Alessandra Di Pierro

Curriculum Vitae et Studiorum

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ACADEMIC APPOINTMENTS

Since Jan 2011 Associate Professor at the Department of Computer Science of the University of Verona, Italy.

2006-2010 Assistant Professor at the Department of Computer Science of the University of Verona, Italy.

1998-2006 Assistant Professor at the Department of Computer Science of the University of Pisa, Italy.

1996-1998 Senior Research Fellow at the Department of Computer Science, School of Informatics, City University, London, UK. Position funded by the European Programme "Training and Mobility of Researchers" Framework 4 - Marie Curie Research Fellow category 30. Project title: *Re-uniting automatic theorem proving and logic programming for the formal verification of logic languages.*

1995-1996 Post-doc at the Department of Mathematics and Computer Science of the University of Udine.

1994-1995 Fellowship at the Department of Computer and Information Science of the University of Linköping (Sweden) within the Human Capital and Mobility European project titled *Transformation and synthesis of logic programs.*

1991-1994 PhD student at the Department of Computer Science of the University of Pisa, Italy.

EDUCATION

- Ph.D. in Computer Science, University of Pisa, Italy, July 25, 1994 [T2].
- Laurea in Computer Science, University of Pisa, Italy, June 15, 1990 [T1].

TEACHING

I have taught a large number of diverse courses, ranging from introductory courses in computer science (also for students from other disciplines) to advanced courses both at Bachelor and MSc level, including in particular "Quantum Computing", a course that I created and delivered first at the University of Pisa (when quantum computing was a discipline still in its infancy) and then, after a thorough revision and update of the contents and the introduction of lab sessions, at the University of Verona.
I enjoy teaching at the different levels (bachelor and masters, as well as PhD) and I am proud that the energy and passion that I invest into the courses that I teach has also led several students to choose me as the tutor of their bachelor or master thesis, or even as supervisor or reviewer of their PhD thesis.
My ambition is to always deliver research-led teaching, especially in advanced courses such as quantum computing, where the interaction with the students is paramount, but also in more basic course, where students benefit from understanding how the topics that they are learning will play a crucial role in their future academic or industrial career.
I have also been invited to teach several PhD courses on advanced topics, in particular related to my quantum research.

- ***Bachelor / MSc Programs***

  Quantum Computing: Academic years 2025-2026, 2024-2025, 2023-2024, 2022-2023, 2021-2022, 2020-2021, 2013-2014, 2012-2013, 2011-2012, 2009-2010, 2008-2009, 2007-2008, MSc in Computer Science. University of Verona.

  Foundations of Programming and Specification Languages : Academic years 2025-2026, MSc in Computer Science. University of Verona.

  Logic: Academic years 2025-2026, 2023-2024, 2022-2023, 2021-2022, 2020-2021, Bachelor in Computer Science. University of Verona.

  Informatics: Academic years 2019-2020, 2018-2019, 2017-2018, 2016-2017, 2015-2016, Bachelor in Bioinformatics. University of Verona.

  Compilers: Academic years 2019-2020, 2018-2019, 2017-2018, 2016-2017, 2015-2016, 2013-2014, 2012-2013, Bachelor in Computer Science. University of Verona.

  Advanced Compilers: Academic years 2013-2014, 2012-2013, Msc in Computer Science and Engineering. University of Verona.

  Languages and Compilers: Academic year 2011-2012, Bachelor in Computer Science. University of Verona.

  Programming II: Academic year 2010-2011, Bachelor in Computer Science. University of Verona.

  Computer Networks: Academic year 2010-2011, Bachelor in Computer Science. University of Verona.

Algorithms and Data Structures: Academic years 2008-2009, 2007-2008, Bachelor in Bioinformatics. University of Verona.

Database and Multimedia: Academic year 2006-2007, Bachelor in Computer Science and Bachelor in Information Technology: Multimedia. University of Verona.

Telematics: Academic year 2005-2006, Bachelor in Digital Humanities. University of Pisa.

Informatics: Academic year 2003-2004, Bachelor in "Cultural Heritage Sciences". University of Pisa.

Quantum Computing: Academic years 2003-2004, 2002-2003, 2001-2002, MSc in Computer Science. University of Pisa.

Introduction to Programming (Lab): Academic years 2001-2002 and 2002-2003. Bachelor in Computer Science. University of Pisa.

Laboratory of Informatics I: Academic years 2000-2001, 1999-2000, Bachelor in Computer Science. University of Pisa.

- ***PhD Courses***

Quantum Machine Learning: PhD Course at the University of Verona, Italy, yearly since 2020.

Compiler Design for Quantum Hardware: Lecture at the High Performance Computing for Sustainable Development School, Stellenbosch, South Africa, April 2023.

Quantum Kernels and Deep Learning: Lecture at EQAI, 1st European Summer School on Quantum AI, International Centre for Mechanical Sciences, Udine September 12 - 16 2022.

Quantum Programming Languages: Lecture at the PhD Course at the Suola Superiore, University of Udine, Italy, May 2021.

Introduction to Topological Quantum Computing: Lecture at PhD School on Quantum Technologies, Università di Camerino, Italy, January 2019.

Introduction to Quantum Programming: Lecture at PhD School on Quantum Technologies, Università di Napoli Federico II, Italy, September 2019.

Quantum Computing: PhD Course at the University of Verona, Italy, yearly from 2017 to 2019.

An Introduction to Probabilistic Abstract Interpretation: PhD Course at ESSLLI 2016, 28th European Summer School in Logic, Language and Information, Bozen, August 2016.

Topological Quantum Computing: PhD Course at the University of Verona, Italy, March, 2016.

Probabilistic Program Analysis: Series of Lectures at MT-Lab, VKR Centre of Excellence, Technical University of Denmark, August 2011.

Quantum Computing: PhD Course at the University of Verona, Italy, June 16-27, 2003.

SUPERVISION

PhD students

I only list the PhD students that I am supervising or have supervised as first supervisor, all on quantum research.

- Linda Zampieri, Università di Verona. Topic: Quantum Finance.
- Nicola Assolini, Università di Verona. PhD thesis: Formal Semantics and Analysis of Quantum Programs. 2022 - 2025.
- Massimiliano Incudini, Università di Verona. PhD thesis: On the construction of useful quantum kernels. 2021 - 2024.
- Riccardo Mengoni, Università di Verona. PhD thesis: Quantum Approaches to Data Science and Data Analytics. 2016 - 2019.

