Claudia Rella

claudia.rella@unige.ch | claudia.rella@cern.ch | https://www.claudiarella.com
Department of Theoretical Physics, University of Geneva
Quai Ernest Ansermet 24, 1205 Geneva, Switzerland

EDUCATION

Doctor of Philosophy in Mathematical Physics — 2020, Oct – present
Department of Theoretical Physics, University of Geneva, Switzerland
Thesis: Supervised by Prof Marcos Mariño.
Affiliations: ERC SyG ReNewQuantum – NCCR SwissMAP.

Master of Science in Mathematical and Theoretical Physics – Distinction — 2018, Oct – 2019, Jun
Mathematical Institute and Department of Physics, University of Oxford, UK
Thesis: *Motivic Amplitudes*. Supervised by Prof Francis Brown.
Affiliations: St John's College.

Bachelor of Science in Physics (*) – Summa cum Laude — 2015, Oct – 2018, Jun
Department of Physics, Sapienza University of Rome, Italy
Thesis: *Photonic Bloch Waves*. Supervised by Prof Fabio Sciarrino.
(*): Extra-curricular coursework in Mathematics at the Department of Mathematics.

RESEARCH EXPERIENCE AND INTERNSHIPS

Research Internship in High Energy Physics Phenomenology — 2020, Jul – Sep
NA62 @ CERN, Geneva, Switzerland

Master Class in Mathematical Physics — 2019, Oct – 2020, Jun
University of Geneva and NCCR SwissMAP, Geneva, Switzerland

Business Consulting Internship — 2019, Jul – Aug
Pangea Formazione, Rome, Italy

Research Internship in Experimental Particle Physics — 2017, Sep – Nov
PADME @ INFN – LNF, Frascati, Italy

OTHER ACTIVITIES

Cooperation Associate of the Department of Theoretical Physics — 2022, May – present
European Organization for Nuclear Research (CERN), Switzerland

Junior Member of the Scientific Council of the SRS Conference Centre — 2020, Sep – present
SwissMAP Research Station (SRS), Switzerland

Invited Contributor to the Theory Frontier of the 2021-22 Snowmass Process — 2020, Aug – present
Division of Particles and Fields of the American Physical Society, US

Mentee at LeadTheFuture Mentorship Program — 2019, Sep – present
LeadTheFuture, Italy

PUBLICATIONS

Searching for Muonphilic Dark Sectors with Proton Beams — 2022, May
With B. Döbrich and T.-T. Yu, preprint, https://arxiv.org/abs/2205.09870

An Introduction to Motivic Feynman Integrals — 2021, Mar
SIGMA 17 (2021), 032, 56 pages, https://doi.org/10.3842/SIGMA.2021.032

Characterization and Performance of PADME's Cherenkov-Based Small-Angle Calorimeter 2019, Mar
With A. Frankenthal et al., Nucl. Instrum. Methods Phys. Res. A 919 (2019) 89-97,
https://doi.org/10.1016/j.nima.2018.12.035

TALKS

Introduction to Motivic Amplitudes 2019, Nov
Research Seminar on Lie Groups and Moduli Spaces, University of Geneva, Switzerland

Motivic Scattering Amplitudes 2019, Aug
Conference on Representation Theory and Integrable Systems, ETH Zürich, Switzerland

Monte Carlo Simulation of PADME's Small-Angle Calorimeter 2017, Dec
PADME Weekly Meeting, INFN – LNF, Italy

TEACHING EXPERIENCE

Lecturer on Topological Surfaces 2019, Oct
Master Class in Mathematical Physics – Department of Mathematics, University of Geneva, Switzerland

Lecturer on Riemannian Geometry 2018, Mar – May
Excellence Program in Physics – Department of Mathematics, Sapienza University of Rome, Italy

ACADEMIC ACHIEVEMENTS AND SCHOLARSHIPS

Excellence Fellowship 2019
NCCR SwissMAP, Switzerland

Degree Prize for Distinction 2019
St John's College, University of Oxford, UK

Torno Subito Scholarship 2018
Department of Education, Research and University, Lazio, Italy

Best Student Award for the Course in Nuclear and Subnuclear Physics 2018
Sapienza University of Rome and INFN, Italy

Summer Student Scholarship 2017
INFN, Italy

Excellence Program 2016 – 2018
Department of Physics, Sapienza University of Rome, Italy

Deserving Student Scholarship 2015 – 2018
Sapienza University of Rome, Italy

SKILLS

Languages	Italian (native), English
Programming Languages	C, C++, Python, R
Data Analysis Languages	MATLAB, ROOT, gnuplot
Symbolic Calculus Languages	Mathematica
Version-control Systems	Git
Simulation Software	Geant4