

## Daniele Durante: Curriculum Vitae

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CONTACT INFORMATION	Department of Decision Sciences Bocconi University Via Röntgen, 1, 20136 Milan	✉: <a href="mailto:daniele.durante@unibocconi.it">daniele.durante@unibocconi.it</a> web: <a href="https://danieledurante.github.io/web/">https://danieledurante.github.io/web/</a>
RESEARCH INTERESTS	Network Science, Bayesian Methods and Computation, Categorical Data, Bayesian Nonparametrics Latent Variables Models, Statistical Learning in High Dimension	
CURRENT ACADEMIC POSITIONS	<b>Assistant Professor</b> Bocconi University, Department of Decision Sciences <b>Research Affiliate</b> <ul style="list-style-type: none"><li>Bocconi Institute for Data Science and Analytics [BIDSA]; DONDENA Centre for Research on Social Dynamics and Public Policy; Laboratory for Coronavirus Crisis Research [COVID LAB]</li></ul>	<b>09/2017 — Present</b>
PAST ACADEMIC POSITIONS	<b>Post-Doctoral Research Fellow</b> University of Padova, Department of Statistical Sciences <b>Adjunct Professor</b> Ca' Foscari University, Department of Economics and Management <b>Visiting Research Scholar</b> Duke University, Department of Statistical Sciences	<b>02/2016 — 08/2017</b> <b>12/2015 — 12/2016</b> <b>03/2014 — 02/2015</b>
EDUCATION	<b>University of Padova</b> , Department of Statistical Sciences <b>Ph.D. in Statistics.</b> Department of Statistical Sciences <ul style="list-style-type: none"><li>Ph.D. Thesis Topic: <i>Bayesian nonparametric modeling of network data</i></li><li>Advisor: Bruno Scarpa. Co-advisor: David B. Dunson</li></ul> <b>M.Sc. in Statistical Sciences.</b> Department of Statistical Sciences <b>B.Sc. in Statistics, Economics and Finance.</b> Department of Statistics	<b>2013 — 2016</b> <b>2010 — 2012</b> <b>2007 — 2010</b>
AWARDS	<b>Early-Career Scholar Award for Contributions to Statistics.</b> Italian Statistical Society <b>Bocconi Research Excellence Award.</b> Bocconi University <b>Leonardo da Vinci Medal.</b> Italian Ministry of University and Research <b>Bocconi Research Excellence Award.</b> Bocconi University <b>Bocconi Innovation in Teaching Award.</b> Bocconi University <b>National Scientific Qualification for Associate Professor in Statistics</b> [13/D1] <b>Doctoral Thesis Award in Statistics.</b> Italian Statistical Society <b>Mitchell Award.</b> International Society for Bayesian Analysis <b>Theory-Methods Editor's Invited Paper</b> [JASA]. American Statistical Association <b>Byar Award.</b> Biometrics Section. American Statistical Association <b>Lifetime Members Junior Award.</b> International Society for Bayesian Analysis <b>Laplace Award.</b> Bayesian Statistical Sciences Section. American Statistical Association	<b>2021</b> <b>2021</b> <b>2020</b> <b>2020</b> <b>2020</b> <b>2018</b> <b>2018</b> <b>2017</b> <b>2017</b> <b>2015</b> <b>2014</b> <b>2013</b>
EDITORIAL ACTIVITY	<b>Associate Editor</b> <b>Journal of Multivariate Analysis</b> <b>Biometrika</b> <b>Journal of Computational and Graphical Statistics</b>	<b>09/2021 — Present</b> <b>08/2019 — Present</b> <b>09/2018 — Present</b>

## Referee [selected — alphabetical order]

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

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## SERVICE TO PROFESSION

### Positions in Scientific Societies

— [ISBA] <b>Chair</b> of the Blackwell–Rosenbluth Award scientific committee	<b>2022</b>
— [ISBA] <b>Vice–Chair</b> of the Blackwell–Rosenbluth Award scientific committee	<b>2021</b>
— [IMS] <b>Member</b> of the IMS committee on nominations	<b>2020</b>
— [ISBA] <b>Member</b> of the ISBA Task Team for codes of conduct and procedures	<b>2019/18</b>
— [ISBA] <b>Chair</b> of the J-ISBA Section	<b>2018</b>
— [SIS] <b>Chair</b> of the Y-SIS Section	<b>2018</b>
— [ASA] <b>Member</b> of the selection committee for the Laplace Award	<b>2018</b>
— [ISBA] <b>Chair–Elect</b> of the J-ISBA Section	<b>2017</b>
— [SIS] <b>Secretary</b> of the Y-SIS Section	<b>2017</b>

### Membership to Scientific Societies

American Statistical Association [ASA], International Society for Bayesian Analysis [ISBA], Italian Statistical Society [SIS], Institute of Mathematical Statistics [IMS], Italian Association for Population Studies [AISP].

