Denis PÉRICE

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Research

Constructor university 📍 Bremen, Germany 📅 Nov 2023 - Current	**Postdoc -** *DFG[1] grant : Asymptotic Expansions for the Weakly Interacting Bose Gas* School of sciences - Department of Mathematics and Logistics supervisor: Soeren Petrat
CNRS[2] - *UMPA[3]* 📍 Lyon, France 📅 Oct 2020 - Oct 2023	**PHD in mathematical physics -** *Semi-classical limits of 2D fermions under high magnetic fields* modelization and analysis team, ENS Lyon[4] supervisor: Nicolas Rougerie
CNRS - *LPMMC[5]* 📍 Grenoble, France 📅 March - July 2020	**Master Internship -** *Mean Field limits for fermionic systems under high magnetic field* supervisor: Nicolas Rougerie
Osaka university - *Kuwahara lab* 📍 Osaka, Japan 📅 June - August 2019	**Master Internship -** *Study of a carbon nanotubes system with a spontaneous modification of conductance for the development of neuromorphic devices* supervisor: Megumi Akai-Kasaya
CNRS - *Institut Néel* 📍 Grenoble, France 📅 June - August 2018	**Bachelor internship -** *Measurement and analysis of Raman spectroscopy on ceramics, development of python codes for the data treatment* supervisor: Denis Testemale
CNRS - *Institut Néel* 📍 Grenoble, France 📅 May - June 2017	**Bachelor internship -** *Synthesis of new multiferroic compounds and characterization with X-ray diffraction* supervisor: Céline Darie

Formation

ENS Lyon - *UMPA* 📍 Lyon, France 📅 Oct 2020 - Oct 2023	**PHD in mathematical physics -** *Semi-classical limits of 2D fermions under high magnetic fields* supervisor: Nicolas Rougerie
ENS Lyon 📍 Lyon, France 📅 2020 - 2021	**Courses from M2 in advanced mathematics** calculus of variations and elliptic equations, kinetic theory
UGA[6] - *UFR-Phitem[7]*	**Master degree in physics -** *specialisation in condensed matter*

📍 Grenoble, France
📅 2019 - 2020

physics
quantum physics, solid state physics, statistical physics, quantum field theory, relativity, computational physics
Mention good

UGA - *Institut Fourier*
📍 Grenoble, France
📅 2018 - 2020

Courses from Master 1 in fundamentals mathematics
general algebra, differential equations, representation theory, differential geometry, functional analysis, stochastic processes

Grenoble INP[8] - *Phelma[9]*
📍 Grenoble, France
📅 2018 - 2020

Engineering degree - *specialisation in Physics and nano-sciences*
advanced electromagnetism, semiconductor physics, optical physics, numerical methods, experimental methods in physics and nano-sciences
Mention good

Institut Fourier - *UGA*
📍 Grenoble, France
📅 2017 - 2018

Courses from bachelor in mathematics
algebra, topology, calculus, measure theory and probability theory

Grenoble INP - *Phelma*
📍 Grenoble, France
📅 2017 - 2018

Bachelor degree - *specialisation in physics, materials, processes*
general physics, mechanic, electronic, materials science, statistics, complex analysis, Fourier analysis

CPP[10]
📍 Grenoble, France
📅 2015 - 2017

Polytechnic preparatory cycle - *specialisation in mathematics and mechanic*

Lycée Jean Mermoz
📍 Montpellier, France
📅 2012 - 2015

High school degree in sciences - *specialisation in mathematics*
Mention very good

Teaching

TD[11]/TP[12] - *36h*
📍 Lyon 1 university,
📅 Jan - May 2023

L1[13] Department of mathematics - *Analysis*
supervisor: Khaled Saleh

TD - *24h*
📍 ENS Lyon,
📅 Sep - Dec 2022

L3[14] Department of mathematics - *Topology and differential calculus*
supervisor: Emmanuel Grenier

Colles[15] - *24h*
📍 Lyon 1 university,
📅 Sep - dec 2022

L2[16] CUPGE[17]
supervisor: Gaëlle Dejou

Lectures/TD - *55h*
📍 Lyon 1 university,
📅 Sep 2021 - Jan 2022

L1 PCSI[18] - *Techniques mathématiques de base (Introduction to analysis)*
supervisor: Ulysse Serres

Colles - *18h*   **L1 CUPGE**

📍 Lyon 1 university,   supervisor: Frank Wagner

📅 Sep - dec 2021

Preprint

- [Multiple Landau level filling for a mean field limit of 2D fermions](#)
- [Semi-classical limit of the 2D Hartree equation in a large magnetic field](#)

Talks

- LPMMC, Jul 2020, weekly seminar
- UMPA, Feb 2021, modelization and analysis team seminar
- UMPA, Jun 2021, modelization and analysis team seminar
- UMPA, Jul 2022, modelization and analysis team PHD seminar
- Venice, Aug 2022, [Quantissima in the Serenissima IV (slides)](#)
- UMPA, Jan 2023, PHD seminar
- Constructor University, Mar 2023, [Mathematical and Theoretical Physics Seminar](#)
- Metz, Aug 2023, [Kick-off Meeting: Effective Approximation and Dynamics of Many-Body Quantum Systems](#)

Skills

- Computer sciences : Python (numpy, scipy), LaTeX, Beamer, fundamentals of Matlab and C
- Language : French native, English C1 level (BULATS certification), Espagnol A2

Glossary

- [1]**DFG:** German Research Foundation
- [2]**CNRS:** Centre Nationnal de Recherche Scientifique
- [3]**UMPA:** Unité de Mathématiques Pures et Appliquées
- [4]**ENS Lyon:** École Normale Supérieure de Lyon
- [5]**LPMMC:** Laboratoire de Physique et Modélisation des Milieux Condensés
- [6]**UGA:** Université Grenoble-Alpes
- [7]**UFR-Phitem:** Unité de Formation et de Recherche en Physique, Ingénierie, Terre, Environnement, Mécanique
- [8]**INP:** Institut National Polytechnique

- [9]**Phelma:** école nationale supérieure de PHysique ELectronique MAtériaux

- [10]**CPP:** Cycle Préparatoire Polytechnique

- [11]**TD:** Exercice sessions

- [12]**TP:** Practical work

- [13]**L1:** First bachelor year

- [14]**L3:** Third bachelor year

- [15]**Colles:** Oral examination in small groups

- [16]**L2:** Second bachelor year

- [17]**CUPGE:** University preparatory cycle for selective french schools

- [18]**PCSI:** Physic Chemistry and engineering sciences