GIORGIO PAULON

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QUALIFICATIONS

- Eight 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, C++, SQL, package development, 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

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

Statistical Scientist • **Berry Consultants, LLC** • Austin, TX Aug 2021 - current

- Implementation of the statistical components of adaptive and innovative, often Bayesian, clinical trials, including platform trials
- Preparation of reports interpreting interim and final analysis; illustration of interim results to Data Safety Monitoring Boards (DSMB) composed of clinicians and statisticians
- Interactions with the statistical design team to help writing and reviewing prospective documents such as Statistical Analysis Plan (SAP) and Adaptive Design Report (ADR)

PhD Candidate • **The University of Texas at Austin** • Austin, TX Aug 2016 - Aug 2021

- Developed and published a Bayesian nonparametric model for survival analysis of multiple outcomes
- Developed and published a novel framework for analyzing behavioral data using factorial HMMs
- Developed and 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
- Development of a classifier predicting the semantic fields of URLs coming from different data providers
- Development of an automated reporting pipeline for clients using an integration between R and LaTeX

Techinical Skills and Languages

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

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

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

Awards and Honors

- 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^{nd} School on Advanced Statistics and Probability Summer 2018
- Scholarship, University of Washington, 22^{nd} Institute on Statistical Genetics (SISG) Summer 2017
- Best report award at the hackathon Stats under the Stars 2 Jun 2016

Volunteer work

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

1. Pradilla, G., Ratcliff, J. J., Hall, A. J., Saville, B. R., Allen, J. W., **Paulon, G.**, and others (2024). Early minimally invasive removal of intracerebral hemorrhage trial. New England Journal of Medicine, 390, 1277-1289 **[Article]**
2. Roark, C. L., **Paulon, G.**, Rebaudo, G., McHaney, J. R., Sarkar, A., Chandrasekaran, B. (2024). Individual differences in working memory impact task engagement and decision processes during speech category learning. PloS one **[Preprint]**
3. **Paulon, G.**, Müller, P., and Sarkar, A. (2024). Bayesian semiparametric hidden Markov tensor models for time varying random partitions with local variable selection. Bayesian Analysis **[Article]**
4. **Paulon, G.**, Müller, P., and Sal y Rosas, V. G. (2024). Bayesian nonparametric bivariate survival regression for current status data. Bayesian Analysis, 19, 49-75 **[Article]**
5. 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]**
6. **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]**
7. **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]**
8. **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]**
9. **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]**