



Denis Janković

23 YEARS OLD - PHD STUDENT



- Part of the Quantum Dynamics of Nano-objects (QDYN) group at the Institut de Physique et de Chimie des Matériaux de Strasbourg (IPCMS).
- Part of the Ruben Group at the Karlsruhe Institute of Technology (KIT).
- Physics Graduate | MSc Condensed Matter and Nanophysics.
- Part of the Quantum Sciences and Nanomaterials (QMat) International Graduate School and the International Doctoral Program (PDI) of the European Doctoral College.

EXPERIENCE

2020-2023 **IPCMS (Strasbourg)** Cotutelle with the KIT (Karlsruhe)
Department of Ultrafast Optics and Nanophotonics
Current PhD position

Supervisor : Pr. Dr. Paul-Antoine Hervieux

Co-Supervisor : Pr. Dr. Mario Ruben (KIT)

Hyperfine interactions in lanthanide-organic complexes for quantum information processing.

To obtain a theoretical model taking into account all useful parameters to optimize read-out, manipulation (optical or electrical), entanglement and coherence times of nuclear qubits. I am computing and diagonalizing the hamiltonian matrix of valence electrons of a central lanthanide atom, whose nucleus is accessible through the hyperfine interaction.

2020 **IPCMS (Strasbourg)**
Department of Ultrafast Optics and Nanophotonics
M2 Internship

Supervisor : Pr. Dr. Paul-Antoine Hervieux

Theoretical study in the case of PrCl_3 of the observed linear Stark Effect in the Single Molecule Magnet Pc_2Tb used for Quantum Information Processing. In collaboration with Pr. Dr. Mario Ruben and Pr. Dr. Wolfgang Wernsdorfer.

2019 **Faculty of Physics - University of Basel**
Condensed Matter Theory & Quantum Computing Group
M1 Internship

Supervisors : Pr. Dr. Daniel Loss - Dr. Marko Rancic

Theoretical study and modelization of the electronic current through a double quantum dot in a Ge Nanowire used for quantum computational purposes.

SKILLS

Teachings

- Private lessons to High and Middle School students.
- Support courses to first-year bachelor-level students as part of the "Ariane" student association.

Programming and Software

- Python, C, C++, Fortran, LaTeX, Mathematica
- Office (Word, Excel, PowerPoint)

Associative Involvement

- QMat Graduate School - Young Investigators Group Student Representative
- International Doctoral Program - Primo Levi 2021 Cohort Delegate.

Scientific Events

- Student Organizer of the Machine Learning for Quantum X online pop-up conference 2021.
- KSOP-QMat Summer School 2020 . Best PhD poster in Photonic Materials & Devices award. (KIT, Karlsruhe).

HOBBIES & INTERESTS

Scientific

Quantum Computing, Quantum Optics, Atomic and Molecular Physics among others.

Miscellaneous

Popular Science, Video-making, Biking, Martial Arts (Kendo), Linguistics, Vexillology, Geography and Geology.

EDUCATION

MSC IN PHYSICS

Condensed Matter & Nanophysics

2018 - 2020 | UNIVERSITY OF STRASBOURG

Faculty of Physics and Engineering & IPCMS

Magistère of Fundamental Physics

QMat International Graduate School

With high honors - Valedictorian

BACHELOR OF SCIENCE

Physics

2015 - 2018 | UNIVERSITY OF STRASBOURG

Faculty of Physics and Engineering

Magistère of Fundamental Physics

With honors

2-YEAR DEGREE : MATHEMATICS

Double Degree with Physics

2015 - 2017 | UNIVERSITY OF STRASBOURG

Faculty of Mathematics & Computer Science

Double degree : Physics & Mathematics

With honors

SCIENTIFIC HIGH-SCHOOL DIPLOMA

2013 - 2015 | LYCEE JEAN MERMOZ

Saint-Louis

With high honors

CONTACT

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