

Kelvin Salou-Smith

PERSONAL DETAILS

Date of birth 19/02/1999
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EDUCATION

Doctoral Student	2024-Current
LOMA, Université de Bordeaux	
Machine Learning Methods in Quantum Frustrated Systems: Using Neural Quantum States to study a 3D version of a Shastry-Sutherland lattice. Methods of finding numerically exact results in 3D quantum systems are rare and we aim at optimizing the method so that these structures become accessible.	
M2 International Center for Fundamental Physics	2023-2024
Ecole Normale Supérieure, Sorbonne Université	
Grade: Bien	
Condensed Matter Track: Courses on theoretical tools in condensed matter such as QFT, Green's functions, advanced topics in Statistical Physics and Topological aspects of Condensed Matter, complemented by Machine Learning and Quantum Computation courses, to study matter in exotic phases.	
Numerical Project: Development of a Self-Supervised Model to detect phase transitions	
M1 Fundamental Physics and Applications	2022-2023
Sorbonne Université	
Grade: Très Bien	
General Physics	
Numerical Project: Development of a predictive model for the critical temperatures of superconductors	
Bachelor's Degree in Physics	2017-2021
Université de Bretagne Occidentale	
Grade: Très Bien.	
Bibliographic Project: The black hole information paradox.	
L2 Mathematics, L2 Physical-Chemistry, PACES	
A-Levels (UK equivalent to Baccalaureate)	2015-2017
St. Aidans's & St. John Fisher Associated Sixth Form, England	
Grade equivalence: Bien	
Acheivements: Gold Medal in Bitish Chemistry Olympiad, British Biology Olympiad and Senior Maths Challenge	

WORK EXPERIENCE

Internship: Frustrated Magnetism on a deformed pyrochlore lattice	April 2024 - Current
Laboratoire Ondes et Matière d'Aquitaine	
Theoretical internship: studying a new lattice geometry for frustrated spins through numerical methods (Monte-Carlo Simulations, Exact Diagonalization) and some analytical methods to study the ground state properties of Classical Ising, Heisenberg and Quantum Heisenberg spins on the lattice.	
Internship: Study of charge and spin transport in thin molecular films	2023, 4 months
Laboratoire Matériaux et Phénomènes Quantiques	
Experimental internship: Design and nanofabrication of circuits to study spin transport.	
Projet: Oceanic thermohaline circulation	2021, 3 mois
Laboratoire d'Océanographie Physique et Spatiale	
Experimental project: Recreation of the thermohaline circulation effect in the lab.	
Physics, Chemistry and English Tutor	2018-2021