



MIGUEL CLAVERO RUBIO

Theoretical physicist and young PhD researcher at QUINFOG

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Madrid, Spain

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STRENGTHS

C++ Python

Mathematica Matlab

Languages

Monte Carlo LaTeX

Data analysis

Computing and programming

Leadership

Teamworking skills

Public speaking

LEARNING

Machine learning Big Data

Physics Quantum simulation

Quantum computing

Topology

Driving license

LANGUAGES

Spanish: Native

English: Fluent / B2

German: Still learning / B1

AWARDS

Secondary Education Award

X Premios de Educación
"Ciudad de Málaga", 2018

REFERENCES

Group web page:

https://quinfog.hbar.es/
members/miguel-clavero-rubio/

ABOUT ME

I am a young theoretical physicist currently working on my PhD thesis about the quantum advantage with efficient use of resources. In particular, I focus on quantum simulation with trapped ions, paying special attention to topological phases of matter and their applications (e.g. quantum sensing).

My theoretical background comes from high energy physics. Thus, my professional goal consist in merging condensed matter systems and high energy physics in order to use quantum simulation as a platform where gauge theories can be explored.

EDUCATION

Theoretical Physics Master | Centro de excelencia Severo Ochoa UAM/IFT

22/23

Madrid, Spain

- Specialized in Elementary Particles and Cosmology. GPA: 8.89
- Master thesis about quantum simulation with trapped ions using Floquet engineering to implement driven-dissipative topological phases.

Bachelor in Physics | University of Granada / Universität Bonn

18/19 - 21/22

Granada, Spain

- GPA: 8.831. Top 3% students.
- My B.Sc. thesis consisted in the understanding of gauge theories through principal fibre bundle formalism.

PROJECTS & RESEARCH

Bachelor Thesis | University of Granada

June 2022

Granada, Spain

- "Fibre bundle theory in Physics". Grade: 10

Master Thesis | Universidad Autónoma de Madrid

June 2023

Madrid, Spain

- "Quantum simulation with trapped ions". Grade: 9.7

Collaboration Scholarship | Ministerio de Educación

22/23

Madrid, Spain

JAE INTRO ICU Scholarship | IFF CSIC

22/23

Madrid, Spain

Current PhD | [QUINFOG IFF-CSIC](#)

📅 2023-2027

📍 Madrid, Spain

- Current research about quantum advantage with efficient use of resources. The main topic is the search of topological phases of matter to enhance quantum simulation and quantum sensing.

LABORAL EXPERIENCE

Study assistant Scholarship | [University of Granada](#)

📅 19/20

📍 Granada, Spain

- Scholarship for collaborator with students with disabilities

Private teacher | [Mathematics and Physics](#)

📅 2019-2023

📍 Málaga, Spain

Event hostess | [Best Way Events](#)

📅 2023

📍 Madrid, Spain

- During october and november in international events such as ESMO, Global Mobility Call, KPMG, Ericsson, Mutua Madrileña, Ennova Healthy Day, etc.

PYSQT Organizer [PYSQT](#)

📅 2023-24

📍 Madrid, Spain

- Organization of monthly seminars and a national congress related to Quantum Technologies for young researchers.

CONFERENCES AND PUBLICATIONS

Quantum Technologies for Young Researchers Workshop | [Oral contribution](#)

📅 07/07/23

📍 Instituto de Química Física Blas Cabrera (IQF-CSIC)

Cold Atom Workshop | [Poster contribution](#)

📅 25/01/24

📍 ICCUB

APART FROM PHYSICS...

Music Conservatoire | [Eduardo Ocón](#)

📅 08/09 - 11/12

📍 Málaga, Spain

- Elementary guitar course

Erasmus Programme | [Rheinische Friedrich-Wilhelms-Universität Bonn](#)

📅 20/21

📍 Bonn, Germany


Machine Learning and Big Data in Bioinformatics | [University of Granada](#)

📅 21/22

📍 Granada, Spain


- Massive online open course

Planning of testing and adjustment of equipment and elements of home automation and building automation systems | [UTE Fameró](#)

 21/22

 Málaga, Spain

Management planning and organization of processes assembly of home automation and building automation systems. | [UTE Fameró](#)

 21/22

 Málaga, Spain