
ANNALISA CADONNA



Current address: Applied Mathematics and Statistics Department, University of California,
Santa Cruz, 1156 High Street, Santa Cruz, CA 95060

Phone number: +1 831-332-0749

E-mail: acadonna@soe.ucsc.edu

Web Page: <https://acadonna.sites.ucsc.edu/>

Research interests

Bayesian modeling, Bayesian nonparametrics, time series analysis, spectral analysis, spatial statistics, mixture models.

Education

- **Ph.D. in Applied Mathematics and Statistics, Expected Summer 2016** - University of California, Santa Cruz. Thesis title : “Bayesian flexible spectral modeling and computation for the analysis of complex brain signals”. Advisors: Prof. Athanasios Kottas and Prof. Raquel Prado.
- **M.S. in Mathematical Engineering, 2011** - Politecnico di Milano. Thesis title: “Bayesian nonparametric AR(1)-models for multiple binary sequences”. Advisor: Prof. Alessandra Guglielmi, Co-advisor: Prof. Fernando Quintana (Pontificia Universidad Católica de Chile).
- **B.S. in Biomedical Engineering, 2007** - Università degli Studi di Padova. Thesis title: “Non invasive sensors for continuous blood glucose monitoring”. Advisor: Prof. Claudio Cobelli.

Consulting and internships

- I.M.S Health - Milan, Italy, Spring 2012. Member of the Consulting Group and the Advanced Analytics team, which focus is to help pharmaceutical industries to harness their data for decision-making. Developed methods for data analysis in SAS, including test and control to determine the success of ad campaigns, and clustering of pharmacies to suggest efficient allocation of products to clients.
- IT for welfare - Trento, Italy, Spring 2008. Part of a project that facilitated monetary transactions among companies by digital signature. Stored and updated information, reports and transactions using SQL. Provided technical support to clients.

Research Experience

- Graduate Student Researcher for Professor Juhee Lee - University of California, Santa Cruz, Spring 2014. Worked on Bayesian clinical trial designs, with following clustering of subjects via a hierarchical bayesian model based on Dirichlet Process.
 - Graduate Student Researcher for Professor Athanasios Kottas and Professor Raquel Prado - University of California, Santa Cruz, Summer 2014 and Summer 2015. Developed Bayesian hierarchical models for multiple related time series in the spectral domain, applicable to fields where the frequency behavior is relevant and several time series are recorded simultaneously, e.g. neuroscience, econometrics, geoscience.
-

Teaching experience

- Graduate Student Instructor for Statistical Methods for the Biological, Environmental, and Health Sciences Laboratory, UCSC (Summer and Fall 2015, Spring 2016).
- Teaching Assistant for Classical and Bayesian inference, UCSC (Winter 2014 and Winter 2016).
- Teaching Assistant for Probability theory, UCSC (Fall 2013).
- Teaching Assistant for Gambling and Gaming, UCSC (Winter 2013).
- Tutor for Statistics, Politecnico di Milano, (Spring 2012).

Publications and presentations

- Cadonna, A., Kottas, A., Prado, R. (2016) *Bayesian modeling for multiple spectral densities*, University of California, Santa Cruz. Preprint.
- Bayesian mixture modeling and inference for spectral density estimation. Politecnico di Milano, Italy, January 2016.
- Cadonna, A., Kottas, A., Prado, R. (2015) *Bayesian mixture modeling for spectral density estimation*. Submitted.
- Bayesian mixture modeling for spectral density estimation. Data Science afternoon 2015, University of California, Santa Cruz, March 2015.
- Cadonna, A., Kottas, A., Prado, R. (2014) *Nonparametric mixture modeling for spectral density estimation*. Technical Report.
- Bayesian nonparametric modeling and inference for spectral densities. 2014 ISBA World Meeting. Cancun, Mexico, July 2014.
- Bayesian flexible spectral modeling and computation for the analysis of complex brain signals. Graduate Research Symposium. University of California, Santa Cruz.
- Bayesian flexible spectral modeling and computation for the analysis of complex brain signals. Women In Machine Learning Workshop, Lake Tahoe, December 2013.
- Cadonna A., Guglielmi A., Quintana F. A., *Bayesian nonparametric AR(1)-models for multiple binary sequences*. Sco 2011, 7th Conference on Statistical Computation and Complex Systems, Padua, Italy.

Honors and Awards

- Junior Travel Award, ISBA, 2016.
- UCSC Grad Slam 2015 - People's choice award, competition consisted in presenting research topic in three minutes to a non expert audience.
- Outstanding Teaching Assistant award, 2014.
- Junior Travel Award, ISBA, 2014.
- Jack Baskin & Peggy Downes Baskin Fellowship 2014-2015, awarded to two students in the Baskin School of Engineering.
- Chancellor's fellowship 2012-2013, awarded to one first year student in the AMS department.

Programming skills

- Fluent in R and C.
 - Knowledge of Matlab, JAGS, SAS, SQL, JMP, Java, Python.
-