### Organization of Scientific Events

<b>Organizing</b> committee of Junior Bayes Beyond the Borders. Milan	<b>2021/2020</b>
<b>Organizing</b> committee of SELECT workshop. Milan	<b>2021/2020</b>
<b>Local</b> committee of sis2019 Conference. Milan	<b>2019</b>
<b>Chair</b> of Stats under the Stars 5. Milan	<b>2019</b>
<b>Organizing</b> committee of BAYSM2018 meeting. Warwick	<b>2018</b>
<b>Scientific</b> committee of sis2018 Conference. Palermo	<b>2018</b>
<b>Scientific</b> committee of StartUpResearch. Siena	<b>2017</b>
<b>Organizing</b> committee of Stats under the Stars 2. Salerno	<b>2016</b>
<b>Chair</b> of Stats under the Stars 1. Padova	<b>2015</b>
<b>Organizing</b> committee of Statistica e Data Science per il Business. Padova	<b>2015</b>

### Sessions Organized at Conferences

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

### Outreach

— [SUS] <b>Founder and leading organizer</b> of “Stats Under the Stars”	<b>2015 — Present</b>
“Stats Under the Stars” (SUS) is a series of Data Science hackathons for university students, organized annually, since 2015, all over Italy and endorsed by the Italian Statistical Society.	
— [TEDx talk] <b>The Geometry of Relationships</b> ( $\approx 40000$ views on YouTube)	<b>2018</b>
<a href="https://www.ted.com/talks/daniele_durante_daniele_durante_la_geometria_delle_relazioni">https://www.ted.com/talks/daniele_durante_daniele_durante_la_geometria_delle_relazioni</a>	

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## SERVICE TO UNIVERSITY

### Positions in Boards and Committees

<b>Member</b> of the Bocconi Junior Hiring Committee (DEC Department)	<b>2022 — Present</b>
<b>Mentor</b> at the IGIER–BIDSA Visiting Student Initiative	<b>2019 — Present</b>
<b>Coordinator</b> of the DEC Seminars Series	<b>2019 — Present</b>
<b>Coordinator</b> of the BIDSA Seminars Series	<b>2018 — Present</b>
<b>Program committee member</b> of the MSc in DS&BA	<b>2018 — Present</b>
<b>Faculty board member</b> of Ph.D. in Statistics & Computer Science	<b>2017 — Present</b>

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

### Students Supervised or Co-supervised

Federico Pavone [Ph.D.], Francesco Pozza [Ph.D.], Valentina Ghidini [Ph.D.], Niccoló Anceschi [Ph.D.], Sirio Legramanti [Ph.D. and Postdoc], Augusto Fasano [Ph.D.] + 20 [MSc students] + 7 [BSc students].

### Innovation in Teaching

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

### Outreach Events and Projects

**Invited speaker** for the Bocconi Job Lab project [Online] **2021**  
**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**

### 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 — 2022**  
**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: 588 • — • H-INDEX: 12 • — • I10-INDEX: 14  
**Codes** • <https://github.com/danieledurante>

### Manuscripts under Review

1. Cao, J., **Durante, D.** and Genton, M. (2021) Scalable computation of predictive probabilities in probit models with Gaussian process priors. *arXiv:2009.01471* [revision submitted]
2. Fasano, A., and **Durante, D.** (2020) A class of conjugate priors for multinomial probit models which includes the multivariate normal one. *arXiv:2007.06944* [revision submitted]
3. Fasano, A., **Durante, D.** and Zanella, G. (2020) Scalable and accurate variational Bayes for high-dimensional binary regression models. *arXiv:1911.06743* [revision submitted]

