

Matteo Sammartino

Personal Information

Born: Catania, Italy, 10/11/1984
Citizenship: Italian
Email: m.sammartino@ucl.ac.uk
Job title: Senior Research Associate and Teaching Fellow
Affiliation: University College London
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[Google Scholar Page](#) [DBLP page](#)

Language

Italian native language
English fluent

Research Interests

- Formal semantics of programming languages
- Algebraic and coalgebraic specification
- Formal methods for concurrency
- Infinite-state models of computation
- Model learning and its applications in automated verification

Education

- 1/2010- **PhD in Computer Science**, *University of Pisa, Italy.*
12/2013 *Thesis title:* A Network-Aware Process Calculus for Global Computing and its Categorical Framework
Supervisor: Prof. Ugo Montanari
- 5/2009- **Scholarship in the EU FP6 Project SENSORIA**, *University of Pisa, Italy.*
12/2009 *Topic:* Semantics of systems with dynamic allocation and de-allocation of resources
- 1/2007- **Master's degree in Computer Science**, *University of Pisa, Italy.*
4/2009 *Thesis title:* Saturated Transition Systems for Presheaf Models
Supervisor: Prof. Ugo Montanari
Graduation mark: 110/110 cum laude
- 9/2003- **Bachelor's degree in Computer Science**, *University of Pisa, Italy.*
12/2006 *Thesis Title:* Un approccio innovativo ai problemi di flusso multicommodity basato sulla lagrangiana aumentata (An innovative approach to multicommodity flow problems based on augmented lagrangian)
Supervisor: Prof. Antonio Frangioni
Graduation mark: 110/110 cum laude

Employment History

- 11/2018-present **Senior Research Associate and Teaching Fellow**, *Computer Science Department, UCL, UK.*
- 11/2017-10/2018 **Research Associate and Teaching Fellow**, *Computer Science Department, UCL, UK.*
- 1/2016-10/2017 **Research Associate**, *Computer Science Department, UCL, UK.*
- 1/2015-12/2015 **Postdoc researcher**, *Institute for Computing and Information Sciences, Radboud University, Nijmegen, The Netherlands.*
Funded by the NWO project *Practical Coinduction*
- 1/2013 - 12/2014 **Research fellow**, *Computer Science Department, University of Pisa, Italy.*
Funded by the EU FP7 Project *ASCENS*
Topic: Resource-based process calculi for global computing

Visiting positions

- 10/2016-11/2016 **Visiting researcher**, *Simons Institute for the Theory of Computing, Berkeley, CA, USA.*
Participant in the program *Logical Structures in Computation*

Teaching Experience

- 2017-present **Module Leader**, *Computer Science Department, UCL, London, UK.*
Course: Design and Professional Skills
- 2015 **Instructor**, *Institute for Computing and Information Sciences, Radboud University, Nijmegen, The Netherlands.*
Course: Algorithms and Data Structures

Student Supervision

- from October 2018 **Stefan Zetzsche**, *PhD Student, Computer Science Department, UCL, UK.*
- Summers 2017/2018 **Tiago Ferreira**, *A-level student, Internship at UCL.*
- 2/2017-5/2017 **Maverick Chardet**, *Master's student, ENS Lyon, M2 internship.*
- 9/2016-present **Gerco van Heerdt**, *PhD student, Computer Science Department, UCL, UK.*

Grants and Awards

- 2019 ~ **£690k EPSRC Standard Grant.**
Project: Verification of Hardware Concurrency via Model Learning (CLeVer)
- 2018 ~ **£98k grant for a PhD studentship.**
Funder: GCHQ, via the Research Institute in Verified Trustworthy Software Systems
- 2010 **Awarded PhD scholarship.**

Department Service

- 2018 Served as Upgrade VIVA Chair and Final VIVA Examiner.
- 2017 Served as First Year VIVA Chair.

Additional Education and Training

- 2019 “Arena Two” course and “Enhancing Module Design” workshop, UCL.
- 2017 “Introduction to Research Student Supervision” course, UCL.

