

Curriculum Vitae

Personal Information

Surname, Name

Address

e-mail

Nationality

Date of birth

Scientific interests

Work Experience

Donà, Pietro

Via Moschini 2, 30141 Murano, Venezia (Italy)

dona.pietro@gmail.com

Italian

21 September 1986

Quantum Gravity, Loop Quantum Gravity, Spin Foam models, Group Field Theory, Asymptotic Safety, Functional Renormalization Group

July 2019 → Current

Postdoctoral Research Fellow

Institution

Centre de Physique Theorique de Luminy,
Case 907, Luminy, Marseille, France

Research subjects

Loop Quantum Gravity, Spin Foam, Numerical methods for Loop Quantum Gravity
co-tutoring of two PhD students and a Master student.

Mentoring

September 2017 → June 2019

Postdoctoral Research Fellow

Institution

Institute for Gravitation and the Cosmos,
The Pennsylvania State University,
University Park, PA 16802, USA

Research subjects

Loop Quantum Gravity, Spin Foam, Entropy, Information Theory

September 2016 → September 2017

Postdoctoral Research Fellow

Institution

Centre de Physique Theorique de Luminy,
Case 907, Luminy, Marseille, France

Research subjects

Loop Quantum Gravity, Spin Foam, Numerical methods for Loop Quantum Gravity

December 2014 → August 2016

Postdoctoral Research Fellow

Institution

Department of Physics, Fudan University
Guanghua Tower West Sub-Building, Office 705
220 Handan Road, Shanghai 200433, China

Research subjects

Cosmology, Non-Local theories of gravity, Functional Renormalization Group, Asymptotic Safety

Education and Training

October 2010 → September 2014

Ph.D. - Theoretical Particle Physics

Institution

SISSA/ISAS
Via Bonomea 265,
34136 Trieste (Italy)

Thesis Title

Matter fields in Asymptotic Safety, advisor: Roberto Percacci

September 2008 - September 2010
 Master in Physics 110/110 with Honors
 Thesis Title "Polyhedra in Loop Quantum Gravity" - advisors: Prof. Pietro Menotti and Dr. Simone Speziale
 Institution Università di Pisa

September 2008 - September 2010
 Allievo ordinario classe di Scienze
 Institution Scuola Normale Superiore di Pisa

September 2005 - July 2008
 Bachelor in Physics 110/110 with Honors
 Thesis Title "Lie Algebras in Particle Physics" - advisor: Prof. Damiano Anselmi
 Institution Università di Pisa

Personal Skills

Digital skills

- Excellent knowledge of Windows OS, Linux/Unix OS
- Excellent knowledge Python, C++, Visual Basic, .NET framework programming languages
- Excellent knowledge of LaTeX typesetting system
- Excellent knowledge of Mathematica computational language
- Advanced knowledge of HTML, PHP
- Designer and Webmaster of the group website SISSA Theoretical Particle Physics www.sissa.it/tpp
- Advanced knowledge of MySQL syntax

Honours and awards

Winner of the IGC Post-Doctoral Scholar award from PennState University for the academic years 2017/2018 and 2018/2019
 Winner of an Erasmus Placement scholarship for the academic year 2009/2010 to visit the Centre de Physique Théorique - UMR-7332 in Marseille (FR) from January 2010 - July 2010
 Winner of Scuola Normale Superiore di Pisa - Master scholarship and member of the Class of Science

Teaching and Mentoring

Teaching

Spring 2015 co-instructor with Prof. Antonino Marciano for the course of "Advanced topics on Quantum Field Theory" in Fudan University, Shanghai, China.
 Teaching load of 6 hours of frontal lectures plus office hours. The course was addressed to Master and Ph.D. students.

Autumn 2015 co-instructor with Prof. Antonino Marciano for the course of "Quantum Field Theory" in Fudan University, Shanghai, China.
 Teaching load of 12 hours of frontal lectures plus office hours. The course was addressed to Bachelor, Master and Ph.D. students.

Spring 2016 co-instructor with Prof. Antonino Marciano for the course of "Gauge Field Theory" for a total of 15 hours of frontal lectures
 Teaching load of 15 hours of frontal lectures plus office hours. The course was addressed to Bachelor, Master and Ph.D. students.

Summer 2019 invited lecturer at the Bard Summer School on Quantum Gravity, Bard College, NY, USA
 The course was "Numerical methods for Loop Quantum gravity" and consisted in 6 hours of frontal lectures.
 The summer school took place June 17th-21st 2019.

Winter 2020 integration to the course of "Quantum gravity" of Prof Carlo Rovelli in the CPT, Marseille, France
 Teaching load of 8 hours of frontal lectures plus office hours. The course was addressed to Master and Ph.D. students.

