PAOLO ZULIANI
Curriculum Vitae
(per pubblicazione)

Date 08/10/2021

Part I – General Information

Full Name	Paolo Zuliani
Website	https://pzuliani.github.io/

Part II – Education

Type	Year	Institution	Notes (Degree, Experience,…)
University graduation	1997	Università degli Studi di Milano	Laurea in Scienze dell'Informazione
PhD	2001	University of Oxford, UK	DPhil in Computer Science

Part III – Appointments

IIIA – Academic Appointments

Start	End	Institution	Position
08/2017	current	School of Computing, Newcastle University, UK	Senior Lecturer
09/2012	07/2017	School of Computing, Newcastle University, UK	Lecturer
11/2008	08/2012	Computer Science Department, Carnegie Mellon University, USA	Technical Coordinator
09/2006	12/2007	Computing Laboratory, University of Oxford, UK	Marie Curie Outgoing International Fellow
12/2004	08/2006	Department of Computer Science, Princeton University, USA	Marie Curie Outgoing International Fellow
12/2003	11/2004	Facoltà di Science e Tecnologie Informatiche, Libera Università di Bolzano	Ricercatore Tempo Determinato
06/2003	11/2003	Computing Laboratory, University of Oxford, UK	Visiting Researcher (con borsa CNR)
11/2002	05/2003	Facoltà di Science e Tecnologie Informatiche, Libera Università di Bolzano	Assistente di ricerca

Part IV – Teaching experience

Year	Institution	Lecture/Course
Da 09/2012	Newcastle University, UK	CSC8316/CSC8324 Modelling Cellular

		Systems
Da 09/2020	Newcastle University, UK	CSC8332 Bio-data Science
Da 09/2013 a 08/2020	Newcastle University, UK	CSC8319 Stochastic Systems Biology
03/2016 e 03/2017	African Institute for Mathematical Sciences, Cape Town, South Africa	Corso 'Bioinformatics' (30 ore)
2003/04	Facoltà di Science e Tecnologie Informatiche, Libera Università di Bolzano	Corso 'Software Architectures' (in Inglese)

Part V - Society memberberships, Awards and Honors

Year	Title
10/2021-22	Turing Fellow, Alan Turing Institute (UK)
06/2021	Co-editore (con Prof Sicun Gao, UCSD e Prof Orna Grumberg, Technion, Israel) di una edizione speciale di Formal Methods in System Design in memoria di Edmund Clarke
Da 07/2016	Membro dell'EPSRC (UK) Peer Review College
2004-07	Marie Curie Outgoing International Fellowship
2010	Best Paper Award a InCoB 2010 (9th International Conference on Bioinformatics)
Da 09/2012	Revisore per BBSRC, MRC, French National Research Agency (ANR), German Research Foundation (DFG), Leverhulme Trust, Netherlands Organisation for Scientific Research (NWO), Poland National Science Centre
09/2018	Invito al Dagstuhl Seminar 18381 on Quantum Programming Languages
Dal 2010	>12 invited lectures a convegni internazionali (lista nella Parte XII sotto)

Part VI - Funding Information [grants as PI-principal investigator or I-investigator]

Year	Title	Program	Grant value
2021	BioHPC: Simulating Microbial Communities on High-Performance Computers	EPSRC Impact Acceleration Account (UK)	£45,000
2021	Accelerating Innovation by Designing Water Treatment Biofilm Media in silico	National Biofilm Innovation Centre (UK)	£50,000
2020	Quantum Verification	EPSRC DTP (UK)	£90,000
2018	Quantum Machine Learning	EPSRC Cloud Computing CDT (UK)	£70,000
2017	Personalised ultraviolet B treatment of psoriasis through biomarker integration with computational modelling of psoriatic plaque resolution	Rosetrees Trust (UK)	£250,000
2016	Synthetic Portabolomics: Leading the way at the crossroads of the Digital and the Bio Economies	EPSRC (UK)	£4,300,000

2015	Trans-Atlantic Modelling and Simulation for Cyber-Physical Systems	Horizon 2020 (EU)	€400,000
2014	Psoriasis Stratification to Optimise Relevant Therapy	MRC (UK)	£5,100,000
2014	Parameter Inference and Synthesis for Stochastic Biological Models	BBSRC NLD-DTP (UK)	£100,000
2013	Verification of Complex Cyber-Physical Systems	US Office of Naval Research (USA)	£940,000
2013	A New Frontier in Design: The Simulation of Open Engineered Biological Systems	EPSRC (UK)	£5,500,000

Part VII – Research Activities

Keywords	Brief Description
Model checking Quantum computing Hybrid systems Cyber-physical systems Reachability	La mia attività di ricerca verte principalmente sulla verifica formale di sistemi stocastici ibridi (discreto/continuo), cyber-physical, modelli biologici, e programmi quantistici via tecniche di model checking e SMT (Satisfiability Modulo Theories).

