Francesco Deangelis

Curriculum vitae

Education

11/2020- present	**PhD in Mathematics**, *Gran Sasso Science Institute*, L'Aquila, Italy Advisor: Prof. Camillo De Lellis (IAS, Princeton).
10/2023- 11/2023	**Short Term Visitor**, *Institute for Advanced Study*, Princeton, NJ, USA I was a visitor of IAS from 1/10/2023 to 30/11/2023.
10/2017- 3/2020	**MSc Pure and Applied Mathematics**, *University of Rome Tor Vergata*, Rome 110/110 cum laude, GPA: 29.46/30. I was awarded a 2000€ prize for my master's thesis. Classes taken:

○ Basics of Algebra (Abstract Algebra): 28/30
○ Introduction to Functional Analysis: 30/30 cum laude
○ Laboratory - Calculus (Numerical Methods for PDEs): 30/30
○ Basics of Geometry and Analysis (General Topology and Lebesgue integration): 28/30
○ Measure Theory: 30/30 cum laude
○ Statistical and Quantum Mechanics: 30/30
○ Differential Equations (PDEs): 28/30
○ Geometry 5 (Algebraic Topology): 30/30
○ Statistical Learning and High Dimensional Data: 30/30 cum laude
○ Machine Learning: 30/30 cum laude
○ Sobolev Spaces and Weak Solutions: 30/30 cum laude
○ Advanced Probability (with Measure Theory and Martingales): 30/30 cum laude

10/2014– 7/2017	**BEng Mechanical Engineering**, *University of Rome Tor Vergata*, Rome 110/110 cum laude. Some grades:

○ Mathematical Analysis 1 (12 ECTS)
  written: 33, oral: 30/30 cum laude
○ Mathematical Analysis 2 (9 ECTS)
  written: 30/30, oral: 30/30 cum laude
○ Geometry 1 (6 ECTS)
  written: 30/30, oral: 30/30 cum laude
○ Geometry 2 (Differential Geometry of Curves and Surfaces) (6 ECTS)
  oral: 30/30
○ Physics 1 (12 ECTS)
  written: 30/30, oral: 30/30 cum laude
○ Physics 2 (9 ECTS)
  written: 30/30, oral: 30/30
○ Chemistry (6 ECTS)
  written: 30/30, oral: 30/30 cum laude

2013-2014	**BSc Economics and Industrial Organization**, *The University of Warwick*, UK I dropped out before the end of first year (April) because it was not challenging enough.

2008–2013 **Diploma di Maturità Classica**, *Liceo Classico Ugo Foscolo*, Albano Laziale (Rome)
100/100 cum laude
Top 0.7% of all Italian students, included in "Albo Nazionale Delle Eccellenze"(i.e. National Register of Excellent Students), published by Ministero dell'Istruzione e della Ricerca(i.e. Italian Ministry of Education, University and Research) (http://www.indire.it/eccellenze/).

Experience

2018-2019 **Tutor - Mathematical Analysis 1**, *University of Rome Tor Vergata*, Rome
I was the tutor for the course 'Mathematical Analysis 1' of the undergraduate degree in Mathematics.

Languages

Italian Mothertongue
English TOEFL iBT: 115/120

Computer skills

Web programming PHP, MySQL, AJAX, CodeIgniter, JQuery, JavaScript, HTML, CSS, Bootstrap, Python, Django, Jekyll
Mobile programming Flutter
Scientific programming MATLAB, Python, C

Publications

1) Roberto Benzi, Michiel Bertsch, and Francesco Deangelis. A free boundary problem for binary fluids. *Interfaces Free Bound.*, 23(4):485–506, 2021. URL: `https://ems.press/journals/ifb/articles/3324283`, `doi:10.4171/IFB/462`.

2) Francesco Deangelis. Boundary regularity for the Mumford-Shah functional with Dirichlet boundary conditions, 2024. `arXiv:2404.07162`.