

# Daniele Durante: Curriculum Vitae

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CONTACT INFORMATION	Department of Decision Sciences Sciences Bocconi University Via Roentgen, 1, 20136 Milano Date of birth: 28/02/1988	✉: <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> ☎: +39 3402730227
RESEARCH INTERESTS	Network Science, Bayesian Nonparametrics, Neuroscience, High Dimensional Inference, Statistical Machine Learning, Tensor Factorization, Stochastic Processes, Functional Data.	
POSITIONS	<p><b>Assistant Professor</b> at the Department of Decision Sciences of Bocconi University. Milan, Italy. 01/09/2017— Today.</p> <p><b>Past Academic and Business Positions</b></p> <p>Post-doctoral Research Fellow. Università degli Studi di Padova, Department of Statistical Sciences. Padova, Italy. (02/2016 — 08/2017).</p> <p>Adjunct Professor. Department of Economics and Management, Ca' Foscari University. Venice, Italy. (Academic year 2015/2016).</p> <p>Visiting Research Scholar. Department of Statistical Sciences, Duke University. Durham, NC, USA. (03/2014 — 02/2015).</p> <p>Research Assistant at Università degli Studi di Padova (01/2013 — 04/2013) and Ca' Foscari University (01/2012 — 02/2012).</p> <p>Teaching Assistant. Università degli Studi di Padova, Department of Statistical Sciences. Exercises and small lectures for undergraduates. (10/2011—10/2012).</p> <p>Freelance Researcher providing statistical consulting for business. (07/2011—07/2012).</p>	
EDUCATION	<p><b>Università degli Studi di Padova</b>, Padova, Italy</p> <p>Ph.D. in Statistical Sciences. Department of Statistical Sciences (2013–2016)</p> <ul style="list-style-type: none"><li>• Ph.D. Thesis Topic: <i>Bayesian nonparametric modeling of network data</i></li><li>• Advisors: Bruno Scarpa and David B. Dunson</li></ul> <p>M.S. in Statistical Sciences. Department of Statistical Sciences (2010–2012)</p> <ul style="list-style-type: none"><li>• M.S. Thesis Topic: <i>Locally adaptive Bayesian covariance regression</i></li><li>• Advisors: Bruno Scarpa and David B. Dunson</li></ul> <p>B.S. in Statistics, Economy and Finance. Department of Statistical Sciences (2007–2010)</p>	
AWARDS	<p><b>Academic</b></p> <ul style="list-style-type: none"><li>• Awarded the <i>2017 JASA Theory &amp; Methods Invited Paper</i>. American Statistical Association. (2017).</li><li>• Winner of the <i>David P. Byar Award</i>. Biometrics Section of the American Statistical Association. (2015).</li><li>• Winner of the <i>ISBA Lifetime Members Junior Researcher Award</i>. International Society for Bayesian Analysis. (2014).</li><li>• Winner of the <i>Grand Data Challenge</i> of the 2014 International Conference on Social Computing, Behavioral-Cultural Modeling &amp; Prediction. (2014).</li><li>• Winner of the <i>Laplace Award</i>. Section on Bayesian Statistical Sciences of the American Statistical Association. (2013).</li></ul>	

## Outreach

- *My Statistician Friend*. Honorable mention in the video contest sponsored for the International Year of Statistics 2013. (2013).  
Link of the video: <https://www.youtube.com/watch?v=yU2qQywUnnU>.
  - *The Statistical Calendar*. Awarded as the best outreach project of Statistics in the multimedia competition: "La statistica e la professione di statistico: idee per la promozione e la diffusione". ISTAT, Rome. (2012).  
Link of the project: <http://cal.stat.unipd.it/eng/index.html>.
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## FUNDING

### Research Projects

- *"Predicting Performance from Network Data"*. ARO (\$742,129). PI: David Dunson. Contribution and position: Member of the research group, support in writing the proposal and help in conceiving the key ideas.
  - *"Bayesian Learning for High-Dimensional Low Sample Size Data"*. ONR (\$448,913). PI: David Dunson. Contribution and position: Member of the research group.
  - *"Bayesian Inference on Brain Network Data"*. Università degli Studi di Padova (€25,244). PI: Bruno Scarpa. Contribution and position: Member of the research group, support in writing the proposal and help in conceiving the key ideas.
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## PUBLICATIONS