Participation in Research Projects

- Verification of Hardware Concurrency via Model Learning (as Co-Investigator and lead author of the proposal)
- Automated Black-box Verification of Networking Systems (as Co-Investigator and lead author of the proposal)
- Dutch NWO project Practical Coinduction (as Researcher)
- EU FP7 Project ASCENS (as Researcher)
- EU FP6 Project SENSORIA (as Researcher)
- Italian MIUR Project CINA (PRIN 2010) (as Researcher)
- Italian MIUR Project IPODS (PRIN 2008) (as Researcher)

International Collaborations

- Loris D’Antoni, University of Wisconsin-Madison, USA
- Nathan Chong, ARM, UK
- Elvira Albert, Complutense University of Madrid, Spain
- Albert Rubio, Universitat Politècnica de Catalunya, Spain
- Byron Cook and Paul Subotic, Amazon UK
- Ugo Montanari, Fabio Gadducci, Roberto Bruni and Giacomina Valentina Monreale, University of Pisa, Italy
- Vincenzo Ciancia, ISTI-CNR Pisa, Italy
- Joshua Moerman, Radboud University, The Netherlands
- Bartek Klin and Michał Szywnowski, Warsaw University, Poland

Invitation to Conferences

- 3/2016 Bellairs Workshop, McGill University, Barbados.

Talks

Invited

- 2019 Coalgebras for Causality, 4th Workshop on Formal Reasoning about Causation, Responsibility, & Explanations in Science & Technology (CREST), ETAPS workshop, Prague, Czech Republic.
- 2017 Learning Nominal Automata, RISE Seminar Cycle, IST Austria, Vienna, Austria.

Conferences and Workshops

- 2018 **Automated Black-box Verification of Networking Systems**, *VeTSS PhD School and Sixth Workshop on Formal Methods and Tools for Security (FMATS)*, Microsoft Research, Cambridge, UK.
- 2017 **CALF: Categorical Automata Learning Framework.**, *LiVe (Learning in Verification)*, Uppsala, Sweden.
- 2017 **Learning Nominal Automata.**, *POPL (Principles of Programming Languages)*, Paris, France.
- 2015 **Dynamic Programming on Nominal Graphs.**, *GaM (Graph as Models)*, London, UK.
- 2014 **A Class of Automata for the Verification of Infinite, Resource-Allocating Behaviours.**, *TCG (Trustworthy Global Computing)*, Rome, Italy.
- 2012 **Network-Conscious π -calculus: a Concurrent Semantics.**, *MFPS (Mathematical Foundations of Programming Semantics)*, Bath, UK.

Seminars

- 2017 **CALF: Categorical Automata Learning Framework**, *6th South of England Regional Programming Language Seminar (S-REPLS)*, UCL, UK.
- 2016 **Learning Nominal Automata**, *Logic Lounge Cycle*, Simons Institute for the Theory of Computing, University of California, Berkeley, USA.
- 2015 **A Coalgebraic Semantics for Causality in Petri Nets**, *Brouwer Seminar Cycle*, Radboud University, Nijmegen, The Netherlands.
- 2014 **Presheaf Models for Nominal Calculi.**
Delivered at: ENS Lyon, France; Aarhus University, Denmark; Radboud University, Nijmegen, The Netherlands, in the *Brouwer Seminar Cycle*
- 2012-2014 **Seminars at meetings of research projects.**
- *Modeling PASTRY Distributed Hash Tables with Resource-Conscious Pi-Calculus*, University of Bologna (2014), PRIN CINA project;
 - *Revisiting Causality*, Volkswagen, Braunschweig (2014), EU FP7 ASCENS project;
 - *Operational models for resource-aware calculi*, University of Pisa (2013), PRIN CINA project;
 - *Resources in Cloud Computing*, Fraunhofer Institute, Berlin (2012), EU FP7 ASCENS project.

Professional Service

Organisation of events

- 2018-present **Co-organiser and co-chair of the Learning and Automata (LearnAut) Workshop.**
Affiliated with: FLoC 2018, LICS 2019
- 2010-2013 **Organiser of the Mauriana Pesaresi seminars for Computer Science PhD students**, *University of Pisa*, Italy.

Committee Memberships

ICE 2019 PC, CREST 2019 PC, ICE 2018 PC, RADICAL 2017 PC, POPL 2017 Artefact Evaluation Committee.

Reviews

- Journals *Journal of Logical and Algebraic Methods in Programming* (Elsevier), *Transactions on Modeling and Computer Simulation* (ACM), *Scientific Annals of Computer Science*, *Science of Computer Programming* (Elsevier), *Service Oriented Computing and Applications* (Springer), *Fundamenta Informaticæ*.

Conferences FSCD 2019, ESOP 2019, LPAR 2018, CSL 2018, FORTE 2018, FOSSACS 2018, MFCS 2017,
& Workshops CALCO 2017, FORTE 2017, FOSSACS 2017, FORTE 2016, CONCUR 2015, LICS 2015, FSEN
2015, COORDINATION 2014, ICALP 2014, PDP 2014, LATA 2014, WRLA 2014, APLAS 2014,
FORTE 2012, TCS 2012.