External Examiner for PhD theses

- Andrea Marchesin. Title of the Thesis: Analysis and Design of Quantum Algorithms and Technologies for Engineering Applications - Intelligent Urban Traffic Optimisation and Other Near-term Opportunities. Politecnico di Torino. December 2024.
- Alexander Geng. Title of the Thesis: Application of hybrid quantum machine learning for image processing in the NISQ era. RPTU Kaiserslautern-Landau. December 2023.
- Aidan Patrick Pellow-Jarman. Title of the Thesis: Investigating variational quantum algorithms for solving systems of linear equations and optimization on near term quantum hardware. University of KwaZulu-Natal. December 2023.
- Balthazar Casale. Title of the Thesis: Machine learning for quantum bandits and quantum entanglement detection. Université d'Aix-Marseille. November 2023.
- Valentin Heyraud. Title of the Thesis: Noise and trainability in quantum machine learning. Université Paris Cité. November 2023.
- Viet Pham Ngoc. Title of the Thesis: Learning Boolean Functions with Multi-Controlled X Gates. Imperial College. October 2023.
- Gabriele Francesco Maria Agliardi. Title of the Thesis: Data Encoding and Processing for Quantum-Based Monte Carlo Simulations in Finance. University of Milan. July 2023.
- Daniele Cuomo. Title of the Thesis: Architectures and circuits for distributed quantum computing. University of Naples. May 2023.

- Carla Maria Alves Pereira da Silva. Title of the Thesis: Quantum Machine Intelligence: Mapping AI Applications. Universidade do Porto. November 2021.
- Linda Anticoli. Title of the Thesis: Entangλe: a Framework from Quantum Programming to Quantum Model Checking. University of Udine. May 2018.
- Andreas Maniotis. Title of the Thesis: A Representation-Theoretic Approach to Reversible Computation with Applications. DIKU, University of Copenhagen. February 2015.
- Arnaud Jobin. Title of the Thesis: Dioïdes et idéaux de polynomes en analyse statique. ENS Cachan, Antenne de Bretagne. January 2012.

MSc/Bachelor students

Since 2009 I have supervised more than 30 theses on Quantum Computing and Quantum Machine Learning.

RESEARCH

Research Interests

My research can be roughly grouped into the following areas:

1. Quantum Computing and Quantum Machine Learning
2. Quantitative analysis of security properties
3. Probabilistic abstract interpretation
4. Probabilistic programming and semantics
5. Theory of logic programming and concurrent constraint programming

Main Results

1. I have carried out a foundational study of structures for modeling quantum computing producing the results in [C18, J8, EJ10, C35]. In [J17, J15] I have investigated the use of homologies for the classification of entangled quantum states and topological data analysis. In 2017 I organised a conference on the then newly born Quantum Machine Learning research area, with the purpose of discussing problems and promises with the main representative people of the field. The conference, called Quantum Techniques in Machine Learning, has developped in a very successfull yearly event. Research in this field has been my main activity since then, and I have produced several results regarding the study of quantum kernel-based and quantum neural network machine learning techniques and their application to problems in pattern recognition, finance and more recently in bioinformatics [J20, J19, C43, J18, J16, J14, C41, C39].

2. Computer security is a field where a quantitative approach has proved to be particularly well-suited, and quantitative risk or vulnerability analysis is more useful than absolute security certification. The main result of my research in this aerea has been the introduction of the notion of Approximate Confidentiality to formalise and quantify the possible information leakage of a system, [C23, C21, C22, EJ1, J7, C24, B1, C25, J7, J9, J5, C26, EJ7].

3. In [C17, C16]. we have defined a general methodology for constructing semantics-based analyses of various program properties, in which both the analysis of probabilistic programs and the probabilistic analysis of classical deterministic programs can be accommodated. This is formalised in the theory of Probabilistic Abstract Interpretation (PAI), and some of its applications are reported in [J6, EJ11, C31, EJ12]. Similar structures are used in [C42] to define a probabilistic semantics of a typed lambda calculus.

4. With the aim of modelling so called "randomized algorithms" within a declarative framework, I have devoted some work to the design and modelling of a probabilistic version of the concurrent constraint programming paradigm with results described in [C12, C10, C9, C8, C7, EJ2, C11, C14, C13].

5. My research activities started in the field of Logic Programming with investigations on the problems of negation and infinite computation. The main results are published in [J2, C3, C2, C1, T2, T1, C4, J3].

Publications

Journals

[J25] Nicola Assolini, Alessandra Di Pierro, and Isabella Mastroeni. Challenges in Quantum Programs Analysis. To appear in *Software Tools for Technology Transfer*.

[J24] Massimiliano Incudini, Daniele Lizzio Bosco, Francesco Martini, Michele Grossi, Giuseppe Serra, and Alessandra Di Pierro. Automatic and Effective Discovery of Quantum Kernels. *IEEE Transactions on Emerging Topics in Computational Intelligence*, pages 1–10, 2024.

[J23] Markus Hoffmann, Julian M Poschenrieder, Massimiliano Incudini, Sylvie Baier, Amelie Fritz, Andreas Maier, Michael Hartung, Christian Hoffmann, Nico Trummer, Klaudia Adamowicz, Mario Picciani, Evelyn Scheibling, Maximilian V Harl, Ingmar Lesch, Hunor Frey, Simon Kayser, Paul Wissenberg, Leon Schwartz, Leon Hafner, Aakriti Acharya, Lena Hackl, Gordon Grabert, Sung-Gwon Lee, Gyuhyeok Cho, Matthew E Cloward, Jakub Jankowski, Hye Kyung Lee, Olga Tsoy, Nina Wenke, Anders Gorm Pedersen, Klaus Bønnelykke, Antonio Mandarino, Federico Melograna, Laura Schulz, Héctor Climente-González, Mathias Wilhelm, Luigi Iapichino, Lars Wienbrandt, David Ellinghaus, Kristel Van Steen, Michele Grossi, Priscilla A Furth, Lothar Hennighausen, Alessandra Di Pierro, Jan Baumbach, Tim Kacprowski, Markus List, and David B Blumenthal. Network medicine-based epistasis detection in complex diseases: ready for quantum computing. *Nucleic Acids Research*, 52(17):10144–10160, 08 2024.

[J21] Massimiliano Incudini, Francesco Martini, and Alessandra Di Pierro. Toward Useful Quantum Kernels. *Advanced Quantum Technologies*, 8(12):2300298, 2025.

