Simone Rubinacci

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Curriculum vitæ

Personal Information

ORCID https://orcid.org/0000-0002-7725-4813

Google Scholar https://scholar.google.com/citations?user=db_xAkkAAAAJ

Education

03 Oct 2016 22 Jan 2020	DPhil in Statistical and Population Genomics , Supervisors: Prof. Jonathan Marchini, Prof. Pier Palamara Department of Statistics, University of Oxford, UK. Defence date: Jan 22nd, 2020
05 Oct 2015 02 Oct 2016	Systems Biology Doctoral Training Centre University of Oxford, United Kingdom
08 Oct 2012 31 Mar 2015	Msc in Computer Science , Supervisors: Prof. Marco Antoniotti, Dr Joe Pitt-Francis, University of Milan-Bicocca, Italy
12 Oct 2009 27 Sep 2012	Bsc in Computer Science , Supervisors: Prof. Ugo Moscato, Prof. Matteo Palmonari, University of Milan-Bicocca, Italy

Employment history

- 01 Jan 2023 **Postdoctoral fellow**, Stastical genomics, Supervisor: Prof. Po-Ru Loh Present Brigham and women's hospital & Harvard medical school & Broad institue of MIT and Harvard, Boston, USA.
- 01 Nov 2019 **Postdoctoral researcher**, Modelling of imputation methods for low-coverage 31 Dec 2022 sequencing data, Supervisor: Prof. Olivier Delaneau Department of Computational Biology, University of Lausanne, Switzerland.
 - 06 Apr 2015 Research assistant, Analysis in-lattice and off-lattice cancer simulations using
 - 28 Sep 2015 spatio-temporal logics, Supervisor: Prof. Marco Antoniotti Department of Computer Science, University of Milan-Bicocca, Italy.
 - 27 Jan 2014 Research assistant, Development of tissue-specific biological models in the
 - 08 Aug 2014 Chaste environment, Supervisor: Dr Joe Pitt-Francis, Prof. David Gavaghan Department of Computer Science, University of Oxford, United Kingdom.

Acadimic training

Dec 2016 Jul 2017	Academy for PhD Training in Statistics University of Cambridge/Oxford/Durham, United Kingdom
04 Jul 2016 02 Oct 2016	Research Assistant , <i>Efficient approaches to simulating models of epithelial tissues</i> , Supervisors: Dr Joe Pitt-Francis, Dr Jonathan Cooper Department of Computer Science, University of Oxford, United Kingdom.
04 Apr 2016 03 Jul 2016	Research Assistant , <i>Phasing methods on large scale datasets using rare variants</i> , Supervisor: Prof. Jonathan Marchini Department of Statistics, University of Oxford, United Kingdom.

Selected Talks

19 Dec 2022 Invited talk, Seminar series in Bioinf., University of Fribourg, Switzerland
19 Apr 2021 Invited talk, Population genetics seminar series, University of Bern, Switzerland
22 Apr 2021 Conference talk, EMGM 2021, Ecole normale superieure, France [virtual]
25 Jun 2021 Conference talk, RECOMB 2020, University of Padua, Italy [virtual]
16 Apr 2020 Conference talk, EMGM 2020, University of Lausanne, Switzerland [virtual]

Conference Posters

2018-2022	ASHG, years: 2018,2020,2021,2022, Reviewer's choice (top 5% abstracts)
Sep 2021	BC2, Basel, Switzerland, year: 2021, with poster pitch (top 5% abstracts)
Jun 2020	ESHG, Vienna, Austria

Teaching

Oct 2019 –	PhD student mentoring, Barbara Mota: Imputation of ancient DNA samples
Present	Department of Computational Biology, University of Lausanne, Switzerland.
Oct 2020 –	University Teacher , <i>Experimental design and Statistical analysis (BSc Biology)</i>
Present	Faculty of Biology and Medicine, University of Lausanne, Switzerland.
Oct 2017	Teaching Assistant , <i>Project Supervisor (Statistics course)</i> , Gibbs Sampling and Stochastic Differential Equations
Dec 2017	Doctoral Training Centre, University of Oxford, UK.
Oct 2016	Teaching Assistant , C++ programming and Shell scripting
Dec 2018	Doctoral Training Centre, University of Oxford, UK.
Oct 2013	Teaching Assistant , <i>Theory of Computation (BSc CS)</i>
Jan 2014	Department of Computer Science, University of Milan-Bicocca, Italy.

