

# Arthur LE SAUX

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## Contact Information

🏠 Physics & Astronomy, University of Exeter,  
EX4 4QL, Exeter, United-Kingdom

☎ +33 (0)6 50 53 28 73

✉ [al598@exeter.ac.uk](mailto:al598@exeter.ac.uk)

🌐 [orcid:0000-0002-6686-7956](https://orcid.org/0000-0002-6686-7956)

## Experience

- 2019 – Present **Postgraduate Research Student**, Physics & Astronomy, University of Exeter, UK  
Co-direction: CRAL, Ecole Normale Supérieure, Lyon, Université de Lyon, France  
Supervisors: Prof. Isabelle Baraffe & Dr. Thomas Guillet  
*Understanding **mixing processes in stars** using **hydrodynamical simulations***
- 2019 **Master's thesis** (5 months), AIM-CEA, Université Paris-Saclay, Gif-sur-Yvette, France  
Supervisors: Dr. Rafael A. García & Dr. Lisa Bugnet  
*Identification and **classification of pulsating stars** by combining classical **asteroseismology** and **intelligent methods***
- March 2019 **Observation Trainee** (1 week), IRAM, Granada, Spain  
Supervisor: Dr. Pierre Guillard  
*Turbulence and proto-stellar **outflows mapping** in **L1251-A***
- 2018 **Master's thesis** (6 months), Laboratoire de Météorologie Dynamique, Paris, France  
Supervisor: Dr. Sébastien Lebonnois  
*Study of large-scale **gravity waves** in the deep **atmosphere of Venus***
- Summer 2017 **Research Intern** (3 months), Physics & Astronomy, University of Exeter, UK  
Supervisor: Prof. Isabelle Baraffe  
*Theoretical and numerical approach of **hydrodynamic processes in stellar interiors***
- 2017 - 2018 **Research Project** (1 year), Institut des Nanotechnologies de Lyon, Ecully, France  
Supervisors: Dr. Bertrand Vilquin & Dr. Pedro Rojo Romeo  
*Theoretical and practical study on **hyperbolic metamaterials***

## Education

- 2019 – Present **PhD in Astronomy & Astrophysics** (Ongoing), University of Exeter, UK  
Expected March 2023
- 2019 **Master of Science**, Observatoire de Paris, France  
Astronomy, Astrophysics & Space Engineering  
*Specialisation: **Stellar physics**, **Asteroseismology**, **Numerical Methods**, **Data Science***
- 2018 **Master of Engineering**, Ecole Centrale de Lyon, France  
*Specialisation: **Hydrodynamics**, **Nanotechnologies** and **Biotechnology***
- 2015 **Bachelor of Science**, Sorbonne Université, Paris, France  
Mechanical Engineering  
*Specialisation: **Fluid dynamics**, **Acoustics**, **Thermal Physics***
- 2011 **French Baccalaureate**, with Honours, Lycée Alphonse Daudet, Nîmes, France

## Grants & Awards

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- 2022 Kavli Summer Program in-person workshop, Göttingen, Germany (~1000€)
- 2021 Kavli Summer Program fellowship (Awarded to 8 fellows/ year) (2000\$)
- 2021 1<sup>st</sup> Prize Postgraduate Conference Presentations, Exeter, UK (50£)
- 2019 Artistic residency, Le Port des Créateurs, Toulon, France (6500€)
- 2019 College funded PhD Studentship (3.5 years), University of Exeter, UK (~15000£ /yr)
- 2019 Observation time (36h), IRAM 30m telescope, Granada, Spain

## Oral presentations (12)

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- 2022 UPCOMING: Observatoire de Genève, Switzerland (**Invited seminar**)
- 2022 UPCOMING: Fluid Dynamics of the Sun and stars workshop, Göttingen, Germany
- 2022 Angular momentum in stellar systems workshop, AIM-CEA, Gif-sur-Yvette, France
- 2022 Cool Stars 21, Toulouse, France (Plenary session)
- 2022 PNPS workshop: Codes for stellar physics, Meudon, France
- 2022 EAS meeting 2022, Session 21
- 2022 Good Vibrations seminar series, online (Seminar)
- 2021 Astrophysics group seminar, University of Exeter, UK (Seminar)
- 2021 MUSIC Team Talk, online
- 2021 Kavli Summer Program in Astrophysics, online
- 2021 MUREX festival, Toulon, France (**Invited Talk with L. Fourdrinier**)
- 2021 EMPS PGR Conference 2021, Exeter, UK

## Posters (7)

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- 2022 TASC13/KASC6 workshop, Leuven, Belgium
- 2022 EAS meeting 2022, Session 21
- 2021 Kavli Summer Program in Astrophysics 2021, online
- 2021 Cool Stars 20.5, online ([Poster](#))
- 2021 EMPS PGR Conference 2021, Exeter, UK
- 2020 Exosystem 1, Paris, France (Poster)
- 2019 Meeting SF2A, Nice, France (Poster)

## Teaching & Student supervision

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- 2022 Co-supervision of a an undergrad student from University of Toronto (Canada) in the context of [Simons-NSBP Scholars Program 2022](#) hosted by the CCA, Flatiron Institute (New-York, USA)
- 2022 Co-supervision of a Master student from ENS Lyon, France
- 2022 Committee role for the organisation of the EMPS PGR conference 2022 (in April) and design of the [conference website](#)
- 2020 - Demonstrator for 2<sup>nd</sup> year Physics problem class in Quantum Mechanics, Electromagnetism, Thermal Physics and Condensed Matter (96 hr/yr)
- Present
- 2020 Co-supervision of a Master student from ENS Lyon, France

## Collaboration with an artist

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- Since Active collaboration with [Léo Fourdrinier](#), plastic artist working in Toulon (France).
- 2019 Through regular discussion, Léo reinterprets my research on waves that propagate in stellar interiors for his plastic work. This collaboration started during the [BOOSTER #4](#) artistic residency at [Le Port des Créateurs](#) in Toulon, in 2019.
- 2020 PULSE (Art Exhibition on the theme of asteroseismology) in collaboration with Léo Fourdrinier, L’Axolotl Gallery, Toulon, France ([PULSE presentation](#))