

# LOAN RENAUD

1st year PhD student at IMPMC (Institut de Minéralogie, de Physique des Matériaux et de Cosmochimie), Sorbonne Université.

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📅 Born on 12/14/2001

🌐 loan-renaud



## EXPERIENCE

### Institut de Minéralogie, de Physique des Matériaux et de Cosmochimie (IMPMC)

📅 April 2024 - Present

Supervisors: A. Marco SAITTA, Michele CASULA & Livia E. BOVE.

- Fundamental study of hydrate and ice phases.

### Laboratoire Kastler Brossel (LKB - Collège de France)

📅 April 2023 - June 2023 (53 days)

Supervisors: Raphaël LOPES and Jean DALIBARD.

- Magnetic field calibration using dipolar relaxation losses in the "Ultracold atomic mixture in mixed dimensions" experiment.
- **Publication:** M. Lecomte, A. Journeaux, L. Renaud, J. Dalibard, & R. Lopes (2024). Loss features in ultracold  $^{162}\text{Dy}$  gases: Two- versus three-body processes. Phys. Rev. A, 109(2), 023319.

### Plas@Par Summer School (Plasma Physics)

📅 August 20-27, 2022 in Roscoff

University of Pisa, Sorbonne University, IPI & EUR PLASMA Science

### Summer School "Graduate School in Particle Physics"

📅 July 19-27, 2022 in Annecy

Laboratoire d'Annecy de Physique des Particules (LAPP - CNRS/IN2P3)

### Institut d'Astrophysique de Paris (IAP)

📅 Jan 2022 - June 2022 (10 full days + ½ day per week)

Supervisor: Damien LE BORGNE.

- Determination of galaxy evolution scenario sets.

### Laboratoire de Physique Théorique et Hautes Énergies (LPTHE)

📅 Sept 2021 - Jan 2022 (½ day per week)

Supervisors: Benjamin FUKS, Michela PETRINI, Dan ISRAEL.

## EDUCATION

### PhD at Institut de Minéralogie, de Physique des Matériaux et de Cosmochimie

Sorbonne Université

📅 Oct 2024 - Present

📍 Campus Pierre et Marie Curie, Paris 5th

Supervisors: A. Marco SAITTA, Michele CASULA & Livia E. BOVE.

### Master's Degree - "International Centre for Fundamental Physics", Condensed Matter track

École Normale Supérieure and Sorbonne Université

📅 Sept 2022 - July 2024

📍 Campus Pierre et Marie Curie, Paris 5th

- **Graduated with Honors, ranked 3/40.** Student Representative.

### Bachelor's Degree in Physics SPRINT: "Sorbonne Physique Recherche Intensive et Nouvelles Technologies", Valedictorian

Sorbonne Université

📅 Sept 2020 - June 2022

📍 Campus Pierre et Marie Curie, Paris 5th

- **Graduated with Honors - GPA: 18.6/20**
- Intensive research-oriented curriculum (🎥 Video interview on my academic journey during my Bachelor's degree)

## ABOUT ME

I am working on the fundamental understanding of hydrogen stability in clathrates and ices through advanced molecular simulations, with direct relevance to environmental challenges associated with the stability of natural gas hydrates in the cryosphere.

I have strong interests in condensed matter, and their multidisciplinary interfaces, particularly in Machine Learning and computational physics, aiming to develop innovative approaches to address urgent climatic and environmental issues.

## OTHER ACTIVITIES



Elected student representative

Doctoral School (ED397) Council



Elected representative (2022-2024)

Faculty Council of the Physics

Department, Sorbonne Université



Organiser and co-founder

Sorbonne "SPRINT summer camp"

Summer School (2023-Present)



Past President, Honorary Member, and Co-Founder

Association du cursus SPRINT de

Sorbonne Université



Astrophotography

🔭 Deep Sky and Planetary imagery



Music

Acoustic and Electric Guitar

## SKILLS

Scientific Approach

Decision-Making

Team Leadership

Teaching

Organizational Skills

Science communication

Python & AI

## PROJECTS

- Ongoing science communication project using physics to explain illusions and magic (with Prof. COURTY, CNRS Medal for Scientific Mediation)
- Ongoing science communication on artificial intelligence and its societal implications for high school students
- Low-Cost Electrochemistry with Prof. Maisonhaute (SU - LISE)
- Amateur Stellar Spectroscopy (low-cost)
- "Behind the Blob, the Research", CNRS