

CURRICULUM VITAE

CARLA PIAZZA



PERSONAL INFORMATION

<i>Name</i>	CARLA PIAZZA
<i>Current position</i>	Full Professor of Computer Science — University of Udine
<i>Department</i>	Department of Mathematical, Computer and Physical Sciences — Coordinator, Quantum Information Technology (QIT) Lab
<i>Phone</i>	+39 0432 558497
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WORK EXPERIENCE

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| • <i>Dates (from - to)</i> | December 2021 – present |
| • <i>Employer</i> | University of Udine – Department of Mathematical, Computer and Physical Sciences |
| • <i>Position</i> | Full Professor of Computer Science |
| • <i>Dates (from - to)</i> | November 2005 – November 2021 |
| • <i>Employer</i> | University of Udine – Department of Mathematics and Computer Science |
| • <i>Position</i> | Associate Professor of Computer Science |
| • <i>Dates (from - to)</i> | January 2005 – October 2005 |
| • <i>Employer</i> | University of Udine – Department of Mathematics and Computer Science |
| • <i>Position</i> | Assistant Professor of Computer Science |

VISITING POSITIONS

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| • <i>Dates</i> | January–July 2000 |
| • <i>Institution</i> | Institute for Logic, Language and Computation, University of Amsterdam, The Netherlands |
| • <i>Dates</i> | April 2001 |
| • <i>Institution</i> | Departamento de Sistemas Informaticos y Computacion, Universidad Politecnica de Valencia, Spain |

• <i>Dates</i>	January and July 2003
• <i>Institution</i>	Courant Institute, New York University, USA
• <i>Dates</i>	September–December 2004
• <i>Institution</i>	Research Fellow, Courant Institute, New York University (Prof. Mishra's group)
• <i>Dates</i>	April 2007, November 2007, November–December 2008
• <i>Institution</i>	Research Fellow, Courant Institute, New York University (Prof. Mishra's group)

EDUCATION AND TRAINING

• <i>Dates (from - to)</i>	2002 – 2004
• <i>Organization</i>	University of Udine; Ca' Foscari University of Venice; New York University
• <i>Main activities</i>	Research activity in Computer Science
• <i>Qualification</i>	Post-Doc Grants
• <i>Dates (from - to)</i>	1998 – 2002
• <i>Organization</i>	University of Udine
• <i>Main activities</i>	Thesis titled "Computing in Non-Standard Set Theories"
• <i>Qualification</i>	PhD in Computer Science
• <i>Dates (from - to)</i>	1992 – 1997
• <i>Organization</i>	University of Parma
• <i>Main activities</i>	Thesis titled "Set-Constraint Languages"
• <i>Qualification</i>	Degree in Mathematics (with honors)

TEACHING ACTIVITIES AND PHD SUPERVISION

Current courses

- Algorithms and Data Structures (12 ECTS) — Bachelor's Degree in Computer Science
- Complexity and Information Theory (6 ECTS) — International Master's Degree in Artificial Intelligence & Cybersecurity
- Quantum Computing and Communication (6 ECTS) — Master's Degree in Computer Science

PhD supervision

- Tommaso Dreossi (2012-2015) — co-supervised with Prof. Dang, University of Grenoble, "Reachability Computation and Parameter Synthesis for Polynomial Dynamical Systems"
- Linda Anticoli (2014-2018) — co-supervised with Prof. Zuliani, Newcastle University, "Entangle: a Framework from Quantum Programming to Quantum Model Checking"

- Riccardo Romanello (2021-2024) — "On the role of graphs in Quantum Computing"
- Francesco Decataldo (2025-ongoing) — Quantum Error Correction (co-supervisor Prof. Serra)
- Jacopo Cossio (2025-ongoing) — co-supervisor, AI for Quantum (supervisor Prof. Serra)

