

SIMONE ROMITI

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EDUCATION

Roma Tre University	Rome, Italy
PhD in Theoretical Physics (Dissertation 22 April 2022)	2018 – 2021
<ul style="list-style-type: none">• 1st in ranking for public admission exam to PhD program• Affiliation with INFN (INFN - Istituto Nazionale di Fisica Nucleare)• Tutorial sessions and teaching assistant for undergraduate courses	
Roma Tre University	Rome, Italy
M.S. in Theoretical Physics of Elementary Particles	2016 – 2018
<ul style="list-style-type: none">• Final grade: 110/110 <i>cum laude</i>, GPA: 29.85/30	
Roma Tre University	Rome, Italy
B.S. in Physics	2013 – 2016
<ul style="list-style-type: none">• Final grade: 110/110 <i>cum laude</i>, GPA: 28.84 / 30• Merit Scholarship awarded for top high school marks and academic excellence.	

WORK EXPERIENCE

University of Bern	Apr 2024–Present
<i>Postdoctoral Researcher</i>	Bern, Switzerland
<ul style="list-style-type: none">• Innovative method using Physics-Informed Neural Networks (PINNs) → exponential to polynomial scaling of memory• Reference scientist for Hadronic Vacuum Polarization (HVP) analysis of Bern group → sub-permille precision achievement• Pole contribution to Hadronic Light-by-Light contribution to $(g - 2)_\mu$ → achieved N^6 to $N \log(N)$ scaling improvement• Main developer of open-source libraries → my code for and Monte Carlo simulations and analysis led to scientific publications• Supervision of PhD students	
University of Bonn	Nov 2021–Mar 2024
<i>Postdoctoral Researcher</i>	Bonn, Germany
<ul style="list-style-type: none">• ETMC ensembles generation → fine tuned simulation and obtained $O(a)$-improved configurations• GPU code optimization → achieved ~ 1.5 improvement by auto-tuning of Multigrid parameters• Novel method for SU(2) Hamiltonians → achieved machine-precision exactness for canonical commutation relations• Monte Carlo and Quantum Computing → obtained Hamiltonian limit and high-statistics calculations of glueball spectrum• Supervision of Master's and PhD students	

SKILLS

Programming Languages - C, C++, Python, Bash, R

High-Performance Computing - openMP, MPI, CUDA, EasyBuild, SLURM

Tools - \LaTeX , Markdown, RMarkdown, Quarto

Frameworks and Libraries - Jupyter, NumPy, SymPy, SciPy, Pandas, Matplotlib, Plotly, PyTorch, Streamlit

Tools & DevOps - Docker, Git, GitHub Actions

Languages - Italian (native), English (proficient), German (A1)

EXTRA ACTIVITIES AND AWARDS

Invited speaker at [Scale Setting workshop](#)

[ECT*](#) | March 2025

Main organizer of [Hamiltonian LGTs workshop](#)

[ECT*](#) | September 2025

Principal Investigator for 240k GPU node-hours allocation
Leading organizer of [weekly seminars at HISKP](#)
[department](#)

[CSCS \(ALPS\)](#) | October 2025
[HISKP](#) | 2022 - 2024