

YASSINE HAMOUDI

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<https://www.irif.fr/~hamoudi/>

EDUCATION

IRIF, Université de Paris 2017 - 2021

- PhD in Computer Science under the supervision of Frédéric Magniez and Miklos Santha.
- Title: Quantum Algorithms for the Monte Carlo Method.

Ecole Normale Supérieure de Lyon 2013 - 2017

- Grande Ecole (a leading institution of higher education, entrance to which is based on competitive examination).
- Bachelor's and Master's Degrees in Computer Science - obtained with highest honors.

Classe préparatoire aux Grandes Ecoles, Lycée Champollion 2011 - 2013

- Two years of intensive course after high school, preparing for the entrance exam to French "Grandes Ecoles". Major in Mathematics and Physics.

EXPERIENCE

Teaching assistant at Université de Paris 2017 - 2020

- Automata and Lexical Analysis (24 hours). Databases (36 hours). Object-oriented programming and GUI (36 hours). Python programming (84 hours).

Co-founder of Deep Thought Project 2014 - 2017

- Natural language question answering system - Acquired by LEXISTEMS in 2017.
- Project website: <http://projetpp.github.io/> (no longer maintained).

Research Internships

- CQT, Singapore, 2017 (3 months). On *Pigeonhole Subset Sum and Interactive Proofs in Quantum Communication*, with Miklos Santha and Hartmut Klauck.
- IRIF, France, 2016 (6 months). On *Quantum Time-Space Tradeoffs and Multiplicative Adversary Method*, with Frédéric Magniez.
- Carnegie Mellon University, USA, 2016 (5 months). On *Communication Complexity in the Number-On-the-Forehead Model*, with Anil Ada.
- LIAFA, France, 2015 (3 months). On *Huffman-like Problems and Phylogenetic Trees*, with Sophie Laplante and Roberto Mantaci.
- LIX, Ecole Polytechnique, France, 2014 (2 months). On *Polynomial Space Computation on Analog Models of Computations*, with Olivier Bournez.

SERVICE

Organizer of the seminar "Algorithms and Complexity" at IRIF from 2017 to 2021.

Reviewer for MFCS 2018, ICALP 2019, FSTTCS 2020, ITCS 2021, SODA 2021, STACS 2021, QIP 2021, ICALP 2021, MFCS 2021, FOCS 2021.

PUBLICATIONS

Quantum Sub-Gaussian Mean Estimator.

Yassine Hamoudi. *In Proceedings of the 29th European Symposium on Algorithms (ESA)*, 2021.

Quantum Time-Space Tradeoff for Finding Multiple Collision Pairs.

Yassine Hamoudi and Frédéric Magniez. *In Proceedings of the 16th Conference on the Theory of Quantum Computation, Communication and Cryptography (TQC)*, 2021. **Outstanding Paper Award.**

Quantum Algorithms for Hedging and the Learning of Ising Models.

Patrick Reberntrost, Yassine Hamoudi, Maharshi Ray, Xin Wang, Siyi Yang, Miklos Santha. *In Physical Review A, volume 103*, 2021.

Quantum and Classical Algorithms for Approximate Submodular Function Minimization.

Yassine Hamoudi, Patrick Reberntrost, Ansis Rosmanis, Miklos Santha. *In Quantum Information & Computation, volume 19*, 2019.

Quantum Chebyshev's Inequality and Applications.

Yassine Hamoudi and Frédéric Magniez. *In Proceedings of the 46th International Colloquium on Automata, Languages, and Programming (ICALP)*, 2019.

Simultaneous Multiparty Communication Complexity of Composed Functions.

Yassine Hamoudi. *In Proceedings of the 43rd International Symposium on Mathematical Foundations of Computer Science (MFCS)*, 2018.

SCIENTIFIC TALKS

Conferences

- Conference on the Theory of Quantum Computation, Communication and Cryptography (TQC), Virtual, 2021.
- International Colloquium on Automata, Languages and Programming (ICALP), University of Patras, Greece, 2019.
- International Symposium on Mathematical Foundations of Computer Science (MFCS), Liverpool, 2018.

Seminars

- Bristol QIT Seminar, University of Bristol, 2020.
- Centre for Quantum Technologies Seminar, Singapore, 2019.

Workshops

- Workshop on Quantum Algorithms and Complexity, IQC, Waterloo, 2019.
- Quantum Algorithms and Applications (QUANTALGO) Workshop, CWI, Amsterdam, 2019.
- Quantum Algorithms for Massive Data (QUADATA) Project, IRIF, Paris, 2019.
- Journées Informatique Quantique (JIQ), LORIA, Nancy, 2018.
- Quantum Algorithms and Applications (QUANTALGO) Workshop, IRIF, Paris, 2018.

SKILLS

Languages	French (mother tongue), English (advanced level, both written and oral), Arabic and German (basic).
Sports	Mountain Biking and Hiking.