

Antoine Marie

MASTER 2 STUDENT

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Education

École Normale Supérieure de Lyon

Lyon, France

MSC IN COMPUTATIONAL PHYSICS AND CHEMISTRY

Sep. 2019 - Today

- I attended to the "Computational Physics and Chemistry" course program of the ENS' Master in chemistry.
- Average grade: 16.2/20 in 1st year and 17.4/20 in 2nd year.

École Normale Supérieure de Lyon

Lyon, France

BSC IN CHEMISTRY

Sep. 2018 - Jul. 2019

- Average grade: 15,3/20

Lycée Victor Hugo

Caen, France

"CLASSE PRÉPARATOIRE PCSI/PC"

Sep. 2015 - Jul. 2018

- Two years intensive courses preparing for the entrance exam to French "Grandes Écoles". Ranked 33th at the École Normale Supérieure de Lyon entrance exam, the second most difficult to enter in France.
- Specialized in Mathematics, Physics and Chemistry.

Experience

Laboratoire de Physique et Chimie Quantique

Toulouse, France

2ND YEAR OF MASTER DEGREE INTERNSHIP WITH PIERRE-FRANÇOIS LOOS

Feb. 2021 - Today

- Studied coupled-cluster methods.
- Worked on the variational pair coupled cluster for excited-states.

Laboratoire de Physique et Chimie Quantique

Toulouse, France

1ST YEAR OF MASTER DEGREE INTERNSHIP WITH PIERRE-FRANÇOIS LOOS

May 2020 - Jul. 2020

- Studied perturbation theory in electronic structure theory.
- Worked on the connection between singularities in the complex plane and convergence properties.

Laboratoire de Catalyse et Spectrochimie

Caen, France

BACHELOR DEGREE INTERNSHIP WITH MARIAME AKOUCHE

Jun. 2019 - Jul. 2019

- Worked on synthetization and characterization of embryonic zeolithes.
- Used/learned various characterization methods: : XRD, UV-vis spectroscopy, N2-sorption measurements, NMR, IR in-situ ...

Skills

Programming Mathematica, Fortran, Bash

Software Linux, LaTeX

Languages French (native), English (Cambridge C1 certification)

Publications

- 2021 **Variational coupled cluster for ground and excited states**, A. Marie, F. Kossoski, and P.F. Loos. *J. Chem. Phys.* (Open Access) **155**, 104105 (2021).
- 2021 **Excited states from state specific orbital optimized pair coupled cluster**, F. Kossoski, A. Marie, A. Scemama, M. Caffarel, and P.F. Loos. *J. Chem. Theory Comput.* (Open Access) **17**, 4756 (2021).
- 2021 **Perturbation theory in the complex plane: Exceptional points and where to find them**, A. Marie, H.G.A. Burton, P.F. Loos. *J. Phys. Cond. Mat.* (Open Access) **33**, 283001 (2021).