NATIONAL AND INTERNATIONAL COLLABORATIONS AND NETWORKS

- Coordinator, with Prof. Cremonesi (PoliMI), of the Working Group on Quantum Information Technology within the HPC Lab of the National Consortium CINI (since late 2025)
- Since 2022, organizer, with Prof. di Pierro (UniVR) and Prof. Serra, of the European School on Quantum Artificial Intelligence (EQAI)
- Organizer, with Cerezo and Cincio (Los Alamos Lab), Pira (Center for Quantum Technologies Singapore), Gouzien (Alice & Bob Paris), Zoufal (IBM Quantum Switzerland) and Serra, of the workshop "AI for Circuit Synthesis, Optimization, and Discovery" at IEEE QCE Quantum Week 2026
- Member of the "QUANTAIZE" proposal within the European Horizon-Widera-2026 call (submitted 04/2026), 4 institutions across Portugal, Spain and Italy
- Member of the "HPC-Europe" proposal within the European Digital-EuroHPC call (not approved), 12 institutions for a European Master in HPC
- Member of GNCS-INdAM projects on Quantum Computing (since 2023), collaborations among Udine, Pisa, Milan, Verona
- Co-author with Prof. Wille (TUM) and Prof. Zuliani (Newcastle, now La Sapienza) on Quantum Compilation and Verification of Quantum Programs

OTHER PROFESSIONAL EXPERIENCE

- Since 2024: member of the Research and Innovation Committee of the Autonomous Province of Trento
- 2019 and 2025: member of the Evaluation Committee for Assistant and Associate Professor positions, University of Southern Denmark

ADMINISTRATIVE ROLES AND RESPONSIBILITIES

- Since October 2022: Coordinator of the Bachelor's and Master's Degree Programs in Computer Science, University of Udine
- 2018-2021: Coordinator of the Quality Assurance Committee of the Department of Mathematics, Computer Science and Physics
- 2014-2018: Rector's Delegate for Open Access and member of the Open Access Working Group of CRUI
- 2012-2014: Rector's Delegate for Libraries and member of the Library Committee of CRUI
- 2011-2012: Deputy Head of the Department of Mathematics and Computer Science

SCIENTIFIC ORGANIZATION IN THE LAST 5 YEARS

- Since late 2025: coordinator, with Prof. Cremonesi (PoliMI), of the Working Group on Quantum Information Technology of CINI
 - Since 2022: scientific organizer, with Prof. di Pierro (Univr) and Prof. Serra, of the European School on Quantum Artificial Intelligence (EQAI)
 - Since 2025: coordinator, with Prof. Serra, of the Quantum Information Technology Lab of the University of Udine
 - General chair, with Dr. Geatti, of the "27th Italian Conference on Theoretical Computer Science" (Udine, September 2026)
 - Member of the Program Committee of: IEEE QSW 2026, IEEE QSW 2025, IEEE QAI 2025, AIQxQAI 2025, AIQxQAI 2024
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EDITORIAL ACTIVITY

- Since 2026: member of the Editorial Board of Quantum Machine Intelligence — Springer Nature (Q1 SJR, Computational Theory and Mathematics; Theoretical Computer Science)
 - Since 2019: member of the Editorial Board of Algorithms — MDPI (Q2 SJR, Computational Theory and Mathematics; Theoretical Computer Science)
 - Editor, with Prof. Dang (University of Grenoble), of the EPTCS proceedings of "HSB 2013 - Second International Workshop on Hybrid Systems and Biology"
 - Editor, with Prof. Peron (Unina), of the EPTCS proceedings of "GandALF 2014 - Fifth International Symposium on Games, Automata, Logics and Formal Verification"
 - Editor, with Prof. Fages (INRIA Saclay), of the LNCS proceedings of "1st International Conference on Formal Methods in Macro-Biology, FMMB 2014"
 - Editor, with O. Maler (Verimag Grenoble), A. Halász (West Virginia University) and T. Dang (University of Grenoble), of the LNCS post-proceedings of HSB 2013 and HSB 2014
 - Guest editor, with Prof. Peron (Unina), of the special issue of Information and Computation with extended versions of selected GandALF 2014 papers (2017)
 - Guest editor, with Prof. Policriti (Univd) and Dr. Gentilini (Unipg), of the special issue "Bisimulation and Simulation Algorithms" of Algorithms (2018)
 - Guest editor, with Dr. Pagliarini (Univd), of the special issue "Advanced Research on Machine Learning Algorithms in Bioinformatics" of Algorithms (2025)
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FUNDING OVER THE LAST 10 YEARS

