

Europass Curriculum Vitae

Personal information

Name / Surname **Diego Buccio**
Personal Email dbuccio@sissa.it
Nationality italian
Date of birth 20/05/1995

Education

Date	21/07/2017
Degree	Bachelor's degree in Physics
University	Università degli Studi di Milano
Final mark	110/110 cum laude
Supervisor	Luca Guido Molinari
thesis title	Hydrodynamics in twisted spacetimes
Date	08/04/2020
Degree	Masters's degree in Physics
University	Università degli Studi di Milano
Final mark	110/110 cum laude
Supervisors	Remo Garattini, Luca Guido Molinari
thesis title	On the semiclassical stability of Minkowski spacetime
Date	2020 - Now
Position	PhD student
University	Astroparticle Physics group, SISSA
Supervisor	Roberto Percacci
Date	13/4/2023-12/5/2023
Activity	Scientific collaboration
University	University of Massachusetts, Amherst
Subject	I worked with Prof. John Donoghue on higher derivative theories and quadratic gravity

Research activity

Date	1/2/2025-30/9/2025
Activity	Visiting Researcher
Location	Radboud University, Nijmegen
Subject	Research project on scattering amplitudes in quadratic gravity in collaboration with Prof. Frank Saueressig founded by Fondazione Angelo Della Riccia Fellowship

Publications

D. Buccio and R. Percacci, "Renormalization group flows between Gaussian fixed points," JHEP 10 (2022), 113, [arXiv:2207.10596 [hep-th]]

D. Buccio, J. F. Donoghue and R. Percacci, "Amplitudes and Renormalization Group Techniques: A Case Study," Phys.Rev.D 109 (2024) 4, 045008, [arXiv:2307.00055 [hep-th]]

D. Buccio, J. F. Donoghue, G. Menezes and R. Percacci, "Physical running of couplings in quadratic gravity," Phys.Rev.Lett. 133 (2024) 2, 021604, [arXiv:2403.02397 [hep-th]]

D. Buccio, J. F. Donoghue, G. Menezes and R. Percacci, "Renormalization and running in the 2D CP(1) model," [2408.13142[hep-th]]

D. Buccio, L. Parente and O. Zanusso, "Physical Running in Conformal Gravity and Higher Derivative Scalars," [2410.21475[hep-th]]

Seminars, Conferences and schools

Date	12/09/2022-16/09/2022
Workshop	11th International Conference on the Exact Renormalization Group 2022 (ERG2022)
Location	Berlin
Contribution	Parallel session talk "RG flow between Gaussian fixed point"
Date	13/02/2023-17/02/2023
school	SIGRAV International School 2023 - School of Applied Quantum Gravity
Location	Vietri sul Mare
Date	10/07/2023-14/07/2023
conference	Quantum Gravity 2023
Location	Radboud University, Nijmegen
Contribution	poster "Renormalization Group in a higher derivative scalar model"
Date	4/09/2023-8/09/2023
conference	XXV SIGRAV Conference on General Relativity and Gravitation
Location	SISSA, Trieste
Contribution	parallel session talk "Running couplings in a higher derivative theory"
Date	18/09/2023
seminar	Asymptotic Safety Seminars
Location	online
Contribution	Invited speaker "Renormalization and scattering in a shift-invariant scalar model"
Date	24/03/2024-27/03/2024
conference	PAFT24
Location	Vietri sul Mare
Contribution	talk "Running couplings in Quadratic Gravity"
Date	22/04/2024
seminar	Asymptotic Safety Seminars
Location	online
Contribution	Invited speaker "Physical running of couplings in quadratic gravity"
Date	02/05/2024
seminar	Online Seminar
Location	IBS, Daejeon, Korea
Contribution	Invited speaker "Physical running in quadratic gravity"

Date 20/06/2024
seminar Online Seminar
Location New Brunswick University, Canada
Contribution Invited speaker "Physical running in quadratic gravity"

Date 18/07/2024
seminar Theory Group Seminars
Location INFN Pisa
Contribution Invited speaker "Physical running in quadratic gravity"

Other working experience

2024 I provided solutions for the exercises for the forthcoming publication of the lecture notes of the "Quantum Field Theory II" course on non-perturbative phenomena in QFT by Prof. Roberto Percacci

Personal skills and competences

Mother tongue **Italian**

Other languages **English**
independent user
CEFR B2 - B2 Vantage ESOL certificate obtained in 2013

French
basic user
lived in Bruxelles (BE) from 1998 to 2000

Programming skills Good knowledge of C/C++ and Mathematica, basic knowledge of shell scripting (Bash) and openSCAD.

Date: 05/12/2024