### Published Articles [PEER-REVIEWED]

4. Legramanti S., Rigon, T., **Durante, D.** and Dunson, D.B. (2022) Extended stochastic block models with application to criminal networks. *Annals of Applied Statistics*. In Press.
5. Fasano, A., Rebaudo, G., **Durante, D.** and Petrone, S. (2021) A closed-form filter for binary time series. *Statistics and Computing*, 31, 1–20.
6. Legramanti S., Rigon, T. and **Durante, D.** (2021) Bayesian testing for exogenous equivalence structures in stochastic block-models. *Sankhya A*. In Press.
7. Rigon, T. and **Durante, D.** (2021) Tractable Bayesian density regression via logit stick-breaking priors. *Journal of Statistical Planning and Inference*, 211, 131–142.

8. Legramanti, S., **Durante, D.** and Dunson, D. B. (2020) Bayesian cumulative shrinkage for infinite factorizations. *Biometrika*, 107, 745–752.
9. **Durante, D.** and Guindani, M. (2020) Bayesian methods in brain networks. *Wiley StatsRef–Statistics Reference Online*, 1–10.
10. **Durante, D.** (2019) Conjugate Bayes for probit regression via unified skew-normal distributions. *Biometrika*, 106, 765–779.
11. **Durante, D.** and Rigon, T. (2019) Conditionally conjugate mean-field variational Bayes for logistic models. *Statistical Science*, 34, 472–485.
12. **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.
13. 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.
14. **Durante, D.** and Dunson, D. B. (2018) Bayesian inference and testing of group differences in brain networks. *Bayesian Analysis*, 13, 29–58.
15. Canale, A., **Durante, D.** and Dunson, D. B. (2018) Convex mixture regression for quantitative risk assessment. *Biometrics*, 74, 1331–1340.
16. Russo, M., **Durante, D.** and Scarpa, B. (2018). Bayesian inference on group differences in multivariate categorical data. *Computational Statistics & Data Analysis*, 126, 136–149.
17. Canale, A., **Durante, D.**, Paci, L. and Scarpa, B. (2018) Connecting statistical brains. *Significance*, 15, 38–40.
18. **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).
19. **Durante, D.**, Dunson, D. B. and Vogelstein, J. T. (2017) Rejoinder: Nonparametric Bayes modeling of populations of networks. *Journal of the American Statistical Association*, 112, 1547–1552.
20. **Durante, D.**, Mukherjee, N. and Steorts, R. C. (2017) Bayesian learning of dynamic multilayer networks. *Journal of Machine Learning Research*, 18, 1–29.
21. Wang, L., **Durante, D.**, Jung, R. E. and Dunson, D. B. (2017) Bayesian network-response regression. *Bioinformatics*, 33, 1859–1866.
22. **Durante, D.** (2017) Invited discussion of “Sparse graphs using exchangeable random measures”. *Journal of the Royal Statistical Society: Series B*, 79, 55–56.
23. **Durante, D.** (2017) A note on the multiplicative gamma process. *Statistics & Probability Letters*, 122, 198–204.
24. **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.
25. **Durante, D.** and Dunson, D. B. (2016) Locally adaptive dynamic networks. *Annals of Applied Statistics*, 10, 2203–2232.
26. **Durante, D.** and Dunson, D. B. (2014) Nonparametric Bayes dynamic modelling of relational data. *Biometrika*, 101, 883–898.
27. **Durante, D.** and Dunson, D. B. (2014) Bayesian dynamic financial networks with time-varying predictors. *Statistics & Probability Letters*, 93, 19–26.
28. **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 and Book Chapters [PEER-REVIEWED]

29. Aliverti, E., **Durante, D.**, and Scarpa, B. (2020). Projecting proportionate age-specific fertility rates via Bayesian skewed processes. *Developments in Demographic Forecasting*. 89–103.
30. 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.
31. **Durante, D.** and Dunson, D.B. (2014) Bayesian logistic Gaussian process models for dynamic networks. *AISTAT Conference Proceedings*, 33, 194–201.
32. **Durante, D.**, Scarpa, B. and Dunson, D. B. (2013) Locally adaptive Bayesian multivariate time series. *NEURIPS Conference Proceedings*, 26, 1664–1672.