- 2026 — Quantum Computing and Simulation: Development, Applications and Research in Friuli Venezia Giulia (Quasar-FVG), Friuli Venezia Giulia Region, Associate PI
- 2026 — Quantum linear algebra, state preparation and quantum circuit compilation, INdAM, Member
- 2025 — SIBORIA - PNRR Cascade Call, National Center for Sustainable Mobility and University of Modena and Reggio Emilia, Member
- 2025 — Quantum Subroutines for Computing Matrix Functions and Activation

Functions, INdAM, Member

- 2024 — Matrix and function structures for the synthesis of efficient quantum circuits, INdAM, Member
- 2023 — Quantum algorithms on graphs, INdAM, 0.5 person-months, Member
- 2022 — Noninterference and Reversibility Analysis in Private Blockchains (NiRvAna), Ministry of Research, Associate PI
- 2022 — PNRR Biodiversity, European Union and Ministry of Research, 12 person-months, Member
- 2017 — Efforts in the uNderstanding of Complex InterActing SystEms (ENCASE), University of Udine, PI

BIBLIOMETRIC INDICATORS (SOURCE: SCOPUS)

- Total documents: 127
- Citations: 1,546 (from 1,144 citing documents)
- h-index: 21
- Data retrieved on 16 September 2026

PUBLICATIONS FROM THE LAST 10 YEARS (SOURCE: SCOPUS)

2026

- Casagrande A., Piazza C., Romanello R., Rossi S. (2026). Enhancing the PEPA Eclipse Plug-in. LNICST, vol. 691, pp. 215-227.
- Romanello R., Piazza C., Bugliesi M., Rossi S. (2026). Exact Persistent Stochastic Non-interference. LNICST, vol. 691, pp. 70-87.
- Piazza C., Romanello R., Todone B. (2026). LE-QAOA: A Complexity Theory Enhanced Tool for Quantum Optimization. Proceedings - 2026 IEEE International Conference on Quantum Software, QSW 2026, pp. 57-65.
- Romanello R., Lizzio Bosco D., Serra G., Piazza C. (2026). Qubit Routing via swap Network: A Minimum Dominating Path Approach. LNCS, vol. 16783, pp. 64-79.
- Guesmi S., Piazza C., Gasparetto A., Rizzo M., Rossi S. (2026). Detecting Cross-Function Reentrancy from EVM Traces. OpenAccess Series in Informatics, vol. 142, art. 8.
- Piazza C., Rossi S. (2026). Generalized Proportional Lumpability. LNICST, vol. 663, pp. 69-89.

2025

- Pagliarini R., Piazza C. (2025). Advanced Research on Machine Learning Algorithms in Bioinformatics (Editorial). Algorithms, vol. 18(12), art. 794.
- Smuseva D., Malakhov I., Marin A., Piazza C., Rossi S. (2025). Under the Space Threat: Quantitative Analysis of Cosmos Blockchain. LNCS, vol. 15454, pp. 91-105.
- Benetollo L., Guesmi S., Piazza C., et al., Rossi S., Spanò A. (2025). Modeling Reentrancy in Smart Contracts through Noninterference. CEUR Workshop Proceedings, vol. 4105. (Best Paper Award, DLT 2025)
- Romanello R., Bosco D. L., Cossio J., et al., Piazza C., Burelli P. (2025). CNOT Minimal Circuit Synthesis: A Reinforcement Learning Approach. Proceedings - 2025 IEEE QAI 2025, pp. 253-260.

- Lizzio Bosco D., Romanello R., Serra G., Piazza C. (2025). Softer is Better: Tweaking Quantum Dropout to Enhance Quantum Neural Network Trainability. *Proceedings - 2025 QCNC 2025*, pp. 442-449.

