

HUGUET ALEXANDRE

MASTER 2 NANOTECHNOLOGIES & NANOMATERIALS



CONDENSED MATTER AND NANOSTRUCTURES

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Born the : 23/06/1999

ACADEMIC BACKGROUND

- *Double diploma* Master, Nanosciences and Nanotechnologies at Rennes University, 2021-2022, and Adam Mickiewicz University, 2022-2023
- Bachelor of fundamental physics at Rennes University, 2018-2021
- First year of medical school, pharmacology major, 2017-2018

INTERNSHIPS AND PROFESSIONNAL EXPERIENCES

MARCH-AUGUST
2023

MASTER THESIS IN SPIN TRANSPORTS

- Study by numerical methods (Python, Feynman diagrams) of spin transport in a Single Electron Transistor coupled to a topological superconductor aiming for quantum memories.
- Supervised by professor Ireneusz Weymann, at the *Institute of Spintronics and Quantum information of Poland*

MAY-JUNE
2022

INTERNSHIP IN X RAY DIFFRACTION ON A CRISTAL

- Study of phase transitions in an organic crystal, the dichlorodurene, by X-ray diffraction.
- Supervised by the Pr. Philippe Rabiller in the *Matériaux et Lumière* department of Rennes

MAY-JUNE
2021

BACHELOR THESIS IN THIN FILMS CHARACTERIZATION BY XPS

- Preparation and characterization of Perovskite/TiO₂ characterization by XPS
- Supervised by Soraya Ababou-Girard at the *Institut de Physique de Rennes* in the *département Matériaux nanosciences* in partnership with the ISCR, aiming the development of solar cells.

2013

PROFESSIONAL INTERNSHIPS

- in a workshop of metallurgy and welding, *Bizeul Workshop*
- as a computer technician apprentice, *Sarzeau*
- in production of aluminium doors and windows, *Bell'm*

2013-2020

VOLUNTEER FIREFIGHTER, SPE. FOREST WILDFIRES

- Multiple missions in a military setting: first aid, traffic accidents, wildland and urban interface fires, childbirth, etc
- Young Firefighter apprentice from 2013 to 2016

2021-2022
2020
2019
2017-2018

SUMMER JOBS

- Food processing factory *AtelierV*, production of hummus
- Food processing factory *Délices de St Léonardt*
- Removal man for *déménageurs bretons*, package sorting for *FEDEX*
- Food processing factory *Procanar*, cold storage environment

RELATED SKILLS

- English B2
- Polish LV1 2022-2023
- Japanese LV2 2020-2021
- Spanish LV2 2011-2017
- Python
- Microcontrollers & C++
- LaTeX
- Experimental methods for thin films

SOFTWARES

- Overleaf
- Arduino IDE
- Presents XPS
- WSxM
- CryAlisPro
- Jana2006
- DL_POLY
- Mercury
- CST Studio
- MATLAB
- Linux systems

REFERENCES

Soraya Ababou-Girard,
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M1 Physics Coordinator, IPR

Pascal Turban,
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Nanosciences Coordinator, IPR

Jacek Kubicki,
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MaMaSELF Coordinator, AMU