### Refereed Journals

1. Rigon, T., Durante, D. and Torelli, N. (2018). Bayesian Semiparametric Modelling of Contraceptive Behavior in India via Sequential Logistic Regressions. *Journal of the Royal Statistical Society: Series A*. In press.
2. Durante, D. and Dunson, D. B. (2018). Bayesian Inference and Testing of Group Differences in Brain Networks. *Bayesian Analysis*, 13, 29–58.
3. Canale, A., Durante D., Paci L. and Scarpa, B. (2018). Connecting Statistical Brains. *Significance*, 15, 38–40.
4. Durante, D., Dunson, D. B. and Vogelstein, J. T. (2017). Nonparametric Bayes Modelling of Populations of Networks. *Journal of the American Statistical Association*, 112, 1516–1530 (with discussion).
5. Durante, D., Mukherjee, N. and Steorts, R. C. (2017). Bayesian Learning of Dynamic Multilayer Networks. *Journal of Machine Learning Research*, 18, 1–29.
6. Wang, L., Durante, D., Jung, R. E. and Dunson, D. B. (2017). Bayesian Network-Response Regression. *Bioinformatics*, 33, 1859–1866.
7. Durante, D. (2017). A Note on the Multiplicative Gamma Process. *Statistics & Probability Letters*, 122, 198–204.
8. 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.
9. Durante, D. and Dunson, D. B. (2016). Locally Adaptive Dynamic Networks. *Annals of Applied Statistics*, 10, 2203–2232.
10. Durante, D. and Dunson, D. B. (2014). Nonparametric Bayes Dynamic Modelling of Relational Data. *Biometrika*, 101, 883–898.
11. Durante, D. and Dunson, D. B. (2014). Bayesian Dynamic Financial Networks with Time-Varying Predictors. *Statistics & Probability Letters*, 93, 19–26.
12. 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.

13. Durante, D. and Dunson, D. B. (2014). Bayesian Logistic Gaussian Process Models for Dynamic Networks. *Artificial Intelligence and Statistics (AISTAT). Journal of Machine Learning Research-Workshop & Proceedings*, 33, 194–201.
14. Durante, D., Scarpa, B. and Dunson, D. B. (2013). Locally Adaptive Bayesian Multivariate Time Series. *Advances in Neural Information Processing Systems (NIPS)*, 26, 1664–1672.

#### Refereed Conference Proceedings and Book Chapters

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*, 1–13.
2. Durante, D. and Dunson, D. B. (2015). Bayesian Regression with Network Predictors. *Statistics and Demography: the Legacy of Corrado Gini*, 1–7.
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. [ENGLISH VERSION].
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.

#### Manuscripts Under Review

1. Durante, D. (2018). Conjugate Bayes for Probit Regression via Unified Skew-Normals. *arXiv:1802.09565*. (To be submitted).
2. Durante, D. and Rigon, T. (2018). A Note on Quadratic Approximations of Logistic Log-likelihoods. *arXiv:1711.06999*. (Submitted).
3. Durante, D., Canale, A. and Rigon, T. (2018). A Nested Expectation–Maximization Algorithm for Latent Class Regression Models. *arXiv:1705.03864*. (Submitted).
4. Canale, A., Durante, D. and Dunson, D. B. (2018). Convex Mixture Regression for Quantitative Risk Assessment. *arXiv:1701.02950*. (Submitted).
5. Rigon, T. and Durante, D. (2018). Logit Stick-Breaking Priors for Bayesian Density Regression. *arXiv:1701.02969*. (Submitted).
6. Russo, M., Durante, D. and Scarpa, B. (2017). Bayesian Inference on Group Differences in Multivariate Categorical Data. *arXiv:1606.09415*. (Submitted).
7. Durante, D., Daianu, M., Jahanshad, N., Thompson, P. M. and Dunson, D. B. (2015). Unifying Inference on Brain Network Variations in Neurological Diseases: The Alzheimer’s Case. *arXiv:1510.05391*. (To be submitted).

