

Nicolò Defenu – Curriculum Vitae

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Education

- 11/2010** BSc with honors - [Sapienza University of Rome, Roma](#)
110/110 cum laude - 28/30 Average
Third Year Project - Second Quantization with application to phonon propagation.
Advisor: M. Testa
- 10/2012** MSc with honors - [Sapienza University of Rome, Roma](#)
110/110 cum laude - 29/30 Average
Final Year Project - Overhauser method for pair correlation function calculation applied to density functional theory.
Advisor: J. Lorenzana
- 10/2016** PhD with honors - [International School for Advanced Studies \(SISSA\), Trieste](#)
PhD cum laude
PhD Thesis - Application of Functional Renormalization Group Approach to spin systems and long range models.
Advisors: S. Ruffo, A. Trombettoni and A. Codello

Present Position

- Dec 2016** [Institute for Theoretical Physics \(ITP\), Philosophenweg, 19 - 69120 Heidelberg, Germany](#)
Four years Post-Doc position in the group of Dr. Tilman Enss and part of the ISOQUANT collaboration

Awards and Fellowships

- **Percorsi di eccellenza**
2010-Awarded of the merit-based fellowship *Percorsi di eccellenza* at La Sapienza University.
- **Percorso Imprenditoriale Re-Seed**
2014-Awarded of a project-based fellowship to fund a one year business management course at SISSA (Trieste).
- **Fellowship for EU collaborations**
2015-Awarded of the merit-based *Job Placement* fellowship to fund a two months visit at the Ruprecht-Karls-Universität in Heidelberg.

Research interests

- **Cold atom physics**
- **Theoretical Condensed Matter**
- **Quantum Many Body Dynamics**
- **Dynamical Critical Phenomena**
- **Renormalization group**

- **Low Dimensional Quantum Systems**
- **Long range interactions**

Teaching experience

During my present employment at Heidelberg University it is part of my duties to participate at teaching activities. As a teaching assistant I have to correct and grade home exercise done by the students and to display the solution of such exercises in a lecture every week. Moreover, I have been a guest Instructor at SISSA (Trieste) where I was responsible for a one week intense course (4 ours per day) on Functional Renormalization Group.

- **Teaching Assistant for Advanced Condensed Matter Theory** **Feb.-Jul. 2017**
Heidelberg University, Instructor Prof. Maurits Havenkort
- **Teaching Assistant for Condensed Matter Theory** **Oct. 2017- Feb. 2019**
Heidelberg University, Instructor Prof. Maurits Havenkort
- **Teaching Assistant for Seminar on Statistical Physics** **Feb. - Jul. 2018**
Heidelberg University, Instructor Prof. Andreas Mielke
- **Teaching Assistant for Theoretical Statistical Physics** **Oct. 2018 - Feb. 2019**
Heidelberg University, Instructor Prof. Bjoern Malte Schaefer
- **Teaching Assistant for Seminar on Nonlinear Systems** **Mar. - Jul. 2019**
Heidelberg University, Instructor Prof. Andreas Mielke
- **Main Instructor for Functional Renormalization Group** **Jun. 2019**
SISSA (Trieste), Co-Instructor Dr. Andrea Trombettoni
- **Head Teaching Assistant (Oberassistent) for Theoretical Statistical Physics** **Oct. 2019- Present**
Heidelberg University, Instructor Prof. Luca Amendola

Referee experience

- **Referee for *Physical Review Letters*** **Feb. 2019**
- **Referee for *New Journal of Physics*** **Sept. 2019**

Memberships in boards

- **Member of the Young Researchers Board in the Structures Excellence Cluster** **Feb. 2019**
The young researchers board proposes and organises scientific activities financed by the special fund for young researchers of the Structures Cluster. The board assigns travel stipends and internships, organises colloquia and invites scientific guests.

Conference Organisation

- **Structures Data Science Summer School** **August 2020.**
I am currently organising a summer school on data science for the young members of the Structures Excellence Cluster at the University of Heidelberg, in collaboration with the Structures Cluster steering board.