2024

- Della Schiava A., Piazza C., Romanello R. (2024). Classical computation over quantum architectures from graph encoding to declarative languages compilation. *Journal of Logic and Computation*, vol. 34(8), pp. 1526-1555.
- Ressi D., Romanello R., Rossi S., Piazza C. (2024). Compressing neural networks via formal methods. *Neural Networks*, vol. 178, art. 106411.
- Romanello R., Della Giustina D., Pessotto S., Piazza C. (2024). Speeding up Answer Set Programming by Quantum Computing. *QUASAR 2024, HPDC 2024*, pp. 1-8.
- Ressi D., Romanello R., Piazza C., Rossi S. (2024). AI-enhanced blockchain technology: A review of advancements and opportunities. *Journal of Network and Computer Applications*, vol. 225, art. 103858.
- Piazza C., Rossi S., Smuseva D. (2024). Efficient Algorithm for Proportional Lumpability and Its Application to Selfish Mining in Public Blockchains. *Algorithms*, vol. 17(4), art. 159.
- Smuseva D., Piazza C., Malakhov I., Marin A., Rossi S. (2024). Cosmos discovery: Quantitative assessment of Cosmos blockchain. *Proceedings IEEE MASCOTS 2024*.
- Guesmi S., Piazza C., Rossi S. (2024). Noninterference Analysis for Smart Contracts: Would you Bet on it? *CEUR Workshop Proceedings*, vol. 3791.
- Pagliarini R., Marroni F., Piazza C., et al., Morgante M., Policriti A. (2024). Towards a Computational Approach to Quantification of Allele Specific Expression at Population Level. *LNBI*, vol. 14849, pp. 127-139.
- Rossi N., Gigante N., Vitacolonna N., Piazza C. (2024). Inferring Markov Chains to Describe Convergent Tumor Evolution with CIMICE. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, vol. 21(1), pp. 106-119.
- Della Giustina D., Londero C., Piazza C., Riccardi B., Romanello R. (2024). Quantum encoding of dynamic directed graphs. *Journal of Logical and Algebraic Methods in Programming*, vol. 136, art. 100925.

2023

- Colautti A., Rossi N., Piazza C., Comi G., Iacumin L. (2023). Draft genome sequences of 14 *Lactocaseibacillus* spp. strains, representatives of a collection of 200 strains. *Microbiology Resource Announcements*, vol. 12(10).
- Coan M., et al., Piazza C., et al. (2023). LINC01605 Is a Novel Target of Mutant p53 in Breast and Ovarian Cancer Cell Lines. *International Journal of Molecular Sciences*, vol. 24(18), art. 13736.
- Piazza C., Romanello R. (2023). Synthesis of CNOT minimal quantum circuits with topological constraints through ASP. *CEUR Workshop Proceedings*, vol. 3586, pp. 37-49.
- Casagrande A., Piazza C. (2023). Adaptive Directions for Bernstein-Based Polynomial Set Evolution. *LNCS*, vol. 14235, pp. 113-126.
- Casagrande A., Cimatti A., Dorigo L., Piazza C., Tonetta S. (2023). Set-Based Invariants over Polynomial Systems. *CEUR Workshop Proceedings*, vol. 3428.
- Piazza C., Romanello R., Wille R. (2023). An ASP Approach for the Synthesis of CNOT Minimal Quantum Circuits. *CEUR Workshop Proceedings*, vol. 3428.
- Della Schiava A., Piazza C., Romanello R. (2023). Graph-Theoretical

Arguments in Support of a Quantum Declarative Manifesto. CEUR Workshop Proceedings, vol. 3428. (Best Student Paper Award, CILC 2023)

- Ressi D., Romanello R., Piazza C., Rossi S. (2023). Neural Networks Reduction via Lumping. LNAI, vol. 13796, pp. 75-90.

2022

- Casagrande A., Gentilini R., Piazza C., Policriti A. (2022). Hybrid automata in systems biology (book chapter). Systems Biology Modelling and Analysis: Formal Bioinformatics Methods and Tools, pp. 305-338.