[J20] Massimiliano Incudini, Michele Grossi, Antonio Mandarino, Sofia Vallecorsa, Alessandra Di Pierro, and David Windridge. The Quantum Path Kernel: a Generalized Neural Tangent Kernel for Deep Quantum Machine Learning. *IEEE Transactions on Quantum Engineering*, 4:1–16, 2023.

[J19] Massimiliano Incudini, Fabio Tarocco, Riccardo Mengoni, Alessandra Di Pierro, and Antonio Mandarino. Computing graph edit distance on quantum devices. *Quantum Machine Intelligence*, 4(24), 2022.

[J18] Riccardo Mengoni, Massimiliano Incudini, and Alessandra Di Pierro. Facial expression recognition on a quantum computer. *Quantum Machine Intelligence*, 3(8), 2021.

[J17] Riccardo Mengoni, Alessandra Di Pierro, Laleh Memarzadeh, and Stefano Mancini. Persistent homology analysis of multiqubit entanglement. *Quantum Information & Computation*, 20:375–399, 2020.

[J16] Riccardo Mengoni and Alessandra Di Pierro. Kernel methods in quantum machine learning. *Quantum Machine Intelligence*, 1(3):65–71, 2019.

[J15] Alessandra Di Pierro, Stefano Mancini, Laleh Memarzadeh and Riccardo Mengoni. Homological analysis of multi-qubit entanglement. *Europhysics Letters*, 123(3):30006, 2018.

[J14] Lorenzo Bottarelli, Manuele Bicego, Matteo Denitto, Alessandra Di Pierro, Alessandro Farinelli, and Riccardo Mengoni. Biclustering with a quantum annealer. *Soft Computing*, 2018.

[J13] Alessandra Di Pierro and Oliver Morsh. Computer quantistici. *Mondo Digitale*, 48:1–25, 2013.

[J12] Alessandra Di Pierro, Chris Hankin, and Herbert Wiklicky. Probabilistic timing covert channels: To close or not to close? *International Journal of Information Security*, 10(2):83–106, 2011.

[J11] Alessandra Di Pierro, Chris Hankin, and Herbert Wiklicky. Program analysis probably counts. *The Computer Journal*, 53(6):871–880, 2010.

[J10] Alessandro Aldini and Alessandra Di Pierro. Estimating the Maximum Information Leakage. *International Journal of Information Security*, 7(3):219–242, 2008. Available as `http://www.springerlink.com/content/pxr812q105273787/`.

[J9] Alessandra Di Pierro, Chris Hankin, Igor Siveroni, and Herbert Wiklicky. Tempus Fugit: How to Plug It. *Journal of Logic and Algebraic Programming*, 72(2):173–190, 2007.

[J8] Alessandra Di Pierro, Chris Hankin, and Herbert Wiklicky. Reversible Combinatory Logic. *Mathematical Structures in Computer Science*, 16(4):1–17, 2006.

[J7] Alessandra Di Pierro, Chris Hankin, and Herbert Wiklicky. Measuring the confinement of probabilistic systems. *Theoretical Computer Science*, 340(1):3–56, 2005.

[J6] Alessandra Di Pierro, Chris Hankin, and Herbert Wiklicky. Probabilistic lambda-calculus and quantitative program analysis. *Journal of Logic and Computation*, 15(2):159–179, 2005.

[J5] Alessandra Di Pierro, Chris Hankin, and Herbert Wiklicky. Quantitative static analysis of distributed systems. *Journal of Functional Programming*, 15(5):1–47, 2005.

[J4] Alessandra Di Pierro, Chris Hankin, and Herbert Wiklicky. Approximate Non-Interference. *Journal of Computer Security*, 12(1):37–81, 2004.

[J3] Franck de Boer, Alessandra Di Pierro, and Catuscia Palamidessi. An Algebraic Perspective of Constraint Logic Programming. *Journal of Logic and Computation*, 7(1), 1997.

[J2] Alessandra Di Pierro, Maurizio Martelli, and Catuscia Palamidessi. Negation as Instantiation. *Information & Computation*, 120(2):263–278, 1995.

[J1] Franck de Boer, Alessandra Di Pierro, and Catuscia Palamidessi. Nondeterminism and Infinite Computations in Constraint Programming. *Theoretical Computer Science*, 151(1), 1995.

Electronic Journals

[EJ14] A. Di Pierro, and H. Wiklicky. Probabilistic data flow analysis: a linear equational approach. In Gabriele Puppis and Tiziano Villa, editors, Proceedings Fourth International Symposium on *Games, Automata, Logics and Formal Verification,* Borca di Cadore, Dolomites, Italy, 29-31th August 2013, volume 119 of *Electronic Proceedings in Theoretical Computer Science*, pages 150–165. Open Publishing Association, 2013.

[EJ13] Alessandra Di Pierro. Approximation and relative entropy. In Boris Köpf, Paquale Malacaria, and Catuscia Palamidessi, editors, Quantitative Security Analysis (Dagstuhl Seminar 12481). *Dagstuhl Reports*, 2(11):135–154, pages 141–141, 2012.

[EJ12] A. Di Pierro, P. Sotin, and H. Wiklicky. Relational analysis and precision via probabilistic abstract interpretation. In *6th International Workshop on Quantitative Aspects of Programming Languages*, volume 220, Issue 3 of *Electronic Notes in Computer Science*, pages 23–42. Elsevier, 2008.

[EJ11] A. Di Pierro, C. Hankin, and H. Wiklicky. On probabilistic techniques for data flow analysis. In *5th International Workshop on Quantitative Aspects of Programming Languages*, volume 190 of *Electronic Notes in Computer Science*, pages 59–77. Elsevier, 2007.

[EJ10] A. Di Pierro and H. Wiklicky. Semantic abstraction and quantum computation. In *4th International Workshop on Quantum Programming Languages*, volume 210 of *Electronic Notes in Computer Science*, pages 49–63. Elsevier, 2008.

[EJ9] A. Di Pierro, C. Hankin, and H. Wiklicky. On Reversible Combinatory Logic. In M. Fernández and I. Mackie, editors, *Proceedings of DCM'05 – 1st International Workshop on New Developments in Computational Models, Lisboa, Portugal*, volume 153 of *Electronic Notes in Theoretical Computer Science*, pages 25–35. Elsevier, 2006.

