Argia Rubeo

☏ +39 348 4450767
✉ distinguibile@gmail.com

Profile

Data enthusiast. Theoretical physicist

Personal homepage https://argiarubeo.github.io/

Professional experience

2021	**Postdoctoral Research Fellow** at CMCC, Bologna
2021	**Data scientist** at Vincix Group, Roma
2020	**HPC specialist and developer** at Cineca, Bologna
2018 - 2019	**Postdoctoral Research Fellow** at Plymouth University

Analytical and numerical computations, Monte Carlo simulations, development of libraries for data analysis successfully cross-checked

2014 - 2018	**Research Fellow** at Trinity College Dublin

Mathematical development of alternative and more efficient approach for a computation in perturbative Lattice QCD, numerical development and test confirmation presented at the international Lattice conference 2016. Non-perturbative Monte Carlo simulations, development of libraries for data analysis successfully cross-checked

Education

2019	**Ph.D.** as winner of the "Hamilton Scholar" at Trinity College Dublin, Ireland
Title	*On the Symanzik improvement of gradient flow observables*
2013	**Master degree (Laurea Magistrale)** in Particle Physics from "*Sapienza*", University of Rome (110/110)
Title	*Numerical study of the $q\bar{q}$ static potential in the temporal gauge*

Programming Skills

Languages	Python ♥, Shell Scripting, C, C++, SQL, Octave, MATLAB
Python libraries	Pandas, NumPy, SciPy, Scikit-learn, Matplotlib, Plotly, Seaborn, Jupyter, SQLite
Machine Learning	Regression, Classification, Clustering, Neural Network
Others	MPI, OpenMP, Mathematica, R
Certificates	**Master** Data Science Academy Italia, Roma
	Course Python for Data Science and Machine Learning, Udemy

Languages

Italian	Native language
English	Proficient level

Additional experience

2017	Teaching assistant for the undergraduate course of *Quantum Mechanics II*. Degree program in Physics, Trinity College Dublin (TCD), Ireland. (One semester)
2016	Teaching assistant for the undergraduate course of *Quantum Mechanics*. Degree program in Physics, Trinity College Dublin (TCD), Ireland. (One semester)
2015	Tutorials in Linear Algebra for Science students at TCD, (10 hours); Tutorials in Quantum Mechanics for Physics students at TCD, (10 hours)

Talks and Posters

2018   Seminar at University of Plymouth

2018   Contribute Talk at the conference "High Performance Computing in Life sciences, Engineering, And Physics (HPC-LEAP)", Cambridge University (http://www.damtp.cam.ac.uk/research/hep/conferences/hpcleapjuly18/)

2018   Contribute Talk at the conference "Irish Quantum Foundations 2018 ", All Hallows Campus, Dublin City University (https://www.dcu.ie/node/98866)

2018   Contribute Talk at the workshop "Scattering from the lattice: applications to phenomenology and beyond", Trinity College Dublin (https://indico.cern.ch/event/690702/)

2018   Internal Transfer Talk 2018, Trinity College Dublin

2017   Internal Transfer Talk 2017, Trinity College Dublin

2016   Internal Transfer Talk 2016, Trinity College Dublin

2016   Poster at the conference "34th International Symposium on Lattice Field Theory", Southampton 2016 (http://www.southampton.ac.uk/lattice2016/)

2014   Talk at the conference "New Frontiers in Theoretical Physics", Cortona 2014 (https://agenda.infn.it/conferenceDisplay.py?confId=7371)

Conferences, Workshops and Schools

2020   *SDSC-connect*
       Swiss Data Science Center, Zürich, Switzerland -remote
       Python in HPC course
       Trinity College , Dublin, Ireland -remote
       Parallel Computing School
       Cineca supercomputing centre, Bologna, Italy -remote

2017   *9th Odense Winter School on Theoretical Physics: Cracks and Blind Spots in the Standard Model*
       Centre for Cosmology and Particle Physics Phenomenology (CP3-Origins), Odense, Denmark

2016   *Lectures on the Theory of Fundamental Interactions*
       Galileo Galilei Institute for Theoretical Physics, Arcetri (Florence), Italy
       Irish Quantum Foundations 2016. Maynooth University, Ireland

2015   *Lattice Practices 2015*
       Jülich Supercomputing Centre (JSC), Forschungszentrum Jülich, Germany
       Irish Quantum Foundations 2015
       Dublin Institute for Advanced Studies (DIAS), Dublin, Ireland
       Scientific Challenges and Big Computing
       Higgs Centre for Theoretical Physics, Edinburgh, UK

Scientific dissemination

2018   Interviews at the IQF conference to *Prof. Duncan Haldane (Nobel Laureate in Physics 2016)* and *Dr. Sabine Hossenfelder* about their scientific experiences and thoughts.

2017   Interview for for the Italian journal "OggiScienza" (https://oggiscienza.it/2017/11/20/nuova-fisica-andare-oltre-modello-standard/) as a researcher working abroad.

2017   Organizer of a particle Physics CERN masterclass at Trinity College Dublin together with Dr. M. Krstic Marinkovic .

2017   Videoconference with a Serbian city to explain my research together with my colleagues Dr. M. Krstic Marinkovic and Dr. D. Wilson in the context of Researchers' Night.

2016   Co-author of the chapter "Nanofisica e fisica delle particelle elementari" ("Nanophysics and Particle Physics") related to Particle Physics, in the book for highschool students "Fisica e realtà.blu 3" ("Physics and reality.blu 3") and revisor of the exercises of volume 1 and 2. Publishing company "Zanichelli"

2015   As a winner applicant for the Thesis-in-3 event, I have presented my PhD project, in the context of "*Discover Research Dublin, Sept 25th 2015*".

       I participated in a particle Physics masterclass event for secondary school students, explaining and helping students in a data-analysis exercise organized by CERN.

2010   Among the founders of the magazine "*accastampato*", a journal of scientific divulgation currently distributed in free prints to high schools in Italy (www.accastampato.it).

       Collaborator of "*Frascati Scienza*" for "*European Researchers' Night 2010*"

2009   Collaboration as a scientific advisor in the organization of the Science Festival "*Il Cielo di Argoli* ", Tagliacozzo (AQ)