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Daniele Dimonte

Mathematician

About Me Passionate and curious Mathematician. Achieved the Ph.D. cum Laude in 2019 and subsequently found a postdoc at the University of Basel. Specialized in the field of mathematically rigorous Quantum Mechanics, I am now looking for new opportunity outside of the field of academic research. Particularly interested in modelling complex systems mathematically and more in general in problem solving.

Experiences

2019 - 2021, University of Basel

Post-Doc in Mathematical Physics with Prof. Dr. Chiara Saffirio

2015 - 2019, SISSA (Trieste, Italy)

Ph.D. in Geometry and Mathematical Physics, awarded cum laude
Advisor: Prof. Dr. Michele Correggi

2012 - 2015, 'La Sapienza' University (Rome, Italy)

M.Sc. in Mathematics, awarded cum laude

2012 - 2015, 'Roma Tre' University (Rome, Italy)

B.Sc. in Mathematics, awarded cum laude

Affiliations

2019 - present, NCCR SwissMAP

Member of the National Centre of Competence in Research for Mathematical Physics of Switzerland

2017 - present, IAMP

Member of the International Association of Mathematical Physics

2016 - present, GNFM

Member of the National Group of Mathematical Physics of Italy

Papers

On The Bose-Einstein Condensation In The Thomas Fermi Regime

Work in progress with Prof. Dr. Michele Correggi and Dr. Emanuela Giacomelli

On Some Rigorous Aspects of Fragmented Condensation

Joint work with Dr. Marco Falconi and Dr. Alessandro Olgiati

Nonlinearity **34** (2021), 1

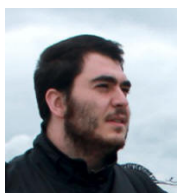
doi: [10.1088/1361-6544/abb451](https://doi.org/10.1088/1361-6544/abb451), arXiv: [1809.03586](https://arxiv.org/abs/1809.03586)

On the Third Critical Speed for Rotating Bose-Einstein Condensates

Joint work with Dr. Michele Correggi

J. Math. Phys. **57** (2016), 071901

doi: [10.1063/1.4954805](https://doi.org/10.1063/1.4954805), arXiv: [1508.07235](https://arxiv.org/abs/1508.07235)



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Funding and Awards

2016 - 2018, GNFM

Received funds for different collaborations for a total amount of 9000 €

2015, SISSA (Trieste, Italy)

Awarded a research training fellowship for post-graduate students

2012 'La Sapienza' University (Rome, Italy)

Awarded the 'Wanted the best' fellowship for brilliant students coming from different universities

2009, 'Roma Tre' (Rome, Italy)

Awarded a fellowship for best entrance test

Languages spoken

- Italian (mother tongue)
- English (fluent)
- French (intermediate)
- German (learning)

Communication Skills

Oral Presentations

- I was given the chance to give numerous presentations of my work in many international conferences (a comprehensive list can be found on my website)
- I was invited speaker in March of 2020 in the Mathematical Physics seminar at LMU in Munich (Germany)
- From 2013 to 2020 I gave a series of short lectures on general topics of Mathematics for high school students in my hometown, Viterbo (Italy)

Managing Seminars

- I am currently managing a series of online informal seminars for young Mathematical Physicists, the 'Looney Seminars'
- I was co-organizer of the Ph.D. students seminar in Geometry and Mathematical Physics during my Ph.D. in SISSA

Teaching Experience

- Assistant for the courses Kinetic Equations, Analysis 1, Introduction to Mathematical Quantum Theory and Topics in Harmonic Analysis at the University of Basel from 2019 to 2021



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Programming Skills

Operating Systems

I manage my own computer with Arch Linux and Windows installed, I manage my own ownCloud and git server (with Debian) and I am competent in iOS

Programming Languages

- L^AT_EX (advanced)
- C (intermediate)
- Python (novice)
- Mathematica (advanced)
- Fortran95 (intermediate)
- Git (novice)

Interests

Professional

Study of complex systems, Quantum Mechanics, effective models in Mathematical Physics, Functional Analysis

Personal

Swing dancing, online and offline videogames, passion for technology