[EJ8] A. Di Pierro and H. Wiklicky. Operator algebras and the operational semantics of probabilistic languages. In A. K. Seda, T. Hurley, M. Schellekens, M. Mac an Airchinnigh and G. Strong, editors, *Proceedings of MFCSIT04– Third Irish Conference on the Mathematical Foundations of Computer Science and Information Technology, Dublin, Ireland*, volume 161 of *Electronic Notes in Theoretical Computer Science*, pages 131–150. Elsevier, 2006.

[EJ7] A. Di Pierro, C. Hankin, and H. Wiklicky. Continuous-time probabilistic KLAIM. In R. Focardi and G. Zavattaro, editors, *Proceedings of SecCo'04 – 2nd International Workshop on Security Issues in Coordination Models, Languages, and Systems*, volume 128(5) of *Electronic Notes in Theoretical Computer Science*, pages 27–38. Elsevier, 2005.

[EJ6] A. Aldini and A. Di Pierro. On quantitative analysis of probabilistic protocols. In A. Cerone and A. Di Pierro, editors, *Proceedings of QAPL'04 – 2nd Workshop on Quantitative Aspects of Programming Languages*, volume 112 of *Electronic Notes in Theoretical Computer Science*, pages 131–148. Elsevier, 2005.

[EJ5] A. Aldini and A. Di Pierro. A quantitative approach to noninterference for probabilistic systems. In M. Bravetti and G. Gorrieri, editors, *Electronic Notes in Theoretical Computer Science*, volume 99. Elsevier Science Publishers, 2004. Proceedings of the MEFISTO Project 2003, Formal Methods for Security and Time.

[EJ4] A. Di Pierro, T. Frühwirth, and H. Wiklicky. Probabilistic constraint handling rules. In Marco Comini and Moreno Falaschi, editors, *Electronic Notes in Theoretical Computer Science*, volume 76. Elsevier Science Publishers, 2002. Selected papers of the 11th International Workshop on Functional and (Constraint) Logic Programming (WFLP 2002).

[EJ3] A. Brogi, A. Di Pierro, and H. Wiklicky. Linear embedding for a quantitative comparison of languages expressiveness. In Alessandra Di Pierro and Herbert Wiklicky, editors, *Electronic Notes in Theoretical Computer Science*, volume 59. Elsevier Science Publishers, 2002. Selected papers of the ACM Workshop on Quantitative Aspects of Programming (QAPL 2001).

[EJ2] A. Di Pierro and H. Wiklicky. Linear structures for concurrency in probabilistic programming languages. In *Proceedings of MFCSIT00– First Irish Conference on the Mathematical Foundations of Computer Science and Information Technology, Cork, Ireland*, volume 40 of *Electronic Notes in Theoretical Computer Science*. Elsevier, 2001.

[EJ1] A. Di Pierro, C. Hankin, and H. Wiklicky. Probabilistic confinement in a declarative framework. In *Declarative Programming – Selected Papers from AGP 2000 – La Havana, Cuba*, volume 48 of *Electronic Notes in Theoretical Computer Science*, pages 1–23. Elsevier, 2001.

Book Chapters

[B3] A. Di Pierro and L. Viganò. *Quantum Machine Intelligence*, chapter 2, pages 49 – 55. Routledge, 2023.

[B2] A. Di Pierro, C. Hankin, and H. Wiklicky. *Probabilistic Semantics and Program Analysis*, volume 6154 of *Lecture Notes in Computer Science*. Springer, Bertinoro School on Formal Methods for Quantitative Aspects of Programming Languages – Advanced Lectures, 21-26 June 2010.

[B1] A. Aldini, M. Bravetti, A. Di Pierro, R. Gorrieri, C. Hankin, and H. Wiklicky. Two formal approaches for approximating noninterference properties. In *Foundations of Security Analysis and Design II, Tutorial Lectures*, volume 2946 of *Lecture Notes in Computer Science*, pages 1–43. Springer, 2004.

Conference and Workshop proceedings

[C47] N. Assolini, A. Di Pierro, and I. Mastroeni. Static analysis of quantum programs. In Roberto Giacobazzi and Alessandra Gorla, editors, *Static Analysis*, pages 1–25, Cham, 2025. Springer Nature Switzerland.

[C46] N. Assolini, A. Di Pierro, and I. Mastroeni. Abstracting entanglement. In *NSAD 2024: Proceedings of the 10th ACM SIGPLAN International Workshop on Numerical and Symbolic Abstract Domains*, pages 34–41, 2024.

[C45] N. Assolini, A. Di Pierro, and I. Mastroeni. A static analysis of entanglement. In Krishna Shankaranarayanan, Sriram Sankaranarayanan, and Ashutosh Trivedi, editors, *Verification, Model Checking, and Abstract Interpretation*, pages 50–71, Cham, 2025. Springer Nature Switzerland.

[C44] M. Incudini, F. Martini, and A. Di Pierro. Higher-order topological kernels via quantum computation. In *2023 IEEE International Conference on Quantum Computing and Engineering (QCE)*, volume 01, pages 621–629, 2023.

[C43] A. Di Pierro and M. Incudini. Quantum machine learning and fraud detection. In Daniel Dougherty, José Meseguer, Sebastian Alexander Mödersheim, and Paul Rowe, editors, *Protocols, Strands, and Logic*, pages 139–155, Springer, 2021.

[C42] A. Di Pierro. A type theory for probabilistic λ–calculus. In *From Lambda Calculus to Cybersecurity Through Program Analysis: Essays Dedicated to Chris Hankin on the Occasion of His Retirement*, Lecture Notes in Computer Science, pages 86–102, Springer, 2020.

[C41] A. Di Pierro, R. Mengoni, R. Nagarajan, and D. Windridge. Hamming distance kernelisation via topological quantum computation. In Vega-Rodríguez M.

Martín-Vide C., Neruda R., editor, *Theory and Practice of Natural Computing, TPNC 2017, Prague, Czech Republic*, volume 10687 of *Lecture Notes in Computer Science*, pages 269–280, Springer, 2017.

[C40] A. Di Pierro. A probabilistic semantics for the pure λ-calculus. In Dang Van Hung and Deepak Kapur, editors, *Theoretical Aspects of Computing – ICTAC 2017: 14th International Colloquium, Hanoi, Vietnam, October 23-27, 2017, Proceedings*, volume 10580 of *Lecture Notes in Computer Science*, pages 70–76. Springer, 2017.

