Silvia Metelli

Université de Paris
&
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My personal website

LANGUAGES	**Italian**: native speaker, **English**: fluent, **French**: working knowledge
RESEARCH INTERESTS	A broad interest in dynamic network analysis - with applications spanning from epidemiology to cyber-security - and network meta-analysis for evidence synthesis. Specific interests include nonparametric latent feature models, clustering methods and multivariate mixed models.
CURRENT POSITION	**Assistant Professor of Biostatistics** (fixed term), Université de Paris, Research Center of Epidemiology and Statistics Sorbonne Paris Cité (CRESS-UMR1153), INSERM, INRA, F-75004 Paris.
EMPLOYMENT	**Post-doctoral Research Associate,** The ATI & Imperial College London, March 2018 - Oct 2019
	External Consultant, Jinn Capital, London, Dec 2016 - Sept 2017
EDUCATION	*Ph.D*, Statistics (award date: 1 October 2018) Department of Mathematics - Statistics Section, Imperial College London, 2014 - 2018, Supervisor: Professor Nicholas A. Heard
	MRes Degree, Mathematical Science *Distinction* Imperial College London, 2013 - 2014
	Short Advanced Course, Survival Analysis Statistical Science PhD School, University of Padua, June 2012
	Master of Science, Statistical Sciences Thesis: Bayesian Estimation with INLA for logistic multilevel models, *110/110 cum laude - publication recommended* University of Florence, 2010 - 2012
	Bachelor of Science, Statistics Thesis: Estimation methods for discrete multilevel models, *110/110 cum laude* University of Florence, 2007 - 2010
VISITING EXPERIENCES	*Visiting PhD student* Los Alamos National Laboratory, June 2015 - Aug 2015 Advanced Computing Solutions - PO Office Los Alamos, New Mexico, US

TEACHING	**Teaching Assistant**, Imperial College London, Oct 2014-2017
	Teaching assistant for the following courses: *Probability & Statistics I, Probability & Statistics II, Statistical Modelling I, Statistical Modelling II, Python, MATLAB.*

SUPERVISION OF STUDENTS

June 2019 - Aug 2019, Supervision of a UROP (Undergraduate Research Opportunity Programme) student, 2nd year, BSc in Mathematics, Department of Mathematics, Imperial College London. Project: Random forests for classification of computer network data.

PUBLICATIONS

S. Metelli and N.A. Heard. On Bayesian New Edge Prediction and Anomaly Detection in Computer Networks. *The Annals of Applied Statistics*, 13 (4), 2586-2610, 2019.

S. Claudiani, S. Metelli, R. Kamvar, R. Szydlo, A. Khan et al. Introducing a Predictive Score for Successful Treatment Free Remission in Chronic Myeloid Leukemia (CML). *Blood, The Journal of the American Society of Hematology*,134, Supplement1, 26-26, 2019.

S. Metelli. New Edge Activity and Anomaly Detection in a Large Computer Network. *PhD Thesis*, Imperial College London, 2018.

S. Metelli and N.A. Heard. Model-based clustering and new edge modelling in large computer networks. *2016 Proceedings of the IEEE Intelligence and Security Informatics Conference (ISI)*, 91-96, 2016.

L. Grilli, S. Metelli and C. Rampichini. Bayesian estimation with integrated nested Laplace approximation for binary logit mixed models. *Journal of Statistical Computation and Simulation*, 85 (13), 2718-2726, 2015.

S. Metelli and N.A. Heard. Modelling new edge formation in a computer network through Bayesian variable selection. *2014 Proceedings of the IEEE Joint Intelligence and Security Informatics Conference (JISIC)*, 272-275, 2014.

SUBMITTED and WORKING PAPERS

S. Metelli and A. Chaimani. Challenges in meta-analyses with observational studies. *Submitted to Evidence-Based Mental Health*.

S. Metelli and N.A. Heard. Activity monitoring with topic modelling for cyber-security data. *Working Paper*.

S. Metelli and N.A. Heard. Data fusion using Quantile Random Forests for cyber security data. *Working Paper*.

CONFERENCES & WORKSHOPS

2018 Computational and Methodological Statistics, CMStatistics, Dec. 14-16, Pisa, IT
2018 The Alan Turing Institute Data Study Group, Dec. 10-14, London, UK
2017 Statistical Data Science Workshop, July 3-5, London, UK
2017 Data Science for Cyber-Security, Sept. 25-27, London, UK
2016 Quick Fire talks, Imperial College London, Nov. 4, London, UK
2016 IEEE Intelligence and Security Informatics Conference (ISI), Sept. 28-30, Tucson, AZ
2015 Quick Fire talks, Imperial College London, Oct. 30, London, UK
2015 Dynamic Networks and Cyber Security Workshop, June 22-24, Bristol, UK
2014 IEEE Joint Intelligence and Security Informatics Conference, Sept. 24-26, The Hague, NL
2013 International Workshop on Statistical Modelling, IWSM, July 7-11, Palermo, IT
2013 International Workshop on Simulation, May 21-25, Rimini, IT

INVITED TALKS

2nd IMA and OR Society Conference on Mathematics of Operational Research, Birmingham, UK, April 25-26, 2019

Centre of Research in Epidemiology and Statistics Sorbonne Paris Cite, Paris, FR, Apr 2019
Imperial College Behind the scenes, Data Science Institute, London, UK, Feb 2019

AWARDS AND BURSARIES

Statistical Data Science Award - Best poster award, Statistical Data Science 2017
IEEE-ISI Studentship - Mobility grant IEEE-ISI 2016 conference
Santander Mobility Award - Travel grant for the year 2014-15
Maths Department (IC) Studentship - Four year studentship (stipend and fees)
Villa Favard Award - Most original thesis of the year 2011-2012
University of Florence- Outstanding achievements scholarship 2010-2012

TECHNICAL SKILLS

Languages & Software:

R, Python: Extensive experience
Programming: R, Python, STATA and MATLAB
Data Visualisation: Gephi
Applications: LaTeX, UNIX, Apache Hadoop, Microsoft Office
Operating Systems: Experience with Linux, Mac and Microsoft Windows