

# Dr. José D. Querales

Researcher

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## Personal data

Nationalities: Argentinian/Venezuelan

Country of residence: Ireland (Since March 2017)

## Objective

Researcher with working experience on computational modelling of novel materials of interest for technological applications. Strong analytical and computational skills developed during Ph.D. and postdoctoral roles. Committed team-player, flexible and reliable with excellent communication skills. Highly motivated to apply these skills and experience to a future career as a data scientist in industry.

## Highlight of technical skills

- Hands-on experience in scientific programming and data analysis (C/C++, FORTRAN, Python).
- Hand-on experience in exploratory data analysis and visualization, and machine learning, using Python libraries: NumPy, SciPy, Pandas, Matplotlib, Seaborn, Scikit-learn, Tableau, among others. A selection of completed data analysis projects could be found on my Github repository.
- Experience working with large scale open-source codes for materials modelling.
- Knowledge and experience with a version control system: Gitlab and Github.

## Education and Qualifications

2011–2016 **Doctor in Physics**, *Balseiro Institute - National University of Cuyo, Argentina.*

- **Dissertation:** “Electronic properties of novel materials: alloys for nano-electronic, superconductors based on Fe, and based on BiS<sub>2</sub>”. Outstanding distinction achieved.

2009–2010 **Master in Physical Sciences**, *Balseiro Institute - National University of Cuyo, Argentina.*

- **Degree work:** “Semiconductor alloys with adjustable gap: electronic structure of Ge<sub>1-x</sub>Sn<sub>x</sub>.”

2003–2009 **Bachelor's Degree in Physics**, *University of Carabobo, Venezuela.*

- **Degree work:** “Preparation and characterization of Fe-Ge alloys.”

## Professional Experience

March 2017–Present **Postdoctoral Researcher**, *Materials Theory Group, Tyndall National Institute, University College Cork, Ireland.*

Project: “Theory and simulation of thermoelectric materials near structural phase transitions”.

Apr. **Postdoctoral Fellow**, *Surface Physics Group, Bariloche Atomic Centre*,  
2016–Feb. Argentina.  
2017

Project:“ Effects of the presence of non-substitutional complex defects on the  
electronic properties of semiconductor alloys, and other materials of interest”.

Feb. 2016 – **1st Teaching Assistant**, *Balseiro Institute, National University of Cuyo*,  
Dec. 2017 Argentina.

## Supervision and Teamwork

- Direct supervision of two undergraduate students from University College Cork.
- Working effectively as a part of a team of about 10 Ph.D. students, Post-Doctoral Researchers, and Principal Investigators.
- Since April 2019, I have been involved in the supervision of a Ph.D. in Physics student from Tyndall National Institute.

## Communication and Presentation

- I have strong communications skills, having given several invited/contributed talks at national and international meetings/conferences for a wide audience of fellows researchers.
- Effectively summarize daily research work, collect process and analyze complex data.
- I have published over 10 papers in highly-rated peer-reviewed journals.

## Languages

- Spanish: Mother tongue.
- General English fluency course at The Language Centre, University College Cork, Ireland - At level B2 (Common European Framework Reference), April to June, 2017.
- English: Upper-intermediate level: B2 Common European Framework of Reference for Languages (CEFR). First Certificate in English, University of Cambridge, August 2018.

## Professional development and training

- Self-directed learning undertaken via Datacamp platform: Data Science for Everyone Track (100 hours), Data Analyst with python Track (60 hours), Data Scientist with python Track (100 hours), Python Programmer Track (52 hours).
- Course: Research Integrity Epigeum. June 2019.
- Workshop: Effective Networking. University College Cork. October 2018.
- Course: Addressing Dissemination, Communication and Outreach in Research Proposals. University College Cork. April 2018.
- Course: Proposal Writing and Costing Workshop. University College Cork. February 2018.

## References

Available on request.