



Pierre Marchand

Postdoc researcher

Experience

Research

- Since Oct 2017 **Postdoc**, *Osaka University*, Osaka, Japan, JSPS Fellowship.
Star formation simulations with non-ideal MHD.
- Oct 2014 – Sep 2017 **PhD Thesis**, *CRAL*, Lyon, France.
Study of physical processes involved in star formation.
 - Numerical simulations (Fortran 90, AMR, Parallel Computing),
 - Non-ideal Magnetohydrodynamics,
 - Chemistry.
- Mar-Jul 2013 **Internship**, *CRAL*, Lyon, France.
Study of the pulsations of gaseous planets.
- May-Jul 2012 **Internship**, *Tohoku University*, Sendai, Japan.
Study of the light profiles of distant galaxies from observational data.

Teaching

- 2015 – 2017 **Teaching assistant in mathematics**, *Université Claude Bernard Lyon 1*, Lyon.
Tutorial classes and oral examinations in first and second year of University.
- 2015 **Teaching assistant in sustainable development**, *Université Claude Bernard Lyon 1*, Lyon.
Short courses on energy sources for second year students.
- 2013 – present **Private tuitions**, *Methodia*, Lyon & Paris.
Private tuitions for students in mathematics and physics from Middle School to 3rd year of University. Training classes in mathematics to prepare competitive examinations.

Communications

Conferences and seminars

- Nov 2018 Seminar at Tokyo University, Tokyo, Japan
- Sep 2018 Seminar at IPAG, Grenoble, France
- Sep 2018 Oral presentation at the RAMSES User Meeting, Lyon, France
- Mar 2018 Seminar at Kyushu University, Fukuoka, Japan
- Jun 2016 Oral presentation at the Astronomy and Astrophysics French Society (SF2A), stellar physics session (PNPS), Lyon, France

08/10/1990 – French – 1 child (2016)

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- Sep 2015 Oral presentation at the RAMSES User Meeting, Oxford, United Kingdom
- Jun 2015 Poster session at the *Disc Dynamics & Planet Formation* conference, Lanarka, Cyprus

Outreach

- Dec 2018 Conference on the life cycle of stars for 2nd year scientific high school students, Osaka
- Apr 2015, 2016, 2017 "Astro week", Accompanying high school students to visit the planetarium, computing center and Lyon observatory.
- 2015 – 2017 Presentation of the astrophysics department at ENS of Lyon and astronomy-related subjects for visiting middle and high school students (~90 minutes)
- May 2016 Presentation of astronomy subjects for 10 years old elementary school children (90 minutes)
- Mar 2012 "Nuit de l'équinoxe", Public gathering of the astronomy clubs of Lyon.

Education

- Sep 2013 – **Master Degree in Astronomy and Astrophysics**, *Paris observatory*.
- Oct 2014 Theoretical astrophysics (fluid mechanics, radiative transfer, computational astrophysics). Ranking: 7th/33.
- Sep 2010 – **Engineering degree**, *École Centrale*, Lyon.
- Sep 2013 Specialised in Energy (electrical network, nuclear energy).
- Sep 2008 – **Classes préparatoires**, *Lycée Chaptal*, Paris.
- Jun 2010 Intensive courses of mathematics and physics to prepare competitive examinations. Accepted in École Centrale de Lyon.

School projects

- 2012 Theoretical and numerical study of a photon trap.
- 2011 Design and building of an aluminium crafting oven for Senegalees craftsmen.

Computer skills

- Advanced Fortran 90, \LaTeX
- Intermediate PYTHON, Office, Linux, Microsoft Windows
- Basic Parallel Computing, HTML, CSS, C++, Matlab, MAPLE

Languages

- French **Mother tongue**
- English **Fluent**
- Japanese **Intermediate** *Can handle low-intermediate conversations*
- Spanish **Basic** *Middle school and high school courses*

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