[C39] L. Bottarelli, M. Bicego, M. Denitto, A. Di Pierro, and A. Farinelli. A quantum annealing approach to biclustering. In Miguel A. Vega-Rodríguez Carlos Martín-Vide, Takaaki Mizuki, editor, *Theory and Practice of Natural Computing, 5th International Conference, TPNC 2016, Sendai, Japan*, volume 10071 of *Lecture Notes in Computer Science*, pages 175–187. Springer, 2016.

[C38] A. Di Pierro. The dual value of probabilistic abstract interpretation. In Antonio Filieri, Marta Kwiatkowska, Sasa Misailovic, and Todd Mytkowicz, editors, *Approximate and Probabilistic Computing: Design, Coding, Verification (Dagstuhl Seminar 15491)*, volume 5/11, pp. 151–179, Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2016.

[C37] A. Di Pierro and H. Wiklicky. Probabilistic abstract interpretation: From trace semantics to DTMCOs via linear regression. In R.R. Hansen C.W. Probst, C. Hankin, editor, *Semantics, Logics and Calculi*, volume 9560 of *Lecture Notes in Computer Science*, pp. 111–139. Springer, 2016.

[C36] A. Di Pierro. A topological quantum calculus. In Gilles Barthe, Andrew D. Gordon, Joost-Pieter Katoen, and Annabelle McIver, editors, *Challenges and Trends in Probabilistic Programming (Dagstuhl Seminar 15181)*, volume 5/4, pages 123–141, Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2015.

[C35] A. Di Pierro and F. Panarotto. A calculus of anyons. In U. Kohlenbach et al., editor, *21st Workshop on Logic, Language, Information and Computation (WoLLIC 2014)*, volume 8652 of *Lecture Notes in Computer Science*, pages 152–165. Springer, 2014.

[C34] A. Di Pierro and H. Wiklicky. Probabilistic analysis of programs: A weak limit approach. In Ugo dal Lago, editor, *3rd International Workshop on Foundational and Practical Aspects of Resource Anlysis (FOPARA 2013)*, volume 8552 of *Lecture Notes in Computer Science*. Springer, 2014.

[C33] A. Di Pierro and H. Wiklicky. Semantics of probabilistic programs: A weak limit approach. In Chung chieh Shan, editor, *Programming Languages and Systems – Proceedings of the 11th Asian Symposium, APLAS 2013*, volume 8301 of *Lecture Notes in Computer Science*, pages 241–256. Springer, 2013.

[C32] A. Di Pierro, C. Hankin, and H. Wiklicky. Quantifying timing leaks and cost optimisation. In Liqun Chen, Mark Ryan, and Guilin Wang, editors, *Proceedings of ICICS'08 – 10th International Conference on Information and Communications Security*, volume 5308 of *Lecture Notes in Computer Science*, pages 81–96. Springer, 2008.

[C31] A. Di Pierro, C. Hankin, and H. Wiklicky. A systematic approach to probabilistic pointer analysis. In Z. Shao, editor, *Proceedings of APLAS'07 – Fifth ASIAN Symposium on Programming Languages and Systems*, volume 4807 of *Lecture Notes in Computer Science*, pages 335–350. Springer, 2007.

[C30] A. Di Pierro, C. Hankin, and H. Wiklicky. Abstract interpretation for worst and average case analysis. In T. Reps, M. Sagiv, and J. Bauer, editors, *Program Analysis and Compilation, Theory and Practice: Essays dedicated to Reinhard Wilhelm*, LNCS 4444, pages 160–174. Springer, 2007.

[C29] A. Aldini and A. Di Pierro. Noninterference and the most powerful probabilistic adversary. In D. Gollmann and J. Jürjens, editors, *Proceedings of WITS'06 – 2006 IFIP WG 1.7, ACM SIGPLAN and GI FoMSESS Workshop on Issues in the Theory of Security*, 2006.

[C28] A. Di Pierro, C. Hankin, and H. Wiklicky. On a probabilistic chemical abstract machine and the expressiveness of Linda languages. In F.S. de Boer, M.M. Bonsangue, S. Graf, and W.-P. de Roever, editors, *Formal Methods for Components and Objects — FMCO'05*, LNCS 4111, pages 388–407. Springer, 2006.

[C27] A. Di Pierro, C. Hankin, and H. Wiklicky. Probabilistic Linda-based Coordination Languages. In F.S. de Boer, M.M. Bonsangue, S. Graf, and W.-P. de Roever, editors, *Formal Methods for Components and Objects — FMCO'04*, volume 3657 of *Lecture Notes in Computer Science*, pages 120–140. Springer, 2005.

[C26] A. Di Pierro, C. Hankin, and H. Wiklicky. Probabilistic KLAIM. In Rocco De Nicola, Gianluigi Ferrari, and Greg Meredith, editors, *Proceedings of Coordination 2004 – 6th International Conference on Coordination Languages and Models*, volume 2949 of *Lecture Notes in Computer Science*, pages 119–134. Springer, 2004.

[C25] A. Di Pierro, C. Hankin, and H. Wiklicky. Quantitative relations and approximate process equivalences. In R. Amadio and D. Lugiez, editors, *Proceedings of CONCUR 2003 – 14th International Conference on Concurrency Theory*, volume 2761 of *Lecture Notes in Computer Science*, pages 508–522. Springer, 2003.

[C24] A. Di Pierro, C. Hankin, and H. Wiklicky. Measuring the confinement of concurrent probabilistic systems. In R. Gorrieri, editor, *Proceedings of WITS'03 – 2003 IFIP WG 1.7, ACM SIGPLAN and GI FoMSESS Workshop on Issues in the Theory of Security*, April 2003. `http://www.dsi.unive.it/IFIPWG1_7/wits2003.html`.

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[C2] A. Di Pierro, M. Martelli, and C. Palamidessi. SLDNI-Resolution: a non-floundering interpreter for geneneral programs. In P. Asirelli, editor, *Proc. Sixth Italian Conference on Logic Programming*. The MIT Press, 1991.

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Theses

[T2] A. Di Pierro. *Negation and Infinite Computations in Logic Programming*. PhD thesis, Università di Pisa, 1994. Technical Report 3/94.

[T1] A. Di Pierro. *Negazione come Instanziazione: una nuova regola per il trattamento della negazione in Programmazione Logica*. Tesi di Laurea, Università di Pisa, 1990.

Editing

12. A. Di Pierro and P. Malacaria (eds.) From Lambda Calculus to Cybersecurity Through Program Analysis: Essays Dedicated to Chris Hankin on the Occasion of His Retirement, *Lecture Notes in Computer Science*, Volume 12065, Springer International Publishing, 2020.