- Casagrande A., Dang T., Dorigo L., et al., Piazza C., Pippia E. (2022). Parameter synthesis of polynomial dynamical systems. Information and Computation, vol. 289, art. 104941.

- Marin A., Piazza C., Rossi S. (2022). Proportional lumpability and proportional bisimilarity. Acta Informatica, vol. 59(2-3), pp. 211-244.

- Piazza C., Romanello R. (2022). Mirrors and Memory in Quantum Automata. LNCS, vol. 13479, pp. 359-380.

- Della Giustina D., Piazza C., Riccardi B., Romanello R. (2022). Directed Graph Encoding in Quantum Computing Supporting Edge-Failures. LNCS, vol. 13354, pp. 75-92.

- Rossi N., Colautti A., Iacumin L., Piazza C. (2022). WGA-LP: A pipeline for whole genome assembly of contaminated reads. Bioinformatics, vol. 38(3), pp. 846-848.

2021

- Marin A., Piazza C., Rossi S. (2021). D_PSNi: Delimited persistent stochastic non-interference. Theoretical Computer Science, vol. 884, pp. 116-135.

- Piazza C., Rossi S. (2021). Reasoning About Proportional Lumpability. LNCS, vol. 12846, pp. 372-390.

- Hillston J., Marin A., Piazza C., Rossi S. (2021). Persistent Stochastic Non-Interference. Fundamenta Informaticae, vol. 181(1), pp. 1-35.

2019

- Hillston J., Piazza C., Marin A., Rossi S. (2019). Delimited persistent stochastic non-interference. ACM International Conference Proceeding Series, pp. 135-142.

- Marin A., Piazza C., Rossi S. (2019). Proportional Lumpability. LNCS, vol. 11750, pp. 265-281.

- Marin A., Piazza C., Rossi S. (2019). A process algebra for (delimited) persistent stochastic non-interference. LNCS, vol. 11785, pp. 222-238.

2018

- Hillston J., Piazza C., Rossi S. (2018). Persistent stochastic non-interference. Electronic Proceedings in Theoretical Computer Science, vol. 276, pp. 53-68.

- Alzetta G., Marin A., Piazza C., Rossi S. (2018). Lumping-based equivalences in Markovian automata: Algorithms and applications to product-form analyses. Information and Computation, vol. 260, pp. 99-125.

- Anticoli L., Piazza C., Taglialegne L., Zuliani P. (2018). Entanglè: A translation framework from quipper programs to quantum markov chains. CCIS, vol. 825, pp. 113-126.

- Hillston J., Marin A., Piazza C., Rossi S. (2018). Information Flow Security for Stochastic Processes. LNCS, vol. 11178, pp. 142-156.

2017

- Sottana M., Piazza C., Albarelli A. (2017). Efficient computation of renaming functions for p-reversible discrete and continuous time markov chains. ACM International Conference Proceeding Series, pp. 52-59.
- Peron A., Piazza C. (2017). Games, Automata, Logics and Formal Verification (GandALF 2014) – Preface. Information and Computation, vol. 253, pp. 179-180.
- Dreossi T., Dang T., Piazza C. (2017). Reachability computation for polynomial dynamical systems. Formal Methods in System Design, vol. 50(1), pp. 1-38.

2016

- Casagrande A., Piazza C., Policriti A. (2016). Is Hyper-extensionality Preservable under Deletions of Graph Elements? Electronic Notes in Theoretical Computer Science, vol. 322, pp. 103-118.
- Dreossi T., Dang T., Piazza C. (2016). Parallelotope bundles for polynomial reachability. HSCC 2016, pp. 297-306.
- Anticoli L., Piazza C., Taglialegne L., Zuliani P. (2016). Towards quantum programs verification: From quipper circuits to QPMC. LNCS, vol. 9720, pp. 213-219.

In accordance with Italian Law 679/2016 implementing the European Parliament Regulation of 27 April 2016 (GDPR), I hereby give my consent to the processing and use of the data provided in this CV.