Argia
Rubeo

Particle Theory Group -School of Computing Electronics and Mathematics
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Curriculum Vitae et Studiorum

Personal information

Nationality	Italian
Gender	Female
Place of birth	Tagliacozzo, L'Aquila, Italy
Citizenship	Italian
Personal homepage	https://argiarubeo.github.io/

Current Position

2018 -present Postdoctoral Research Fellow at University of Plymouth

Education

2019 **Ph.D.** as winner of the "Hamilton Scholar" at Trinity College Dublin, Ireland
Title *On the Symanzik improvement of gradient flow observables*
Supervisor Prof. Stefan Sint

2013 **Master degree (Laurea Magistrale)** in Particle Physics from "*Sapienza*", University of Rome
Final mark 110/110
Title *Numerical study of the $q\bar{q}$ static potential in the temporal gauge*
Supervisor Prof. Massimo Testa

3/2009 **Bachelor Degree (Laurea Triennale)** in Physics from "*Sapienza*", University of Rome
Title *Relativistic invariance of Dirac equation*
Supervisor Prof. Massimo Testa

Research Interests

Physics Beyond the Standard Model

Scattering from the lattice, theoretical studies and applications to phenomenology

Theoretical aspects of lattice gauge theories

Algorithms and hardware for lattice QCD

Non-perturbative renormalization of QCD parameters

Teaching

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

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

Publications

11/2016 **PoS LATTICE 2016**

Title *Perturbative $O(a^2)$ effects in gradient flow couplings with SF and SF-open boundary conditions*

Authors *A. Rubeo , S. Sint*

PoS LATTICE (2016) 388

https://arxiv.org/abs/1612.07047

08/2015 **Physical Review D**

Title *Color structure of Yang-Mills theory with static sources in a periodic box*

Authors *L. Giusti, A.L. Guerrieri, S. Petrarca, A. Rubeo, M. Testa*

hep-lat (2015)

http://link.aps.org/doi/10.1103/PhysRevD.92.034515

11/2013 **PoS LATTICE 2013**

Title *$q\bar{q}$-potential: a numerical study*

Authors *A.L. Guerrieri, S. Petrarca, A. Rubeo, M. Testa*

PoS LATTICE (2013) 470

http://arxiv.org/pdf/1311.1325.pdf

Computer skills

Programming	C, C++, bash, Gnuplot, ROOT, Octave, LaTeX, MPI, openMP, Mathematica, Python
Operating systems	Linux, Mac OsX and MS Windows

Languages

Italian	native language
English	proficient level (IELTS certificate)

Academic referees

Available upon request

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 I was 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`).

I collaborated with "*Frascati Scienza*" for "*European Researchers' Night 2010*"

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