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Contact Information

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Education: **University of Warwick**, United Kingdom

Ph.D. candidate, (expected October 2019).

Statistics, (OxWaSP: Oxford-Warwick Statistical Programme).

Dissertation: “*Bayesian Model Search for Nonstationary Periodic Time Series*”.

I developed a novel Bayesian methodology for analyzing nonstationary time series that exhibit oscillatory behaviour. The algorithm is based on a reversible-jump Markov chain Monte Carlo sampler that simultaneously identifies the change-points and the potentially changing periodicities in the data. This approach successfully identifies time changing oscillatory behaviour in two applications which are relevant to e-Health and sleep research, namely the occurrence of ultradian oscillations in human skin temperature during the time of night rest, and the detection of instances of sleep apnea in plethysmographic respiratory traces.

Advisor: Professor Bärbel Finkenstädt.

University of Oxford, United Kingdom

Centre for Doctoral Training, OxWaSP, 2016.

Overview: Training for graduate researchers in the theory, methods and applications of Statistical Science for modern data-intensive environments and large-scale models.

Training: Computational Statistics, Applied Statistics, Network Analysis, Probability and Approximation, Stochastic Simulation, Stochastic Processes, Machine Learning, Bayesian Inference, Time Series.

University of Warwick, United Kingdom

MSc Statistics (*Distinction*), 2015.

Dissertation: “Simulating the Wright-Fisher Diffusion ”

Advisor: Dr Paul Jenkins and Dr. Dario Spano.

University of Genoa, Italy

BSc Mathematical Statistics and Data Management (*110 cum laude*), 2014.

Dissertation: “Natural Language Processing using Semantic Tools”

Advisor: Professor Eva Riccomagno and Dr. Fabrizio Malfanti.

Professional Experiences:	Intelligrate , Italy Competitive Intelligence and Data Integration. Project: Sentiment Analysis of Twitter Data. Intern, Summer 2014. Advisor: Dr. Fabrizio Malfanti.
Research:	University of Minnesota , Minnesota, USA Division of Biostatistics. Research Visiting Student, Summer 2018. Project: Dirichlet Processes and Infinite Hidden Markov Models. Advisor: Dr. Mark Fiecas.
Technical Skills:	Coding Languages Proficient in R and Julia and experience working with Matlab, C, C++, SAS and Python. Other Computer Skills: L ^A T _E X, Word, Excel, Powerpoint. Languages: Italian and English.
Teaching:	University of Warwick , Department of Statistics Teaching Assistant. ST220 - Introduction to Mathematical Statistics (Autmun 2016, 2017, 2018). ST104 - Statistical Laboratory (Spring 2017, 2018). University of Oxford , Department of Statistics Teaching Assistant. OxWaSP Module – Time Series and Stochastic Processes, Spring 2018 (Spectral Analysis of Time Series). University of Warwick , Department of Computer Science Teaching Assistant (temporary). CS 342 - Machine Learning (Spring 2018).
Awards:	University of Warwick Department of Statistics, OxWaSP Studentship, 2015. Department of Statistics, MSc Bursary, 2014.
Publications:	Hadj-Amar, B., Finkenstädt, B. , Fiecas, M., Levi, F. and Huckstepp, R. (2018), “Bayesian Model Search for Nonstationary Periodic Time Series”, (submitted to the <i>Journal of the American Statistical Association</i>)
Posters and Presentations:	<i>JSM 2018</i> , Vancouver, BC, Canada - August 2018 <i>NeuroImaging Group Meeting</i> , Minneapolis, MN, USA - June 2018. <i>Statistics Seminar</i> , Genoa, Italy - April 2018. <i>BayesComp</i> , Barcellona, Spain - March 2018. <i>Greek Stochastics</i> , Milos, Greece - August 2017. <i>OxWaSP Amazon Workshop</i> , Berlin, Germany - March 2017.