11. A. Di Pierro and S. Mancini (eds.) Special Issue of the *International Journal of Quantum Information* on Quantum Techniques in Machine Learning, Volume 16, Issue 08 (December 2018).

10. M. Bernardo and E. de Vink and A. Di Pierro and H. Wiklicky (eds.) Advanced Lectures on Formal Methods for Dynamical Systems *Lecture Notes in Computer Science*, Volume 7938, Springer 2013.

9. A. Di Pierro and G. Norman (eds.) Special Issue of *Theoretical Computer Science* on Quantitative Aspects of Programming Languages, 413(1), 2012.

8. A. Aldini, M. Bernardo, A. Di Pierro and H. Wiklicky (eds.) Advanced Lectures on Formal Methods for Quantitative Aspects of Programming Languages *Lecture Notes in Computer Science*, Volume 6154, Springer 2010.

7. A. Di Pierro and G. Norman (eds.) Proceedings of the Eighth Workshop on Quantitative Aspects of Programming Languages (QAPL 2010) *Electronic Proceedings in Theoretical Computer Science*, Volume 28, 2010.

6. C. Baier and A. Di Pierro (eds.) Proceedings of the Seventh Workshop on Quantitative Aspects of Programming Languages (QAPL 2009) *Electronic Notes in Theoretical Computer Science*, Volume 253, Issue 3, 2009.

5. A. Di Pierro and H. Wiklicky (eds.) Special Issue of *Theoretical Computer Science* on Quantitative Aspects of Programming Languages and Systems, 382(1) 2007.

4. A. Di Pierro and H. Wiklicky (eds.) Proceedings of the Forth Workshop on Quantitative Aspects of Programming Languages (QAPL 2006), *Electronic Notes in Theoretical Computer Science*, Volume 1371 2006.

3. A. Cerone and A. Di Pierro (eds.) Special Issue of *Theoretical Computer Science* on Quantitative Aspects of Programming Languages, 346(1) 2005.

2. A. Cerone and A. Di Pierro (eds.) Proceedings of the Second Workshop on Quantitative Aspects of Programming Languages (QAPL 2004), *Electronic Notes in Theoretical Computer Science*, Volume 112 2005.

1. A. Di Pierro and H. Wiklicky (eds.) Proceedings of the First Workshop on Quantitative Aspects of Programming Languages (QAPL 2001), *Electronic Notes in Theoretical Computer Science*, Volume 59, Issue 3 2002.

INVITED TALKS, LECTURES AND SEMINARS

- Invited at the Dagstuhl Seminar 26111 on Formal Analysis and Verification in Quantum Programming Languages, Schloss Dagstuhl – Leibniz-Zentrum für Informatik, Germany, 8-13 March, 2026.
- Invited at the NII Shonan Meeting NO.224 on Quantum Software Engineering, Shonan Village Center, Japan, July 28 - 31, 2025
- Lecture on 'Quantum Machine Learning' at the Summer School on 6G and Quantum Communication Networks, King's College London, London, UK, 19-20 June 2025.
- In January 2024 I was invited to give a departmental seminar on 'Quantum Kernels in Machine Learning' at Imperial College - Department of Aeronautics.
- In January 2024 I was invited to give a talk on 'Topological Quantum Kernels' in the Quantum Colloquium at New York University Abu Dhabi, UAE, as part of the activities of the Center for Quantum and Topological Systems (CQTS).
- In July 2023 I was invited to give a seminar on quantum supevised machine learning at the Stellenbosch University (NITHeCs Colloquium).
- In April 2023 I was invited to give a lecture on "Compiler Design for Quantum Hardware" at the High Performance Computing for Sustainable Development School - Abdus Salam International Centre for Theoretical Physics (ICTP), Trento, Italy.
- In February 2023 I was invited to give a seminar on quantum supevised machine learning at the Universitat Autonoma de Barcelona (GIQ seminar series).
- In September 2022, I gave a lecture at the Advanced School on "Quantum Machine Learning: From Fundamentals to Applications", CISM-University of Udine.
- In 2022 I gave a seminar on quantum supevised machine learning at
  - University of Trento (21-02-2022)
  - University of Milano (13-10-2022).
- In January 2021 I was invited to give a lecture on quantum computing at the University of Pisa on 09-03-2021.
- In May 2020 I was invited to talk about my work on quantum machine learning for fraud detection at the University of Pisa on 30-11-2020.
- In 2018 I was invited to give a seminar on my work on topological quantum kernels for Machine Learning at

  - Queen Mary London (3-10-2018)
  - Oxford Unversity (8-12-2017)
  - NASA-USRA, Mountain View, California (16-08-2018)
  - University of Leeds (9-01-2018).

- Some older talks that I gave in the last ten years are listed below. I have given further invited talks and seminars in the past.

  Dagstuhl Seminar "Approximate and Probabilistic Computing" Seminar on "The dual Value of Probabilistic Abstract Interpretation", 1st December 2015, Schloss Dagstuhl, Germany.

  Middlesex University Seminar on "A Calculus for Topological Quantum Computation", 6th November 2015, Middlesex University, UK.

  Sussex University Seminar on "A Calculus for Topological Quantum Computation", 19th June 2015, Sussex University, UK.

  Université Paris Diderot Seminar on "Topological Quantum Lambda-calculus", 21 May 2015, Université Paris Diderot, Paris 7, France.

  Dagstuhl Seminar "Challenges and Trends in Probabilistic Programming" Seminar on "A Topological Quantum Calculus", 30 April 2015, Schloss Dagstuhl, Germany.

  University of Urbino Seminar on "An Introduction to Quantum Computation", 26 February 2015, University of Urbino 'Carlo Bo', Urbino, Italy.

  Birkbeck Seminar on "A Calculus for Topological Quantum Computation", 21 January 2015, Birkbeck University of London, London, UK.

  Universidad Federal do Rio grande do Norte Seminar on "A Calculus for Topological Quantum Computation", 10 September 2014, UFRN, Natal, Brazil.

  King's College London — QuaRK Seminar Series Seminar on "Quantum Computation" 20 August 2014.

  SFM-13:DS Co-organiser of the "13th International School on Formal Methods for the Design of Computer, Communication and Software Systems: Dynamical Systems", Bertinoro (Italy), 17-22 June 2013.

  27th CREST Open Workshop Invited talk on "Probabilistic static analysis and security trade-offs". University College London, 29 Maggio 2013.

