Claudia Rella

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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
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, Aug
With B. Döbrich and T.-T. Yu, Phys. Rev. D 106, 035023(13), https://doi.org/10.1103/PhysRevD.106.035023

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