Part VIII – PhD Students Graduated

Year	Student	Thesis title
2019	Mariia Vasileva	An evaluation of approximate probabilistic reachability techniques for stochastic parametric hybrid systems
2018	Jeremy Revell	Parameter inference for stochastic biological models
2017	Fedor Shmarov	Probabilistic bounded reachability for stochastic hybrid systems

Part IX – Current Research Group

From	Name	
2020	Marco Lewis	Studente PhD
2018	Dinika Paramalingam	Studente PhD
2018	Konstantinos Georgopoulos	Studente PhD
2017	Martin Sidaway	Studente PhD
2016	Bowen Li	Postdoc

Part X – External Examiner Duties

Year	Student	Thesis title
07/2021	Juraj Kolčák (Université Paris Saclay, France):	Unfoldings and Abstract Interpretation for Parametric Biological Regulatory Networks

01/2021	Irfan Muhammad (University of Birmingham, UK):	Algorithms for Reachability Problems on Stochastic Markov Reward Models
12/2020	Stefano Sinisi (Università di Roma – Sapienza)	Artificial Intelligence and Model Checking Methods for In Silico Clinical Trials
04/2017	Yang Gao (Oldenburg University, Germany):	Verification of Stochastic Systems by Stochastic Satisfiability Modulo Theories with Continuous Domain
09/2016	David Henriques (Instituto Superior Técnico, University of Lisbon, Portugal):	Formal Reasoning About Temporal Properties in Dynamic Stochastic Systems — Exact and Approximate Procedures with Applications
02/2002	Stefano Bettelli (Università degli Studi di Trento):	Towards an Architecture for Quantum Programming.

Part XI – Academic Community Service

Membro del Programme Committee di conferenze internazionali (selezione):

- Hybrid Systems: Computation and Control (HSCC); 2013, 2014, 2016
- Computational Methods in Systems Biology (CMSB); 2017-2019
- International Workshop on Bio-Design Automation (IWBDA); 2016-19
- Reversible Computation (RC); 2012-14
- Analysis and Design of Hybrid Systems (ADHS); 2018, 2021
- MEMOCODE: 2020, 2021
- Quantitative Evaluation of SysTems (QEST): 2021

Revisore per:

ACM Transactions on Embedded Computing systems, Bioinformatics, BMC Bioinformatics, Formal Methods in System Design, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, Nonlinear Analysis: Hybrid Systems, Reliability Engineering and System Safety, Software Tools for Technology Transfer, Theoretical Computer Science, Transactions on Software Engineering and Methodology

Organizzazione di convegni:

- Co-organizzatore del 1st International Workshop on *Verification of Autonomous & Robotic Systems (VARS)*, 18/05/2021, virtuale (con CPS-IoT Week 2021) https://hycodev.com/VARS2021/
- Chair del Workshop on *Bio-Design for Portability*, 08/07/2019, Department of Computer Science and Technology, University of Cambridge, UK (con IWBDA2019) https://pzuliani.github.io/bd4p.html
- Co-chair del 1st International Workshop on *Automated Reasoning for Systems Biology and Medicine*, 20/09/2016, Computer Laboratory, University of Cambridge (con CMSB 2016) https://www.cl.cam.ac.uk/events/cmsb2016/workshop.html
- Co-chair di *COMBINE 2016* (7th Computational Modeling in Biology Network Workshop), Newcastle http://co.mbine.org/events/COMBINE_2016

Part XII – Selected Invitations

Invited Lectures:

- MSc DEPEND Erasmus+ Summer School, 03/07/2019, Nancy, France.
- 11th International Workshop on *Numerical Software Verification*, 18/07/2018, Oxford, UK

- Dagstuhl Seminar 18082 on *Formal Methods for the Synthesis of Biomolecular Circuits*, 18-23/02/2018
- MIMOmics Workshop, 23/08/2017, Cambridge, UK
- 10th International Workshop on *Numerical Software Verification*, 22/07/2017, Heidelberg, Germany
- Dagstuhl Seminar 16362 on *Robustness in Cyber-Physical Systems*, 04-09/09/2016
- Dagstuhl Seminar 14482 on *Automated Planning and Model Checking*, 23-28/11/2014
- 11th International Workshop on *Quantitative Aspects of Programming Languages and Systems*, 23-24/03/2013, Rome, Italy
- Workshop on *Systems Biology and Formal Methods*, 29-30/03/2012, New York, USA
- 2nd Symposium on *Systems and Synthetic Biology*, 04-06/10/2010, Tokyo, Japan
- Workshop on *Modeling and Verification of Uncertain Hybrid Systems*, CPSWeek, 12/04/2010, Stockholm, Sweden
- 1st *AVACS Spring School*, 15-19/03/2010, Oldenburg, Germany
- 1st International Workshop on *Quantum Programming Languages*, 15-16/06/2003, University of Ottawa, Canada

Invited Talks:

- Sapienza Information-Based Technology InnovaTion Center for Health, Università di Roma - Sapienza, Italy, 17/05/2021
- Department of Computer Science and Technology, University of Cambridge, UK, 20/02/2019
- Department of Computer Science, Stony Brook University, USA, 13/12/2018
- Department of Computing, Imperial College, London, UK, 06/062013
- School of Software, Tsinghua University, Beijing, China, 17/04/2012
- Center for Information and Systems Engineering, Boston University, Boston, USA, 27/01/2012
- Mathematics Department, Tulane University, New Orleans, USA, 04/11/2010
- Computational Biology Research Center, National Institute of Advanced Industrial Science and Technology, Tokyo, Japan, 07/10/2010
- Bell Labs, Murray Hill, NJ, USA, 11/11/2005

Part XIII – Summary of Scientific Achievements

Product type	Number	Data Base	Start	End
Papers [international]	55	Google Scholar	2000	2021

Total Impact factor	70.1 (20 articoli)
Average Impact factor	3.51 (20 articoli)
Total Citations	2502
Average Citations per Product	45.5
Hirsch (H) index	21
Normalized H index*	1 (21 anni)

*H index divided by the academic seniority.