Laura D'Angelo

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Current position

Research fellow in Statistics
Department of Economics, Management and Statistics (DEMS)
University of Milano-Bicocca

Education

PhD in Statistics (10/2018 – 11/2021, final exam expected on 05/2022)
Department of Statistical Science, University of Padova
Thesis title: "Bayesian modeling of calcium imaging data"
Supervisor: Prof. Antonio Canale
Co-supervisor: Prof. Michele Guindani.

Master's Degree in Statistics (10/2015 – 11/2017)
Department of Statistical Science, University of Padova
Thesis title: "Modelli Bayesiani nonparametrici: applicazioni al settore assicurativo" (Bayesian nonparametric models: applications in insurance)
Supervisor: Prof. Antonio Canale
Final mark: 110/110 *cum laude*.

Bachelor's Degree in Statistics, Economics and Finance (10/2012 – 09/2015)
Department of Statistical Science, University of Padova
Thesis title: "L'area sotto la curva ROC specifica per caratteristiche" (Covariate-specific area under the ROC curve)
Supervisor: Prof. Gianfranco Adimari
Final mark: 110/110 *cum laude*.

Visiting periods

(01/2020 – 11/2020) University of California, Irvine
Irvine, CA; USA
Supervisor: Prof. Michele Guindani.

Work experience

(01/2018 – 09/2018) Data analyst at BIP, Milan.

Research interests

- Statistical modeling
- Bayesian nonparametrics
- Computational methods

Computer skills

- R (advanced)
- C++, GitHub, Python (working level)

Language skills

Italian (native); English (good)

Publications

- D'Angelo L. and Canale A. (2021) Efficient posterior sampling for Bayesian Poisson regression. *arXiv preprint arXiv:2109.09520*
- D'Angelo L., Canale A., Yu Z. and Guindani M. (2021) Bayesian nonparametric analysis for the detection of spikes in noisy calcium imaging data. *arXiv preprint arXiv:2102.09403*
- D'Angelo L. and Canale A. (2021) Contributed Discussion on: "Centered Partition Processes: Informative Priors for Clustering", in Bayesian Analysis, 16(1)
- D'Angelo L., Canale A., Yu Z. and Guindani M. (2021) Detection of neural activity in calcium imaging data via Bayesian mixture models, in *Book of Short Papers SIS 2021* (Editors: Perna C., Salvati N., Schirripa Spagnolo F.), ISBN: 9788891927361
- D'Angelo L. (2019) Model based clustering in group life insurance via Bayesian nonparametric mixtures, in *Book of Short Papers SIS 2019* (Editors: Arbia, G., Peluso, S., Pini, A. and Rivellini, G.), ISBN: 9788891915108

Awards

- Winner of "Best Student/Postdoc Contributed Paper Award", ISBA 2021 World Meeting, sponsored by the National Science Foundation.

Conference presentations

- Bayesian nonparametric analysis for the detection of spikes in noisy calcium imaging data. *JSM 2021*, August 8 – 12, 2021.
- Bayesian nonparametric analysis for the detection of spikes in noisy calcium imaging data. *ISBA 2021 World Meeting*, June 23 – July 2, 2021. Pre-recorded video available at https://youtu.be/SLLSJVuFnMs .
- Detection of neural activity in calcium imaging data via Bayesian mixture models. *SIS 2021 Intermediate meeting*, Pisa, Italy, June 21 – 25, 2021.
- Model based clustering in group life insurance via Bayesian nonparametric mixtures. *SIS 2019 Intermediate meeting*, Milan, Italy, June 12 – 14, 2019.

Software

- D'Angelo L. (2021) "bpr: Fitting Bayesian Poisson Regression", *R package*, `https://CRAN.R-project.org/package=bpr`

Teaching experience

- (04/2021) Classes on the use of Latex for scientific writing and bibliography management. University of Padova.
- (10/2016 – 06/2017) Tutor: lectures and exercises for the courses of Statistics (Advanced) and Mathematical Analysis 1. University of Padova.

Workshops

- January 24, 2020: Bayesian Nonparametrics for Complex Data, Concluding workshop. Department of Statistical Sciences, University of Padova.
- July 2 – 5, 2019: Data research camp, San Servolo island, Venice, Italy. 3-day meeting where groups of young scholars, advised by a senior researcher, were asked to develop innovative methods and models to analyze a common dataset.

Data Hackathons

- June 27 – 28, 2017: First prize winner at Stats Under the Stars[3], Florence.