








Professional Experiences

October 2024 - October 2026	Postdoc researcher joint between ULB and CNRS Paris Research on analog quantum computing with the team of Jérémie Roland at centre for QuIC and analog quantum advantageous algorithms with the team of Frederic Magniez and Simon Apers. Co-supervising a PhD student.	 	Brussels, Belgium Paris, France
February 2021 - August 2024	Quantum Researcher (April to August 2024) Collaborative work with Leonardo Novo at INL, Braga, Portugal on the study of avoided crossing during an analog quantum evolution to solve NP-Hard problems. PhD with Eviden and Orléans University Complexity analysis of analog quantum computing for NP-Hard combinatorial problems (publication on Scholar and participation to many talks around the world - invited speaker at AQC2023) — supervised by Simon Martiel and Ioan Todinca	 	Clayes-sous-Bois & Orléans, France
May - October 2020	Research Internship - Quantum Computing at ATOS Analyzed the effect of anti-crossings in the problem Finding Clique solved by Quantum Adiabatic Evolution — supervised by Simon Martiel Master validation: A+		Clayes-sous-Bois, France
April - August 2019	Individual Research MSc Project - Quantum Programming Implementation of Quantum State Tomography algorithms and Gates synthesis — supervised by Mario Berta		London, UK
October - June 2017	Oral Reviewer in Mathematics in Prépa Examination of maths orals in PCSI (high level abstract maths) Developed strong Pedagogical Assets		Balma, France

Education

2016 - 2020	ISAE-Supaero (Graduate School): Engineer curriculum / Master degree Course of study: Decision and Data Science Field: Modeling and Simulating Complex Systems GPA=4.1		Toulouse, France
2018 - 2019	Imperial College London - MSc in Computing (Spe Artificial Intelligence) Optional Modules : Quantum Computing, Privacy Engineering DISTINCTION		London, UK
2014 - 2016	Lycée Sainte Geneviève Highly competitive national entrance exams to leading French Grandes Écoles		Versailles, France

Personal Projects

November - March 2020	Engineer project manager with InstaDeep Lead a team of 6. Implementation and comparisons of different deep reinforcement learning, deep learning and operational research algorithms for train rescheduling		Toulouse, France
May - June 2017	Creativity and Innovation Project Connected 3D Model of Supaero campus (3D printed building and 360° photos)		Toulouse, France

Linguistic and Computer Skills

French : Mother tongue English : Professionally Fluent	German / Spanish / Langue des Signes Française : Notion	OS : MacOS, Linux Languages : Python, Julia, C
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Personal Interests

Sports	Meditation/ philosophy	Hobbies
Climbing, Squash, Rugby, Judo	3 vipassana retreat, mieux penser pour mieux vivre	Socially involved, origami, puzzle solving, cooking, reading (scientific dissemination, human psychology)

Publication

Braida, A., Martiel, S. Anti-crossings and spectral gap during quantum adiabatic evolution. Quantum Inf Process 20, 260 (2021).

Braida, A., Martiel, S. Todinca, I. On constant-time quantum annealing and guaranteed approximations for graph optimization problems. 2022 Quantum Sci. Technol. 7 045030

Braida, A., Martiel, S. Todinca, I. Avoided level crossings with exponentially closing gaps in quantum annealing. Phys. Rev. A, 109 (2023).

Braida, A., Martiel, S. Todinca, I. (2024). Tight Lieb–Robinson Bound for approximation ratio in quantum annealing. npj Quantum Information, 10(1), 40.

Braida, A., Chakraborty, S., Chaudhuri, A., Cunningham, J., Menavlikar, R., Novo, L., and Roland, J., Unstructured Adiabatic Quantum Optimization: Optimality with Limitations. Quantum 9, 1790 (2025).

International Conference participation

TQC 22: 17th Conference on the Theory of Quantum Computation, Communication and Cryptography - « CONSTANT-TIME QA : Guaranteed Approximation for MaxCut »

AQC 23 (invited speaker): 12th Adiabatic Quantum Computing conference - « On constant-time quantum annealing and guaranteed approximations for graph optimization problems »

INQA 23: International Network on Quantum Annealing Conference - « Anti-crossings occurrence as exponentially closing gaps in Quantum Annealing »

AQC 24: 13th Adiabatic Quantum Computing conference - « Tight Lieb-Robinson Bound for approximation ratio in Quantum Annealing »

AQC 25: 14th Adiabatic Quantum Computing conference - « Unstructured Adiabatic Quantum Optimization: Optimality with Limitations »

Teachings

- Algorithmic in python (1st year undergrad)
- Tools for developers (2nd year undergrad)
- Representation and encoding of information (2nd year undergrad)
- Introduction to artificial intelligence: logic (Master)
- Introduction to Quantum Annealing

Seminars &co participation

International seminars :

- [ESQuisses 2022](#): Summer School on quantum evolution - oral presentation
- [Quantum Computing Summer school](#): Summer School on quantum algorithms at Bad Honnef - poster presentation;
- [CIRM 2023](#): Quantum Days at AMU - oral presentation « Anti-crossings in QA »
- [EoS Ghent 2025](#) - oral presentation

French seminars and workshops :

- [QuData 2021](#): Quantum algorithms for massive data - oral presentation;
- [JGA 2021](#): Journées Graphes et Algorithmes (online) - oral presentation;
- [EDF seminar 2022](#) - oral presentation - with many French quantum actors
- [EJCIM 2022](#): Summer School young researchers Mathematics & Computer science - oral presentation « Introduction to locality and approximation in quantum annealing »
- [CaSciModOT 2022](#): Scientific computation and modeling - oral presentation on « Introduction to Quantum Annealing »;
- [CoA 2023](#): 3rd workshop Complexity and Algorithms - oral presentation;
- [GdR-TeQ 2023](#): 1st colloquium Quantum Technologies - poster presentation;
- [QuData 2024](#): Quantum algorithms for massive data - oral presentation (advanced)
- [ASQ3 2025](#): Algorithms and Software Quests in Quantum Computing - oral presentation on « Non convex optimization via analog quantum computing »