Gabriele Di Ubaldo

INFORMATION

Date of birth: 01/09/1997 — *Nationality:* Italian
Website: https://philosophysics.github.io/site — *E-mail:* gabriele.di.ubaldo@ens.fr

EDUCATION

École Normale Supérieure, PSL Paris, France, 2018 - Present

- ENS Diploma of graduate studies in Physics. (Ongoing) 2018 - 2021
- Master's degree (MSc) in Theoretical Physics. (Completed) 2018 - 2020

University of Pisa Pisa, Italy, 2015 - 2018

Laurea (BSc) in Physics with *110/110 Summa cum Laude*.
Conformally Flat Solutions in Perturbative Quantum Gravity. Supervisor: *Damiano Anselmi*.

Liceo Scientifico E. Fermi Madrid, Spain 2011-2015

Maturità Scientifica , Italian Scientific High School Diploma, *100/100*.
Bachillerato Cientîfico, Spanish Scientific High School Diploma, *10/10*.

SCHOLARSHIPS AND AWARDS

Funding for Research Internship at Institut de Physique Théorique, CEA Paris Saclay, 2021.
Fitzwilliam College Bursary for summer research at Cambridge University, 2019.
ICFP LABEX Excellence Scholarship for graduate study at ENS.
Medal of Academic Achievement for graduating with highest honors, University of Pisa, 2018.
DAAD Scholarship for graduate study at LMU (declined), 2018.
Merit Scholarship of the University of Pisa, undergraduate.

RESEARCH EXPERIENCE

Institut de Physique Théorique (IPhT), CEA Paris Saclay Paris, France, Jan 2021 - Jul 2021

String Theory group. Supervisor: *Eric Perlmutter*.
Conformal Bootstrap in AdS/CFT.

ENS & Universitè de Paris Paris, France, Apr 2020 - Jun 2020

APC Theory group. Supervisors: *Elias Kiritsis* and *Francesco Nitti*.
Holographic RG Flows for Generalized Hawking-Page Transitions. Mention: *Très Bien* (Highest).

DAMTP, Cambridge University Cambridge, UK, Jul 2019 - Aug 2019

Center for Theoretical Cosmology, group of *Paul Shellard*. Supervisor: *Cora Uhlemann*.
Statistics for Biased Tracers of Large Scale Structure.

Laboratoire de Physique Théorique, ENS Paris, France, Feb 2019 - Jun 2019

Particles, Gravitation and Strings group. Supervisor: *Giuseppe Policastro*.
Quantum Information in Matrix Models and 2D String Theory. Mention: *Très Bien* (Highest).

ACADEMIC ACTIVITIES

Doctoral School on Quantum Field Theory, Strings and Gravity - **Solvay Institutes**, 3 months, 2020.
Hamilton School on Mathematical Physics - **Trinity College Dublin**, 2020.
Winter School on Supergravity, Strings and Gauge Theory - **CERN**, 2020.
Workshop on *EFT in Cosmology, Gravity and Particle Physics* - **IPhT, Paris Saclay**, 2019.
Workshop on $T\bar{T}$ *deformations* - **ENS, Paris**, 2019.
Project: *From Inflation to Density Perturbations.* Supervisor: *Nick Kaiser* - **ENS, Paris**, 2019.
Workshop on *Analytical Methods in Cosmology* - **Institut Henri Poincarè, Paris**, 2018.
Talk: *Lie Algebras as the fundamental Structure of Nature.* Supervisor: *Kenichi Konishi* - **Pisa**, 2018.
School - *Plas@Par* Plasma Physics summer school - **École Polytechnique**, 2017.
International Conference of Physics Students ICPS - **University of Turin,** 2017.
School - *Balaton* Gravitational Waves summer school - **ELTE, Virgo, LIGO,** 2017.

School - *Particle and Astroparticle Physics Autumn Program* - **INFN,** 2016.

Conference *90 years of Fermions* - **Accademia dei Lincei, INFN, Rome** 2016.

Summer school for outstanding high school students- **Scuola Normale Superiore, Pisa** 2014.
Summer school for outstanding high school students- **Scuola Superiore Sant'Anna, Pisa** 2014.

Professional Experience

Italian Association of Physics Students AISF 2016 - 2018

Member of Executive Committee and IT Responsible.

- Coordinated at national level the association and its projects.
- Developed and maintained AISF websites and databases.
- Scientific coordinator of the IV Italian Conference of Physics Students (ai-sf.it/cisf18).
- Developed of the FERMI database for physics internships and schools (ai-sf.it/fermi).
- Organized *Lights of Tuscany*, an international event showcasing research in Tuscany (ai-sf.it/lot16).

Languages

Italian - Native; Spanish - Native; English - Fluent (114 TOEFL, 8 IELTS); French - Intermediate.

Graduate Courses

M1 (First year of master)

- Introduction to Quantum Field Theory - A. Bilal
- Advanced Mathematics for Physicists - A.-K. Kashani Poor
- Introduction to General Relativity - N. Kaiser
- Statistical Physics - W. Krauth
- Computational Physics and Numerical Analysis - L. Tuckermann
- Topics in Strongly Coupled QFT (M2 level) - S. Rychkov

M2 (Second year of master)

- Quantum Field Theory - A.-K. Kashani Poor
- Lie Groups, Lie Algebras and Representations - D. Hernandez
- General Relativity - M. Petropoulos
- Advanced Statistical Physics - G. Biroli and G. Schehr
- Numerical Physics, Algortihms and Computations - A. Rosso
- Statistical Field Theory - D. Bernard and J. Jacobsen
- String Theory - D. Israel
- Introduction to AdS/CFT - F. Nitti
- 2D Conformal Field Theory - B. Estienne and Y. Ikhlef
- Quantum Field Theory II - S. Lavignac and B. Bellazzini
- Classical and Quantum Integrability - V. Kazakov
- Differential Geometry and Gauge Theory - O. Biquard
- Advanced Topics in Quantum Field Theory - P. Windey

PhD courses at doctoral schools (most relevant ones)

- $T\bar{T}$ Deformations and Holography - M. Guica (CERN school)
- Symmetries and Anomalies - C. Cordova (CERN school)
- Matrix Models and $c = 1$ String Theory - X. Yin (CERN school)
- Compactifications - L. McAllister (CERN school)
- Aspects of AdS_3/CFT_2 - A. Castro (Hamilton school)
- The Information Paradox - T. Hartman (Hamilton school)
- Advanced QFT - A. Bilal (Solvay school)
- Advanced GR - M. Guica (Solvay school)
- Introduction to Supersymmetry - S. Penati (Solvay school)
- Introduction to Superstring - D. Orlando (Solvay school)
- Introduction to D-branes and String Dualities - S. Reffert (Solvay school)
- Introduction to Supergravity - A. Van Proeyen (Solvay school)
- Resurgence - M. Vonk (Solvay school)
- Introduction to AdS/CFT - J. Sonner (Solvay school)
- AdS/CFT - K. Papadodimas (Solvay school)
- Modern Methods in CFT: Bootstrap and Integrability - A. Bissi (Solvay school)
- Quantum Gravity and Quantum Information - E. Verlinde and M. Walter (Solvay school)