

# GIORGIO PAULON

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## QUALIFICATIONS

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- Six years' experience in building Bayesian interpretable models for prediction and uncertainty quantification
- Strong quantitative skills with an emphasis on Bayesian statistics, hierarchical modeling, clustering methods, causal inference, optimization and big data
- Proficient in R, package development, Python, SQL, reproducible workflows and effective data visualization
- Strong verbal and written communication skills, including publication in peer-reviewed journals, conference presentations, and professional client-facing experience

## EDUCATION AND TRAINING

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**The University of Texas at Austin**, Austin, TX

**Ph.D. in Statistics**

2016 - 2021

- Thesis: Bayesian partition models for local inference in longitudinal and survival data
- Advisors: [Dr. Peter Müller](#) and [Dr. Abhra Sarkar](#)
- Area of Specialization: Bayesian methods for clustering of longitudinal data

**École Centrale Paris**, Paris, France

**Diplôme d'ingénieur**

2011 - 2013

- Double Degree T.I.M.E. "Top International Managers in Engineering"

**Politecnico di Milano**, Milan, Italy

**M.Sc. in Statistics**

2013 - 2016

- Thesis: A Bayesian autoregressive semiparametric model for waiting times of recurrent events
- Advisor: [Dr. Alessandra Guglielmi](#)
- Area of Specialization: Bayesian nonparametric methods for survival analysis

**B.Sc. in Mathematical Engineering**

2009 - 2013

## PROFESSIONAL AND RESEARCH EXPERIENCE

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**Statistical Scientist • Berry Consultants, LLC • Austin, TX**

Aug 2021 - current

- Working on designing and executing innovative and adaptive clinical trials

**PhD Candidate • The University of Texas at Austin • Austin, TX**

Aug 2016 - Aug 2021

- Developed a Bayesian nonparametric model for survival analysis of multiple outcomes - *This method allows to evaluate the effect of an intervention compared to the standard of care in recurrent infections*
- Published a novel framework for analyzing behavioral data using factorial HMMs - *This approach gives neuroscientists an interpretable model to assess how auditory stimuli affect the underlying tone learning mechanisms*
- Published a method (FLMEM) for flexible logistic functional regression with heterogeneous learning curves, and developed an R package to make the method widely available - *Method included in a special issue for "Advancing Statistical Methods in Speech, Language, and Hearing Sciences"*

**Assistant Instructor • The University of Texas at Austin • Austin, TX**

Fall 2019, Fall 2020

- Design and instruction of SDS 323 "Statistical Learning and Inference" to 50 upper level undergraduate students; mentoring of the teaching assistant. Topics: methods for supervised and unsupervised learning

**Junior Data Scientist • iProspect • Milan, Italy**

Jan 2015 - Jun 2015

- Study and preliminary implementation of a data-driven attribution model for advertising using hidden Markov models - *Allowed the company to quantify advertisements' effectiveness*
- Development of a classifier predicting the semantic fields of URLs coming from different data providers - *Identified users' interests using topic recognition*
- Development of an automated reporting pipeline for clients using an integration between R and LaTeX - *Optimized the time-consuming compilation of reports for the clients*

**Research Fellow • Politecnico di Milano • Milan, Italy**

Sep 2015 - Jun 2016

- Developed a Bayesian nonparametric model for recurrent events and survival - *Insights on how recurrent hospitalizations affect patients with chronic heart failure*

## TECHINICAL SKILLS AND LANGUAGES

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**Programming:** R (package development, Markdown, Shiny) • Python (NumPy, Pandas, scikit-learn) • C++ • SQL • Github • HTML

**Applied Technical Skills:** Multilevel modeling • MCMC methods • Longitudinal data analysis • Survival analysis • Feature engineering • Data visualization • Reproducible workflows

**Languages:** Italian (native speaker) • English (proficient) • French (proficient) • Spanish (intermediate)

## AWARDS AND HONORS

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- Mitchell Prize, International Society for Bayesian Analysis (ISBA) 2021
- Student Paper Award, Section on Bayesian Statistical Science (SBSS) 2021
- SDS Excellence Fellowship, The University of Texas at Austin 2016 - 2021
- Graduate School Summer Fellowship, The University of Texas at Austin Summer 2020
- Scholarship, Bocconi University, 2<sup>nd</sup> School on Advanced Statistics and Probability Summer 2018
- Scholarship, University of Washington, 22<sup>nd</sup> Institute on Statistical Genetics (SISG) Summer 2017
- Best report award at the hackathon Stats under the Stars 2 Jun 2016

## VOLUNTEER WORK

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**Volunteer • Cesvi Fondazione Onlus • Chennai, India** Jun 2013 - Aug 2013

- Staff member at a shelter for children of ages 6 to 16. Responsibilities: teaching English; helping with the homework; document and raise awareness about child labor in the local communities

## PUBLICATIONS

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1. **Paulon, G.**, Müller, P., and Sarkar, A. (2021). Bayesian semiparametric hidden Markov tensor partition models for longitudinal data with local variable selection. (Under review) [\[Preprint\]](#)
2. **Paulon, G.**, Müller, P., and Sal y Rosas, V. G. (2021). Bayesian nonparametric bivariate survival regression for current status data. (Under review) [\[Preprint\]](#)
3. Roark, C. L., **Paulon, G.**, Sarkar, A., and Chandrasekaran, B. (2021). Comparing perceptual category learning across modalities in the same individuals. *Psychonomic Bulletin & Review*, 28, 898-909 [\[Article\]](#)
4. **Paulon, G.**, Llanos, F., Chandrasekaran, B., and Sarkar, A. (2021). Bayesian semiparametric longitudinal drift-diffusion mixed models for tone learning in adults. *Journal of the American Statistical Association*, 116, 1114-1127 [\[Article\]](#) [\[R Package\]](#)
5. **Paulon, G.**, De Iorio, M., Guglielmi, A., and Ieva, F. (2020). Joint modeling of recurrent events and survival: A Bayesian non-parametric approach. *Biostatistics*, 21, 1-14 [\[Article\]](#)
6. **Paulon, G.**, Reetzke, R., Chandrasekaran, B., and Sarkar, A. (2019). Functional logistic mixed effects models for learning curves from longitudinal binary data. *Journal of Speech, Language, and Hearing Research*, 62, 543-553 [\[Article\]](#) [\[R Package\]](#)
7. **Paulon, G.**, Trippa, L., and Müller, P. (2018). Invited comment on “Bayesian cluster analysis: Point estimation and credible balls”. *Bayesian Analysis*, 13, 590-593 [\[Article\]](#) [\[Markdown\]](#)