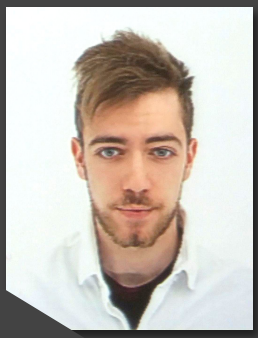

Pierre HOUDAYER

PhD student in asteroseismology

Personal details

French citizen (25 y.o.)

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92190 Meudon,
France

Languages

French - *Native*

English - *Fluent*

Skills

Python OO Programming

Libraries: *numpy, scipy, pandas, emcee, sklearn, george, tensorflow*

Advanced math expertise

Fields: Algebra, probabilities, Bayesian inference, Gaussian processes, numerical methods

Interests

Sports: Trail, running, hiking whenever I can

Math: learning about Bayesian inference, model everything I can get my hands on

EDUCATION

2019 - 2022 *(ongoing)* — **PhD in stellar physics**
Seismic mass determination of F, G, and K stars: exploitation of KEPLER and TESS data and scientific preparation for PLATO, ESA's M3 mission
Supervisors: Marie-Jo Goupil & Daniel Reese

2018 - 2019 — **Master's degree** (2nd year):
Astronomy, Astrophysics and Spatial Engineering at Paris Observatory **(Rank: 1/37, grade: 16.9/20)**
- Including classes of **asteroseismology**, **stellar physics**, **hydrodynamics** and **numerical methods**

2017 - 2018 — **Master's degree** (1st year):
Science of the Universe and Space Technologies at Paris Observatory **(Rank: 2/17, grade: 16.7/20)**
- Including classes of **stellar physics**, **hydrodynamics**, **thermodynamics** and **inversion methods**

2016 - 2017 — **Bachelor's degree**:
Science and Properties of Matter at Rennes 1 University **(Rank: 1/32, grade: 16.0/20)**
- With **astrophysics** major

2014 - 2016 — **two-year intensive program** preparing for the national competitive exam for entry to engineering schools

2014 — **High School diploma** with honours

EXPERIENCE

September 2020 - *(ongoing)* — **Master's course teacher:** *Data processing & Inversion methods* classes at Paris Observatory

March - July 2019 *(5 months)* — **LESIA internship**: *Generalising the notion of polytrope for the seismic glitch study*
Supervisors: Marie-Jo Goupil & Daniel Reese

April - June 2018 *(2 months)* — **LESIA internship**: *Implementation of a centrifugal model deformation method using advanced numerical methods*
Supervisors: Daniel Reese & Marie-Jo Goupil
Poster: Houdayer P., Reese D. & Guillot T., SF2A-2019, May 2019

April - June 2017 *(2 months)* — **LESIA internship**: *Determining the depth of the convective zone base through the seismic glitch signature*
Supervisors: Marie-Jo Goupil & Daniel Reese

PUBLICATION

Pierre S. Houdayer, Daniel R. Reese, Marie-Jo Goupil, and Yveline Lebreton (2021) *Properties of the ionisation glitch: I. Modelling the ionisation region*, Astronomy and Astrophysics, A&A, 2021, 655 (A85), DOI: 10.1051/0004-6361/202141711