

Marco Biroli

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STUDIES

2020 – 2021	International Center for Fundamental Physics Master 1 program, Ecole Normale Supérieure.
2019 – 2020	Licence 3 in Physics, Ecole Normale Supérieure and Ecole Polytechnique. Average in Physics : 15.5/20 Average in Mathematics/CS : 19.5/20
2017 – 2019	Bachelor of Science, Ecole Polytechnique, Majoring in Physics and Mathematics. Sem. 1 GPA: 4.12/4.0 Sem. 2 GPA: 4.17/4.0 Sem. 3 GPA: 4.2/4.0 Sem. 4 GPA: 4.2/4.0
2014 – 2017	French Baccalaureate with specialty Mathematics, Ecole Active Bilingue Jeannine Manuel.

AWARDS

July 2020	Bachelor Diploma of Ecole Polytechnique Summa Cum Laude.
2018 – 2020	Excellence Scholarship from the Ecole Polytechnique Foundation

INTERNSHIPS

06.2020 – 08.2020	<i>"Generalization of Event Chain Monte-Carlo algorithms to elliptic particles"</i> under the supervision of Werner Krauth (CNRS Research Director) . ECMC algorithms are state of the art methods for solving complex many-bodies interacting systems. During my internship I developed a generalization of such algorithms to non-spherical particles with solid boundary conditions. We are currently working on generalizing the algorithm to periodic boundary conditions.
06.2019 – 08.2019	<i>"Quantum localization transitions in quasi-periodic lattice systems"</i> under the supervision of Laurent Sanchez-Palencia (CNRS Research Director, Head of the Quantum Matter group at CPT) . Critical and fractal properties of quantum particles in quasi-periodic potentials. Realization of numerical calculations, analysis of the data, critical discussion of the numerical results, and interpretation.
06.2018 – 08.2018	<i>"Development of path and motion planning algorithms"</i> under the supervision of Adina Panchea (Post-Doc Researcher at LIX) . I developed an algorithm for Path/Motion Planning that I had come up with during the year. I also started building a graphical interface that would regroup all well-known path/motion planning algorithms.

COMPUTER SKILLS	Python, C++, Mathematica, MATLAB & Simulink, Git, LaTeX
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LANGUAGES	French (<i>Native</i>), Italian (<i>Native</i>), English (<i>Native</i>), Spanish (<i>B2</i>)
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EXTRA-CURRICULAR ACTIVITIES & COMPETITIONS

2020	Participated in the ENS team for the <i>French Physicist's Tournament</i> .
2017	Participated in the <i>National High School Competition in Physics and Chemistry</i> .
2015	Ranked 6 th in the world with congratulations from the jury for my young age in the <i>Rover On Mars Challenge</i> from MATLAB & Simulink
2014	Ranked 100 th in the world in 2014 in the competition <i>Coders Strike Back from CodinGame</i> .