CURRICULUM VITAE OF FRANCESCO PIO MARINO
January 2026

Personal Data

CONTACTS

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Education

Ph.D. in Computer Science — 08 2023 — Present
University of Catania, Italy and University of Rouen, France — XXXIX Cycle
Joint PhD / Cotutelle

Erasums — 09 2021 — 02 2022
Kaunas Technology University, Lithuania

Master Degree in Computer Science — 09 2020 — 07 2022
University of Catania, Italy

Visiting

Universidade Estadual de Campinas (BR) — 02 2026 — 03 2026
for scientific collaboration with Prof. Guilherme P. Telles.

University of Yamanashi (JP) — 09 2025 — 12 2025
for scientific collaboration with Prof. Dominik Köppl.

Scientific and Research Activity

RESEARCH INTERESTS

Algorithms on strings, combinatorial algorithms, automata theory, exact and approximate pattern matching, data compression, text indexing, string sampling, sorting algorithms, quantum algorithms

INTERNATIONAL CONFERENCES AS SPEAKER

- *Prague Stringology Conference 2020 (PSC20)* 31 August - 2 Septembre 2020, Prague, Czech Republic.
- *Workshop on Compression, Text and Algorithms (WCTA 2020)* 16 October 2020, Online.
- *Prague Stringology Conference 2021 (PSC20)* 30-31 August 2021, Prague, Czech Republic.
- *Italian Conference on Theoretical Computer Science 2021.* 13-15 September 2021, Bologna, Italy.
- *Quantum Search and Information Retrieval* (QUASAR24) 3 June 2024, Pisa, Italy.
- *12th International Conference on Fun with Algorithms* (FUN24) 4-8 June 2024, Island of La Maddalena, Italy.
- *Future Conference Technology* (FTC24) 14-15 November 2024, London, United Kingdom.
- *The 29th London Stringology Days & London Algorithmic Workshop (LSD & LAW for Costas)* 5 February 2025, London, United Kingdom
- *Sequences in London*, 6-7 February 2025, London, United Kingdom
- *2nd Workshop on Quantum Algorithms, Software and Applied Research, QUASAR25* 20 July 2025, South Bend, IN - USA.

INTERNATIONAL JOURNALS (4 PAPERS)

1. Simone Faro, Francesco Pio Marino and Arianna Pavone. Efficient Online String Matching Based on Characters Distance Text Sampling. *Algorithmica*, Springer, 2020. doi:10.1007/s00453-020-00732-4
2. Simone Faro, Francesco Pio Marino and Arianna Pavone. Improved characters distance sampling for online and offline text searching. *Theoretical Computer Science*, Volume 946, 2023. doi:https://doi.org/10.1016/j.tcs.2022.12.034
3. Simone Faro, Francesco Pio Marino and Gabriele Messina. Extending Qutes: A Practical High-Level Language for Quantum Computing. *The Computer Journal*, doi: https://doi.org/10.1093/comjnl/bxaf133
4. Simone Faro, Thierry Lecroq and Francesco Pio Marino. Optimal Character Distance Sampling for Exact String Matching through Set Cover Reformulation. IEEE Access 2026.

INTERNATIONAL CONFERENCES (14 PAPERS)

5. Simone Faro and Francesco Pio Marino. Reducing Time and Space in Indexed String Matching by Characters Distance Text Sampling. *Proceedings of the Prague Stringology Conference 2020, PSC 2020*
6. Simone Faro, Francesco Pio Marino, Stefano Scafiti. Fast-Insertion-Sort: a New Family of Efficient Variants of the Insertion-Sort Algorithm. *Proceedings of the SOFSEM 2020 Doctoral Student Research Forum co-located with the 46th International Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM 2020)*, CEUR Workshop Proceedings, Vol.2568, pp. 37-48, 2020.
7. Simone Faro, Francesco Pio Marino, Arianna Pavone and Antonio Scardace. Towards an Efficient Text Sampling Approach for Exact and Approximate Matching. *Proceedings of the Prague Stringology Conference 2021, PSC 2021.*
8. Simone Faro, Francesco Pio Marino and Arianna Pavone. Enhancing Characters Distance Text Sampling by Condensed Alphabets. *Proceedings of the 22nd Italian Conference on Theoretical Computer Science, ICTCS 2021.*
9. Simone Faro, Francesco Pio Marino, Andrea Moschetto, Arianna Pavone and Antonio Scardace. The Great Textual Hoax: Boosting Sampled String Matching with Fake Samples.*Proceedings of the 12th International Conference on Fun with Algorithms, FUN 2024.*
10. Simone Faro, Francesco Pio Marino and Antonio Scardace. Practical Implementation of a Quantum String Matching Algorithm. *Quantum Search and Information Retrieval, QUASAR24.*
11. Simone Faro, Francesco Pio Marino and Andrea Moschetto Beyond Horspool: A Comparative Analysis in Sampled Matching. *Proceedings of the Prague Stringology Conference 2024, PSC 2024.*
12. Domenico Cantone, Claudio Caudullo, Simone Faro, Francesco Pio Marino, Arianna Pavone and Caterina Viola. Practical Quantum Combinatorial String Matching *Future Technologies Conference (FTC) 2024.*
13. Simone Faro, Thierry Lecroq, Francesco Pio Marino, Arianna Pavone and Stefano Scafiti. Improving Sampled Matching through Character Context Sampling *Proceedings of the 25th Italian Conference on Theoretical Computer Science, ICTCS 2024.*
14. Simone Faro, Francesco Pio Marino. Scaling Grover's Search for Large Solution Spaces. *ACM Symposium on High-Performance Parallel and Distributed Computing 2025, HPDC25.*
15. Simone Faro, Francesco Pio Marino and Gabriele Messina. Qutes: A High-Level Quantum Programming Language for Simplified Quantum Computing. *ACM Symposium on High-Performance Parallel and Distributed Computing 2025, HPDC25.*
16. Simone Faro, Dominik Köppl and Francesco Pio Marino. Attractor Matching: A New Paradigm for Structural String Comparison. *Data Compression Conference 2026 (DCC26).*
17. Simone Faro, Dominik Köppl, Thierry Lecroq and Francesco Pio Marino. Enabling FM-Index for Elastic-Degenerate Strings via a new Min/Max Wavelet Tree. *Data Compression Conference 2026 (DCC26).*
18. Simone Faro, Dominik Köppl, Thierry Lecroq and Francesco Pio Marino. A Bitwise Approach to SCER Matching in Indeterminate Strings . *Combinatorial Pattern Matching 2026 (CPM26).*

REFEREE SERVICES

Reviewer for the following international journals and conferences:

- Transactions on Quantum Computing, ACM