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

33. Mazzucco, S., Aliverti, E., **Durante, D.** and Campostrini, S. (2021). Causes of death patterns and life expectancy: looking for warning signals. *Proceedings of the 50th Conference of the Italian Statistical Society*, 16–21.
34. **Durante, D.** and Dunson, D. B. (2016) Bayesian nonparametric modeling of dynamic international relations. *Proceedings of the XLVIII Conference of the Italian Statistical Society*.
35. **Durante, D.** and Dunson, D. B. (2015) Bayesian regression with network predictors. *Proceedings of the XLVII Conference of the Italian Statistical Society*.
36. **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.
37. **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.
38. **Durante, D.** (2012) Qualitative latent variables: a comparison between SEM and LCA. *Quaderni di Statistica*, 14, 97–100.

## Edited Books

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

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## PRESENTATIONS

### Seminars

- [2021] Dept. of Business and Economics, **Universitat Pompeu Fabra**. Spain
- [2021] School of Mathematics, **The University of Edinburgh**. Scotland [online]
- [2020] Dept. of Statistics, **Rice University**. USA [online]
- [2019] Dept. of Statistics, Computer Science and Applications, **University of Florence**. Italy
- [2019] Computer, Electrical and Mathematical Science Division, **KAUST**. Saudi Arabia
- [2018] Dept. of Computer and Information Science, **Linköpings Universitet**. Sweden
- [2018] Dept. of Statistical Sciences, **University of Padova**. Italy
- [2017] School of Mathematics and Statistics, **University College of Dublin**. Ireland
- [2017] Dept. of Statistical Science, **Duke University**. USA
- [2017] Dept. of Statistical Science, **University College of London**. UK
- [2017] Dept. of Decision Sciences, **Bocconi University**. Italy
- [2017] School of Basic Sciences, **EPFL**. Switzerland
- [2016] Dept. of Statistical Science, **Università Cattolica**. Italy
- [2016] Dept. of Mathematics and Statistics, **Lancaster University**. UK

## Invited Presentations

- [**upcoming**] ECOSta 2022 Conference on Econometrics and Statistics. Kyoto, Japan.  
[**upcoming**] O'BAYES 2022 Conference. Santa Cruz, USA.  
[**upcoming**] ISBA 2022 [International Society for Bayesian Analysis]. Montreal, Canada  
[**upcoming**] ISNPS 2022 Symposium on Nonparametric Statistics. Paphos, Cyprus
- [**2021**] 5th EAC-ISBA Conference. Online  
[**2021**] BIRS workshop on Foundations of Objective Bayesian Methodology. Online  
[**2021**] PRIN-SELECT Intermediate Workshop. Venice, Italy  
[**2021**] JSM 2021 Conference [American Statistical Association]. Online  
[**2021**] 5th European Conference on Social Network [EUSN2021]. Online  
[**2021**] SIS 2021 Conference [Italian Statistical Society]. Online
- [**2020**] ERCIM 2020 Conference on Computational and Methodological Statistics. Online
- [**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 Processes 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 [International Society for Bayesian Analysis]. Edinburgh, UK.  
[**2014**] ISBA 2014 Conference [International Society for Bayesian Analysis]. Cancun, Mexico.  
[**2014**] Artificial Intelligence and Statistics Conference 2014. Reykjavik, Iceland.  
[**2013**] JSM 2013 Conference [American Statistical Association]. Montreal, Canada.  
[**2013**] BAYSM2013 [International Society for Bayesian Analysis]. Milan, Italy.

## TEACHING EXPERIENCE

### Excellence in Teaching Certificates

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

### Courses Taught at Bocconi University

Machine Learning [MSc]	<b>2018 — Present</b>
Optimization [MSc]	<b>2021 — Present</b>
Statistical Machine Learning [Ph.D.]	<b>2021 — Present</b>
Advanced Python Programming for Economics, Management and Finance [BSc]	<b>2020 — 2021</b>
Topics in Statistical and Machine Learning [Ph.D.]	<b>2017 — 2020</b>
Applied Survival (Duration) Data Analysis [Ph.D.]	<b>2017 — 2018</b>
Advanced Mathematics and Statistics – Module 2 [BSc]	<b>2017 — 2018</b>
Statistics – Module 1 (Theory and Methods) [BSc]	<b>2017 — 2018</b>

**Past Courses.** Data Analysis [BSc] (**2015–2016**). Ca' Foscari University — Advanced Case Studies [Msc] (**2016–2017**). University of Padova

Updated December 23, 2021