  QAPL Workshop at ETAPS 2013 Invited talk on "Probabilistic static analysis and security trade-offs". Rome, Italy, 23 Marzo 2013.

  Dagstuhl Seminar on Quantitative Security Analysis Seminar on "Approximation and Relative Entropy". 29 November, 2012. In *Dagstuhl Reports*, 2(11):135–154, 2012.

Aalborg University Seminar on "Relational Analysis and Precision via Probabilistic Abstract Interpretation". 22 August, 2011.

SFM-10:QAPL Co-organiser of the "10th International School on Formal Methods for the Design of Computer, Communication and Software Systems: Quantitative Aspects of Programming Languages", Bertinoro (Italy), 21-26 June 2010.

University of Verona Seminar on "Quantitative Aspects of Programming Languages". 30 November, 2010.

RESEARCH PROJECTS AND GRANTS

Industrial PhD scholarship (10/2023–09/2026). PhD scholarship on "Quantum Optimization Algorithms for Security Settlement Systems". Co-financed (€30k out of a total of €72k) by Banca d'Italia and IBM, with the University of Verona. Principal Investigator.

Joint Project21 (06/2022–05/2023). Joint Research 2021, Quantum Anomaly Detection, Co-financed (€16500 out of a total of €24000) by TAS Tecnologia Avanzata dei Sistemi S.p.A., with the University of Verona. Principal Investigator.

Cooperint20 (09/2020–12/2020). Internationalization Programme of the University of Verona, €3500. Principal Investigator.

Cooperint19 (11/2019–01/2020). Internationalization Programme of the University of Verona, €3500. Principal Investigator.

Cooperint17 (11/2017–01/2018). Internationalization Programme of the University of Verona, €3500. Principal Investigator.

Cooperint15 (10/2015–12/2015). Internationalization Programme of the University of Verona, €3500. Principal Investigator.

Cooperint13 (04/2013–05/2013). Internationalization Programme of the University of Verona, €3500. Principal Investigator.

Security Horizons (02/2013–10/2016). Progetto PRIN — Programmi di Ricerca Scientifica di Rilevante Interesse Nazionale. National research project funded by MIUR, involing the universities of Venice, Pisa and Verona. Funding of the Verona unit: €87,000. Co-investigator.

SPACIOS (10/2010–9/2014). European project (Strep project no. 257876 in the 7th Framework Programme Theme ICT-2009.1.4) *Secure Provision and Consumption in the Internet of Services*. Budget €5,677,084.00, EC Contribution: €3,610,000.00. Co-investigator.

AVANTSSAR (1/2008–12/2010). European project (Strep project no. 216471 in the 7th Framework Programme Theme ICT-1-1.4) *Automated VAlidatioN of Trust and Security of Service-Oriented ARchitectures*. Budget: €6,070,954.80, EC Contribution: €3,800,000.00. Co-investigator.

AIDA2007 (7/2007–7/2009). *Abstract Interpretation Design and Applications*. MIUR Co-financed project. Co-investigator.

QNet (9/2006–2/2010). EPSRC Network on *Semantics of Quantum Computation*. Co-investigator.

PAFAS (11/2004–12/2007). *Program Analysis and the typed π-calculus: Foundations and Applications to Security*, EPSRC project GR/T04724. Co-investigator.

QACR (4/2004–9/2007). *Quantitative Analysis of Computational Resources*, EPSRC project GR/S77066. Co-principal investigator.

AIDA (11/2004–10/2006). *Abstract Interpretation: Development of Analysis tools and relations with type systems.* MIUR Co-financed project. Co-investigator.

MEFISTO (1/2001–1/2003). *Formal Methods for Security.* MIUR Co-financed project. Co-investigator.

PAI (5/1999–12/2002). *Probabilistic Abstract Interpretation*, EPSRC project GR/M58740. Co-investigator.

EDITORIAL ACTIVITY

- Field Editor of the Springer journal *Quantum Machine Intelligence* since December 2019.
- Guest editor of the special issue of the International Journal of Quantum Information dedicated to the QTML-2017 (Quantum Techniques in Machine Learning) conference
- Guest editor of the special issues of the journal of Quantum Machine Intelligence dedicated to the editions 2020, 2021 and 2023 of the QTML (Quantum Techniques in Machine Learning) conference.

PhD SCHOOL ORGANISATION

EQAI School co-organiser since the 2023 edition at the University of Udine and Lignano Sabbiadoro, Italy.
The School is a yearly event attracting an increasing number of PhD students from several countries.

QLDI 2019 Organizer of the Quantum Languages Design and Implementation Summer School, Verona, 23-28 September 2019.

PROGRAM AND ORGANISATION COMMITTEES

QTML Conference series: I founded QTML, a very successful series of international conferences on Quantum Techniques in Machine Learning, and I have been a member of its steering committee since 2017, when I organized in Verona the first edition of QTML, which was followed by yearly events hosted by international universities with an increasingly high number of participants reaching 400 attendees in 2023.

QAPL Workshop series: Founder and member of the steering committee of the Workshop series on Quantitative Aspects of Programming Languages 2001–2015.

RC 2026: 18th International Conference on Reversible Computation, Torino, Italy, July 9-10th, 2026. Member of the program committee.

QAI 2025: IEEE International Conference on Quantum Artificial Intelligence, Napoli, Italy, 2-5 November 2025. Tutorial co-chair.

FSCD 2025: 10th International Conference on Formal Structures for Computation and Deduction (FSCD 2025), Birmingham, UK, 14-20 July 2025. Member of the program committee.

WQS 2025: Workshop on Quantum Software, Seoul, South Korea, June 17, 2025 (co-located with the 46th ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI 2025)). Organiser and co-progran chair.

IEEE QSW 2025: 2025 IEEE International Conference on Quantum Software, Helsinki, Finland, July 7-12, 2025. Member of the program committee.

WQS 2024: Workshop on Quantum Software (co-located with the 45th ACM SIGPLAN Conference on Programming Language Design and Implementation (PLDI 2024)), Copenhagen, Denmark, June 24, 2024. Organiser and co-progran chair.

IEEE QSW 2024: 2024 IEEE International Conference on Quantum Software, Shenzhen, China, July 7-13, 2024. Member of the program committee.

IEEE QCE 2023: 2023 IEEE International Conference on Quantum Computing and Engineering, Bellevue, WA, United States, 17-22 September, 2023. Member of the program committee.

IEEE QSW 2023: 2023 IEEE International Conference on Quantum Software, Chicago, Illinois USA, 2-8 July 2023. Member of the program committee.

