YASSINE HAMOUDI

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`https://yassine-hamoudi.github.io/`

EDUCATION

Simons Institute for the Theory of Computing   September 2021 - Today

· Simons Quantum Postdoctoral Fellow hosted by Umesh Vazirani.

IRIF, Université de Paris   2017 - 2021

· PhD studies under the supervision of Frédéric Magniez and Miklos Santha.
· Co-hosted with the Centre for Quantum Technologies in Singapore.

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· Project website: `http://projetpp.github.io/` (no longer maintained).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 weekly seminar "Algorithms and Complexity" at IRIF from 2017 to 2021.

Conference reviewer for FOCS, FSTTCS, ICALP, ITCS, MFCS, QIP, SAC, SoCG, SODA, STACS, TQC.

Program committee member for QTML 2022.

PUBLICATIONS

A Sublinear-Time Quantum Algorithm for Approximating Partition Functions.
Arjan Cornelissen, Yassine Hamoudi. *Preprint*, 2022.

Classical and Quantum Dynamic Programming for Subset-Sum and Variants.
Jonathan Allcock, Yassine Hamoudi, Antoine Joux, Felix Klingelhofer, Miklos Santha. *In Proceedings of the 30th European Symposium on Algorithms (ESA)*, 2022.

Preparing Many Copies of a Quantum State in the Black-Box Model.
Yassine Hamoudi. *In Physical Review A*, 2022.

Near-Optimal Quantum Algorithms for Multivariate Mean Estimation.
Arjan Cornelissen, Yassine Hamoudi, Sofiene Jerbi. *In Proceedings of the 54th Symposium on Theory of Computing (STOC)*, 2022.

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.

Quantum algorithms for hedging and the learning of Ising models.
Patrick Rebentrost, Yassine Hamoudi, Maharshi Ray, Xin Wang, Siyi Yang, Miklos Santha. *In Physical Review A*, 2021.

Quantum and Classical Algorithms for Approximate Submodular Function Minimization.
Yassine Hamoudi, Patrick Rebentrost, 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
· European Symposium on Algorithms (ESA), Virtual, 2022.
· Symposium on Theory of Computing (STOC), Rome, Italy, 2022.
· European Symposium on Algorithms (ESA), 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
· Stanford Theory Lunch, Stanford University, 2022.
· Quantum Research Pod, Simons Institute for the Theory of Computing, 2021.
· QuSoft Seminar, QuSoft, 2021.
· GT Info-Quantique, LaBRI, 2021.
· 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 (QUDATA) 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.