Network Analysis. Capri, Italy

#### Contributed Presentations and Poster Presentations

[2018] ISBA 2018 Conference. Edinburgh, UK. [2014] ISBA 2014 Conference. Cancun, Mexico. [2014] SBP 2014. Washington, USA. [2014] AISTAT 2014. Reykjavik, Iceland. [2013] JSM 2013 Conference. Montreal, Canada. [2013] BAYSM 2013. Milan, Italy.

## TEACHING EXPERIENCE

#### **Excellence in Teaching Certificates**

**BEAT**—Bocconi Excellence in Advanced Teaching by BUILT Bocconi University [2018 Edition]

#### Courses Taught

#### **Bocconi University**

Machine Learning [MSc] Topics in Statistical and Machine Learning [Ph.D.]	2018 — Present $2017$ — Present
Applied Survival (Duration) Data Analysis [Ph.D.]	2017 - 2018
Advanced Mathematics and Statistics – Module 2 [BSc] Statistics – Module 1 (Theory and Methods) [BSc]	2017 - 2018 $2017 - 2018$

#### Ca' Foscari University

Data Analysis [BSc] 2015 — 2016

## University of Padova

Advanced Case Studies 2016 — 2017