QSD 2023: QWorld Quantum Science Days, Online, 29-31 May 2023. Member of the program committee.

QTML 2024: 8th Conference on Quantum Techniques in Machine Learning, University of Melbourne, Melbourne, Australia, 25-29 November 2024. Member of the organizing and program committees.

QTML 2023: 7th Conference on Quantum Techniques in Machine Learning, CERN, Switzerland, 19-24 November 2023. Program co-chair.

QTML 2022: 6th Conference on Quantum Techniques in Machine Learning, Naples, Italy, 7-12 November 2022. Member of the organizing and program committees.

QTML 2021: 5th Conference on Quantum Techniques in Machine Learning, RIKEN-AIP, Tokyo, Japan, 8-12 November 2021. Member of the program committee.

QTML 2020: 4th Conference on Quantum Techniques in Machine Learning, Cambridge, Massachusetts, USA, 9-17 November 2020. Member of the organizing and program committees.

QTML 2019: 3rd Conference on Quantum Techniques in Machine Learning, KAIST, Daejeon, South Korea, 20-24 October 2019. Member of the program committee.

QTML 2018: 2nd Conference on Quantum Techniques in Machine Learning, Durban, South Africa, 12-16 November 2018. Member of the program committees.

QTML 2017: 1st Conference on Quantum Techniques in Machine Learning, Verona, Italy, 6-8 November 2017. Chair of the program and organizing committees.

FSEN 2019: 8th International Conference on Fundamentals of Software Engineering, Tehran, Iran, 1-3 April 2019. Member of the program committee.

CiE 2019: Computability in Europe 2019, Durham, UK, 15-19 July 2019. Member of the program committee.

RTA 2015: 26th International Conference on Rewriting Techniques and Applications, June 29-July 1, 2015, Warsaw, Poland. Member of the program committee.

QAPL'15: 13th Workshop on Quantitative Aspects of Programming Languages, Satellite Event of ETAPS 2015, London, UK, April 11-12, 2015. Member of the program committee.

QAPL'14: 12th Workshop on Quantitative Aspects of Programming Languages, Satellite Event of ETAPS 2014, April 2014, Grenoble, France. Member of the program committee.

QAPL'13: 11th Workshop on Quantitative Aspects of Programming Languages, Satellite Event of ETAPS 2013, March 2013, Rome, Italy. Member of the program committee.

QAPL'12: 10th Workshop on Quantitative Aspects of Programming Languages, Satellite Event of ETAPS 2012, April 2012, Tallinn, Estonia. Member of the program committee.

QAPL'11: 9th Workshop on Quantitative Aspects of Programming Languages, Satellite Event of ETAPS 2011, April 2011, Saarbrücken, Germany. Member of the program committee.

QAPL'10: 8th Workshop on Quantitative Aspects of Programming Languages, Satellite Event of ETAPS 2010, March 2010, Paphos, Cyprus. Chair of the program committee.

CILC'09: 24th Italian Conference on Computational Logic, 24-26 June 2009, Ferrara, Italy. Member of the program committee.

QAPL'09: 7th Workshop on Quantitative Aspects of Programming Languages, Satellite Event of ETAPS 2009, March 2009, York, UK. Member of the program committee and PC chair.

QEST'09: 6th International Conference on Quantitative Evaluation of SysTems, September 2009, Budapest, Hungary. Member of the program committee.

CILC'08: 23rd Italian Conference on Computational Logic, 10-12 July 2008, Perugia, Italy. Member of the program committee.

QAPL'08: 6th Workshop on Quantitative Aspects of Programming Languages, Satellite Event of ETAPS 2008, 29-30 March 2008, Budapest, Hungary. Member of the program committee.

QAPL'07: 5th Workshop on Quantitative Aspects of Programming Languages, Satellite Event of ETAPS 2007, 24-25 March 2007, Braga, Portugal. Member of the program committee.

MFCSIT'06: The Irish Conference on the Mathematical Foundation of Computer Science and Information Technology, 1-5 August 2006, Cork, Ireland. Member of the program committee.

QAPL'06: 4th Workshop on Quantitative Aspects of Programming Languages, Satellite Event of ETAPS 2006, 1-2 April 2006, Vienna, Austria. Chair of the program committee.

PLID'05: 2nd Workshop on Programming Interference and Dependence, 6 September 2005, London, UK Member of the program committee.

CPSec'05: 1st Workshop on Applications of Constraint Satisfaction and Programming to Computer Security, 1 October 2005, Barcelona, Spain. Member of the program committee.

SAS'05: 12th Static Analysis Symposium, 7-9 September 2005, London, UK. Member of the program committee.

QAPL'05: 3rd Workshop on Quantitative Aspects of Programming Languages, Satellite Event of ETAPS 2005, 2-3 April 2005, Edinburgh, Scotland. Member of the program committee.

QAPL'04: 2nd Workshop on Quantitative Aspects of Programming Languages, Satellite Event of ETAPS 2004, 27-28 March 2004, Barcelona - Spain. Member of the program committee and PC chair.

PPDP'03: ACM SIGPLAN Conference on Principles and Practice of Declarative Programming, 27-29 August 2003, Uppsala, Sweden. Member of the program committee.

QAPL'01: ACM Workshop on Quantitative Aspects of Programming Languages, Satellite Event of PLI 2001, 3-7 September 2001, Firenze, Italy. Member of the program committee and PC chair.

AGP'00: APPIA-GULP-PRODE'00 — Joint Conference on Declarative Programming, Cuba, December 2000. Member of the Program Committee.

Administration and Leadership

In the course of my career, I have taken on several administration and leadership duties. I highlight here the main ones at the University of Verona.

QuiLab: Quantum Informatics Laboratory at the University of Verona

In 2015, I founded and have since been leading the Quantum Informatics Laboratory (QuiLab, `https://quilab.github.io`) at the Department of Computer Science of the University of Verona. QuiLab comprises a number of Verona-based academics and PhD students (many of whom I supervise) as well as several external academic and industrial collaborators, including some visiting professors and post-docs that I have hosted in Verona.

Participation to collegiate bodies at the University of Verona

I am a member of the various departmental governing bodies and of the teaching staff council for the PhD in Computer Science.
In previous years I have been part of the student support committee (Pratiche studenti) and of the departmental teaching activity evaluation committee (Autovalutazione).
I am currently the coordinator of the Erasmus+ Study Mobility Programme for the Department of Computer Science.