Mentoring

master

co-mentored Dr. Giorgio Sarno for his master thesis during Autumn 2016 and Winter 2017
Thesis title "Simplicial and Generalized Spinfoams in Loop Quantum Gravity: Analytical and Numerical Results"

defended in April 2017 at Università degli Studi di Torino - 110 L/110

master

mentoring Alessandro Nicotra for his master thesis during Autumn 2020 and Winter 2021

Thesis title "Wick rotation of the EPRL spin foam models"

due in February 2021 at Università degli Studi di Bologna

master

co-mentored Dr. Giorgio Sarno for his Ph.D. work from September 2017 to September 2020

Thesis title "A numerical approach to spin foam models of quantum gravity"

defended in September 2020 at the Centre de Physique Théorique in Marseille

Conferences and Seminars

Conferences

June 7-25, 2021, LQG Online Summer School, Lecturer and organizer

January 13-17, 2020, The Quantum Information Structure of Spacetime, Hong Kong University, Hong Kong

June 24-27, 2019, IGC@25, PennState University, State College, PA, USA

June 17-21, 2019, Plenary speaker at LOOPS19, PennState University, State College, PA, USA

June 9-16, 2019, The Bard Summer School on Quantum Gravity, Bard College, NY, USA

March 5-9, 2018, Quantum Gravity on the Computer, Nordita Stockholm, Sweden

November 3-5, 2017, MAS-APS, Newark, NJ, USA - American Physical Society

July 3-7, 2017, LOOPS17, Warsaw, Poland - University of Warsaw

August 10-15, 2016, 21st International Conference on General Relativity and Gravitation, Columbia University, New York, USA

April 14-15, 2016, Fudan-Tokyo-Yonsei Workshop on Particle and Nuclear Physics, Fudan University, Shanghai, China

December 14-18, 2015, 2nd LeCosPA International Symposium "Everything about Gravity", National Taiwan University, Taipei, Taiwan

September 28-29, 2015, Early Universe Workshop, Tangzhongying National Lab, Nanjing, China

July 12-18, 2015, 14th Marcel Grossmann Meeting - MG14, University of Rome "La Sapienza", Rome, Italy

July 28-30 2015, LOOPS15, Erlangen, Germany - Institute for Quantum Gravity (Friedrich-Alexander University)

May 28-30 2014, 1st FLAG meeting, "The Quantum and Gravity", Bologna, Italy

April 22-25 2014, Renormalization Group Approaches to Quantum Gravity at Perimeter Institute for Theoretical Physics, Waterloo, ON, Canada

July 22-26 2013, LOOPS13, Perimeter Institute for Theoretical Physics, Waterloo, ON, Canada

September 2-7 2012, ERG2012, Centre Paul Langevin, Aussois, France

Seminars and Lectures

January 13th, 2020, Hong Kong University, Invited Speaker - "Quantum Information of Loop Quantum Gravity States"

June 18th, 2019, LOOPS19, PSU, Plenary Speaker - "Numerical Study of Spin Foam Theories"

June 10th, 11th and 13th, 2019, Bard College, Invited Lecturer for 6 hours of lectures - "Numerical Methods in LQG"

April 26th, 2018, Perimeter Institute, Canada, Invited Speaker - "Spin Foams: a numerical revolution"

October 10th 2017 as part of International Loop Quantum Gravity Seminar - "SU(2) graph invariants, Regge actions and polytopes"

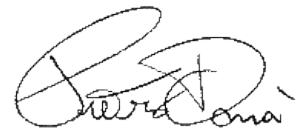
July 7th, 2017, LOOPS17, Warsaw, Poland - "Computing Lorentzian Spin Foam Amplitudes: Overview"

January 16th, 2017, Laboratoire de Physique Theorique d'Orsay, Paris- "Cosmological applications of coherent states"

April 14th, 2016 at Fudan University - Shanghai - "Non-Perturbative Yang-Mills Condensate as Dark Energy"

December 14th, 2015 at NLU - Taipei - *'Asymptotic safety in an interacting system of gravity and matter'*
September 29th, 2015 at Tangzhongying National Lab - Nanjing - *"Non-Perturbative Yang-Mills Condensate as Dark Energy"*
December 13th 2014 at Beijing Normal University - *"Matter Matters in Asymptotically Safe Quantum Gravity"*
April 28th 2014 at Primordial Universe and Gravity Discussions at Institute for Gravitation and Cosmos - *"Matter Matters in Asymptotically Safe Quantum Gravity"*
January 21st 2014 as part of International Loop Quantum Gravity Seminar - *"Matter Matters in Asymptotically Safe Quantum Gravity"*
December 2nd 2013 as part of The Asymptotic Safety web seminars - *"Matter Matters in Asymptotically Safe Quantum Gravity"*
November 7th 2013 at Perimeter Institute for Theoretical Physics, Waterloo, ON, Canada - *"Matter Matters in Asymptotically Safe Quantum Gravity"*
May 18th 2013 at Centre de Physique Theorique, Marseille, France - *"Fermions and Tetrads in Asymptotic Safety"*
October 15th 2012 as part of The Asymptotic Safety web seminars - *"Fermions and Tetrads in Asymptotic Safety"*

4th March 2021



Date

Signature