Awards and Grants

Jan 2023 – Dec 2024	Postdoc.Mobility fellowship , Swiss National Science Foundation, Brigham and women's hospital & Broad Institute of MIT and Harvard, Boston, USA
Aug 2020	Epstein Award for Excellence in Genetics Research, Semifinalist, ASHG
Oct 2015 – Sep 2019	DPhil funding , British Engineering and Physical Sciences Research Council, Department of Statistics, University of Oxford, Oxford, UK
Apr – Oct 2015	Research grant , <i>Analysis of in-lattice and off-lattice tracks for cancer dynamics</i> , University of Milan-Bicocca, Milan, Italy
Jan – Aug 2014	Erasmus Placement & Extra mobility grant, University of Milan-Bicocca

Publications

Journal Articles

- Robin J Hofmeister, **Simone Rubinacci**, Diogo M Ribeiro, et al. Parent-of-Origin inference for biobanks. *Nat. Commun.*, 13(1):6668, November 2022.
- Victoria N Parikh, Alexander G Ioannidis, David Jimenez-Morales, et al. Deconvoluting complex correlates of COVID-19 severity with a multi-omic pandemic tracking strategy. *Nat. Commun.*, 13(1):5107, August 2022.
- Rick Wertenbroek, **Simone Rubinacci**, Ioannis Xenarios, et al. XSI-a genotype compression tool for compressive genomics in large biobanks. *Bioinformatics*, 38(15):3778–3784, August 2022.
- COVID-19 Host Genetics Initiative. Mapping the human genetic architecture of COVID-19. *Nature*, 600(7889):472–477, December 2021.
- Diogo M Ribeiro, **Simone Rubinacci**, Anna Ramisch, et al. The molecular basis, genetic control and pleiotropic effects of local gene co-expression. *Nat. Commun.*, 12(1):4842, August 2021.
- Simone Rubinacci, Diogo M Ribeiro, Robin J Hofmeister, and Olivier Delaneau. Efficient phasing and imputation of low-coverage sequencing data using large reference panels. *Nat. Genet.*, 53(1):120–126, January 2021.
- Irene V van Blokland, Pauline Lanting, Anil P S Ori, et al. Using symptom-based case predictions to identify host genetic factors that contribute to COVID-19 susceptibility. *PLoS One*, 16(8):e0255402, August 2021.
- Simone Rubinacci, Olivier Delaneau, and Jonathan Marchini. Genotype imputation using the positional burrows wheeler transform. *PLoS Genet.*, 16(11):e1009049, November 2020.
- Anisa Rula, Matteo Palmonari, Simone Rubinacci, et al. TISCO: Temporal scoping of facts. Journal of Web Semantics, 54:72–86, January 2019.
- Simone Rubinacci, Alex Graudenzi, Giulio Caravagna, et al. CoGNaC: A chaste plugin for the multiscale simulation of gene regulatory networks driving the spatial dynamics of tissues and cancer. *Cancer Inform.*, 14(Suppl 4):53–65, September 2015.
- Submitted Papers Preprints
- A F Herzig, **Rubinacci, S**, G Marenne, et al. SURFBAT: a surrogate family-based association test building on large imputation reference panels. January 2023.
- Simone Rubinacci, Robin Hofmeister, Bárbara Sousa da Mota, and Olivier Delaneau. Imputation of low-coverage sequencing data from 150,119 UK biobank genomes. November 2022.
- Samuel Neuenschwander, Diana I Cruz Dávalos, Lucas Anchieri, et al. Mapache: a flexible pipeline to map ancient DNA. August 2022.
- Bárbara Sousa da Mota, **Simone Rubinacci**, Diana Ivette Cruz Dávalos, et al. Imputation of ancient genomes. July 2022.
- John E Gorzynski, Hannah N De Jong, David Amar, et al. High-throughput SARS-CoV-2 and host genome sequencing from single nasopharyngeal swabs. *medRxiv*, page 2020.07.27.20163147, September 2020.

DPhil Dissertation

Simone Rubinacci. Genotype imputation methods for next generation datasets. PhD thesis, University of Oxford, 2020.