

Maxime Rey

Magistère - Master in Astrophysics

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Education

- 2019–now **Ph.D. in Astrophysics**, *Centre de Recherche Astrophysique de Lyon (CRAL)*, École Normale Supérieure de Lyon, advisor: Jérémy Blaizot.
- 2016–2019 **Magistère de Physique Fondamentale d'Orsay**, *Université Paris Sud*.
- 2018–2019 **Master 2 (M.sc.)- Astrophysics**, *Université Lyon 1*, *valedictorian*.
Done at the Centre de Recherche Astrophysique de Lyon (CRAL).
- 2017–2018 **Master 1 - School of Physics and Astronomy**, *University of Manchester*.
MPhys year, Erasmus+ Programme.
- 2016–2017 **Licence 3 (B.Sc.) - Fundamental Physics**, *Université Paris-Sud*, Orsay.
- 2014–2016 **CPGE MP¹**, *Lycée Jean Perrin*, Lyon, *with honours*.

Teaching

- 2019 **Electromagnetism**, *CPGE MP¹*, khôlles² (oral examinations).
- 2019 **Thermodynamics**, *1st year Bachelors*, lab course.

Outreach

- 2019–now **Member of DéMesures (outreach association)**.
- 2020 **Popularizer**, Planétarium de Vaulx-en-Velin, *Congrès scientifique des enfants*.
- 2019 **Soirées de l'observatoire**.

Research schools/conferences

- 2019–now Weekly conferences at CRAL
- 2020 Astrosim school
- 2019 European Week of Astronomy and Space Science (EWASS)

Skills

- Physics Astrophysics & cosmology, fundamental physics, numerical simulation, etc.
- Simulation RAMSES-RT (Radiation hydrodynamics in the cosmological context)
- Languages Bash, Python, Fortran, C/C++, Matlab, L^AT_EX, Leekscript, Arduino, SQL & Git.

Languages

- French Native
- English Advanced (C1, TOEIC: 970/990 ↔ 98%)
- Spanish Intermediary
- German Beginner

Undergraduate experience

- Feb. 2019 to Jun. 2019 **Modelisation of slitless spectrographic observations from the Auxiliary Telescope within the framework of the Large Synoptic Survey Telescope.**
Master 2 - Magistère 3 internship supervised by Yannick Copin, Cosmos group, IPNL.
- Nov. 2018 to Jan. 2019 **Developpement of a 2D hydrodynamical code and application to the modelisation of a supernova.**
Master 2 project supervised by Jérémy Blaizot, CRAL.
- Oct. 2018 à Déc. 2019 **Photometric study of the open cluster NGC 1245.**
Study made after a week spent at the Haute-Provence Observatory (OHP).
- Jan. 2018 to May 2018 **Effect of quasi-two-dimensional confinement on the dynamics of a plume thermal.**
MPhys Project supervised by Julien Landel, Manchester Centre for Nonlinear Dynamics.
- Sept. 2017 to Jan. 2018 **Collimation of the High Luminosity Large Hadron Collider using a Hollow Electron Lens.**
MPhys Project supervised by Rob Appleby, Particle Physics Group (Hilumi Project).
- Jul. 2017 **"Rencontres d'été de physique de l'infiniment grand à l'infiniment petit".**
Summer internship at B.Sc. level, IN2P3, Orsay.
- Jun. 2017 to Jul. 2017 **Implementation of a molecules detection system by induced fluorescence.**
Licence 3 internship supervised by Hans Lignier, Aimé Cotton Laboratory (LAC).

Interests

- Sports Climbing (passion since 2012, competition), aikido, tennis (5,5 ans), karate (3 ans), volley (competition, 1 an), extreme sports, ski, snowboard, scuba-diving, etc.
- Music Electric guitar (since 2010), Piano (4 yrs), Drums (1 yr)
- Travels
 - Oceania: Tahiti (8 yrs), New-Zealand, Australia, Easter Island;
 - America: U.S.A, Canada, Hawaï, Peru, Chili, Bolivia, Mexico;
 - Europe: United-kingdom, Scotland, Spain, Germany, Italy, Belgium, etc.;
 - Asie: Japan, Thailand.
- Literature Myths and Epics (Gilgamesh, Nibelungen, Edda), Fantasy (J.R.R. Tolkien), Fantastic (H.P. Lovecraft), etc.;
- Others Environmentalism, Philosophy (cynicism, critical thinking, etc.), theatre.