#### RESEARCH PRESS

##### Press Releases on my Research and Findings

- Creative people have better interconnected brains. *Duke Today* —
  - Do you have a ‘superbrain’? Study finds creative people have better connected brains. *Daily Mail* —
  - Brain scans could reveal if children are naturally creative - and help them pick a career. *The Mirror* —
  - Sei creativo? Allora il tuo cervello è più connesso. *Il Bo Magazine*.
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#### PRESENTATIONS

##### Seminars

- Convex mixture regression for quantitative risk assessment. *Department of Decision Sciences, Bocconi University*. Milan, Italy (May 4, 2017) — • Bayesian nonparametric modeling of network data. *School of Basic Sciences, EPFL*. Lausanne, Switzerland (January 19, 2017), and *Department of Decision Sciences, Bocconi University*. Milan, Italy (February 2, 2017), and *Department of Statistical Science, UCL*. London, UK (February 8, 2017), and *Department of Statistical Science, Duke University*. Durham, USA (February 17, 2017) — • Recent advances and open questions in statistical modeling of structural brain networks. *Department of Psychology, Università degli Studi di Padova*. Padova, Italy (November 7, 2016) — • Bayesian nonparametric modeling of networks. *Department of Statistical Science, Università Cattolica*. Milan, Italy (February 18, 2016) — • Bayesian connectomics. *Department of Mathematics and Statistics, Lancaster University*. Lancaster, UK (October 8, 2015) — • Locally Adaptive DYnamic (LADY) networks. *Department of Statistical Sciences, Università degli Studi di Padova*. Padova, Italy (May 28, 2015).

### Invited Presentations

- Statistical models and predictive strategies for dynamic face-to-face contact networks. *BISP10*. Milan, Italy (June 14, 2017) — • Bayesian nonparametric modeling of populations of networks. *JSM2017*. Baltimore, USA (August 2, 2017) and *BNP11*. Paris, France (June 30, 2017) — • Bayes and graphs. *ARS'17*. Naples, Italy (May 16, 2017) — • Bayesian modeling of networks in business intelligence. *Isaac Newton Institute*. Cambridge, UK (August 25, 2016) — • Bayesian connectomics. *ISBA2016*. Sardinia, Italy (June 18, 2016) — • Nonparametric Bayes modeling of dynamic international relations. *SIS2016*. Salerno, Italy (June 8, 2016) — • Bayesian regression with network predictors. *SIS2015*. Treviso, Italy (September 10, 2015) — • Inference on group differences in brain networks. *JSM2015*. Seattle, USA (August 13, 2015) — • The compass for young statisticians. *Una giornata in ricordo di Lorenzo Bernardi*. Padova, Italy (May 15, 2015) — • Bayesian inference on network data. *ARS'15*. Capri, Italy (April 29, 2015) — • Friends in joy and sorrow: Analysis of the 2007-2012 global financial crisis via Bayesian nonparametric dynamic networks. *SBP 2014*. Washington DC, USA (April 4, 2014).

### Contributed Presentations and Poster Presentations

- Nonparametric Bayes dynamic modeling of relational data. *ISBA2014*. Cancun, Mexico (July 15, 2014) — • Bayesian logistic Gaussian process models for dynamic networks. *AISTAT2014*. Reykjavik, Iceland (April 22, 2014) — • Locally adaptive Bayesian multivariate time series. *JSM2013*. Montreal, Canada (August 6, 2013) — • Analysis of Italian financial market via Bayesian covariance regression. *BAYSM2013*. Milan, Italy (June 5, 2013) — • Qualitative latent variables: a comparison between SEM and LCA. *Methods and models for latent variables*. Naples, Italy (May 17, 2012).

### SERVICE TO PROFESSION

#### Positions in Academic Societies

J-ISBA Chair, since January 2018. Y-SIS Chair, since January 2018.

#### Referee Service

JRSS-B; Annals of Statistics; Biometrics; Annals of Applied Statistics; Computational Statistics & Data Analysis; AISTAT; SBP Conference; Quaderni di Statistica.

#### Organization of Scientific Events

- Joint organizer of “*StartUpResearch*”. Siena, 25-27 June, 2017 (Satellite event of the SIS intermediate scientific meeting)
- Joint organizer of “*Stats under the Stars II*”. Salerno, 7-8 June, 2016 (Satellite event of the SIS intermediate scientific meeting)
- Chair of the event “*Stats under the Stars*”. Padova, 8-9 September, 2015 (Satellite event of the SIS intermediate scientific meeting)
- Joint organizer of “*Statistica e Data Science per il Business*”. Padova, 8 September, 2015 (Satellite event of the SIS intermediate scientific meeting)

TEACHING  
EXPERIENCE

**Ca' Foscari University**

Department of Economics and Management

- Data Analysis [ET2005]. (Academic year 2015/2016).

**Università degli Studi di Padova**

Department of Statistical Sciences

- Advanced Case Studies [SECS-S/01]. (Academic year 2016/2017).
  - Introduction to network analysis (specialist lectures during the class: Analisi dei Dati e Data Mining). (Academic years 2015/2016 and 2014/2015).
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