

DANIELE DIMONTE

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CURRENT POSITION

Ph.D Student in Geometry and Mathematical Physics *2015 - Today*

SISSA, Mathematical Sector, Trieste (Italy)

Research Interests Quantum many body effective theories
and vortices in Bose-Einstein Condensates

Supervisor Michele Correggi

GNFM Member *2016 - Today*

EDUCATION

Master Degree in Mathematics *2012 - 2015*

‘La Sapienza’ University - Department of Mathematics, Rome (Italy)

Thesis Title **Giant Vortices in Rotating Bose-Einstein Condensates**

Advisor **Michele Correggi**

Date of dissertation **27/01/2015**

Final Grading **110/110 cum laude**

Bachelor Degree in Mathematics *2009 - 2012*

‘Roma Tre’ University - Department of Mathematics, Rome (Italy)

Date **18/07/2012**

Final Grading **110/110 cum laude**

Scientific Secondary School Diploma *2004 - 2009*

Liceo Scientifico P. Ruffini, Viterbo (Italy)

Final Grading **83/100**

FUNDING

GNFM *2016*

participant at ‘Progetto Giovani’: **“Superconductivity and Superfluidity”**
(3 participants, € 5.000)

AWARDS

SISSA *2015*

Research training fellowship for post-graduate students, Trieste (Italy), *June-July 2015*

‘La Sapienza’ University *2012*

‘Wanted the Best’ fellowship for students matriculated at local Master Degree from a different university
with degree of 110/110 cum laude, Roma (Italy)

INdAM *2009*

Fellowship for students enrolled in mathematics, Roma (Italy)

PUBLISHED ARTICLE

On the third Critical Speed for Rotating Bose-Einstein Condensatesjoint work with Michele Correggi, *J. Math. Phys.* **57** (2016), 071901**TALKS**

Dynamics of a N-body Vortex State in a Bose-Einstein Condensate 4-6 May 2017*Assemblea Scientifica GNFM 2017*, GNFM

Montecatini Terme (Italy)

Energy asymptotics for a fast rotating Bose-Einstein Condensate 28 March 2017*AMPQ Seminar*,

SISSA, Trieste (Italy)

Critical Speeds for Rotating Bose-Einstein Condensates 1-4 November 2016*Mathematical Foundations of Physics*, Mathematical Institute LMU

Munich (Germany)

Giant vortex state in fast rotating Bose-Einstein Condensates 8-10 July 2015*Trails in Quantum Mechanics and Surroundings 2015*, Cond-Math

‘Insubria’ University, Como (Italy)

POSTER

Many-Body Vortex Dynamics in a Bose-Einstein Condensate 3-7 April 2017*Spectral Days 2017*, Universität Stuttgart

Munich (Germany)

CONFERENCES

Harmonic Analysis, Spectral Theory and PDE’s 12-15 September*‘Harm. Anal. and Diff. Eq.: New Challenges’ ERC Project*

‘La Sapienza’ University, Roma (Italy)

Summer School on Current Topics in Mathematic Physics 17-21 July*SwissMAP*

Universität Zürich, Zürich (Switzerland)

Quantum Mean Field and Related Problems 5-7 July 2017*BQR, Université de Paris 13*

LAGA, Université de Paris 13, Paris (France)

Spectral Days 2017 3-7 April 2017*Deutsche Forschungsgemeinschaft*

Universität Stuttgart, Stuttgart (Germany)

Macroscopic Limits of Quantum Systems 30 March-1 April 2017*TUM - Deutsche Forschungsgemeinschaft*

TUM, München (Germany)

Trieste Quantum Days 2017 20-24 February 2017*Mathematical Methods of Quantum Mechanics Group of SISSA*

SISSA, Trieste (Italy)

Mathematical Challenges of Zero-Range Physics <i>Mathematical Methods of Quantum Mechanics Group of SISSA</i> SISSA, Trieste (Italy)	7-10 November 2016
Frontiers in Mathematical Physics <i>Centre de recherches Mathématiques</i> Université de Montréal, Montréal, Québec (Canada)	28 August-1 September 2016
Conference on Methods of Modern Mathematical Physics <i>The Fields Institute</i> Toronto, Ontario (Canada)	22-26 August 2016
Summer School in Mathematical Physics <i>EMS - IAMP</i> 'La Sapienza' University, Roma (Italy)	11-15 July 2016
Contemporary Trends in the Mathematics of Quantum Mechanics <i>INdAM</i> 'La Sapienza' University, Roma (Italy)	4-8 July 2016
Trieste Quantum Days <i>Mathematical Methods of Quantum Mechanics Group of SISSA</i> SISSA, Trieste (Italy)	21-23 June 2016
Solid Math 2016 Conference <i>Aalborg University - Danish Council for Independent Research - IAMP</i> Aalborg University, Aalborg (Denmark)	26-28 May 2016
Mathematical Challenges in Quantum Mechanics <i>Cond-Math</i> Bressanone (Italy)	8-13 February 2016
Eight Summer School in Analysis and Applied Mathematics <i>National project 'Calcolo delle Variazioni' (PRIN 2011)</i> 'La Sapienza' University, Roma (Italy)	15-19 June 2015
The Mathematics of Topological Insulators in Naples <i>Cond-Math</i> 'Federico II' University, Napoli (Italy)	2-5 February 2015
Selected Problems in Mathematical Physics (SP2014) <i>Cond-Math</i> 'G. Marconi' University, La Spezia (Italy)	1-5 September 2014

TEACHING EXPERIENCES

Tutoring activity for the Course of AM220 (Mathematical Analysis 4) <i>'Roma Tre' University - Department of Mathematics, Rome (Italy)</i>	2011-2012
Short Lectures <i>'Paolo Ruffini' high school, Viterbo, Italy</i>	2013-today
2016 Problemi variazionali in natura (<i>in collaborazione con E. Giacomelli</i>)	
2015 La bellezza del numero di Nepero e l'importanza delle definizioni	
2013 Verso l'infinito e oltre	

LANGUAGES

Italian	native speaker
English	very good command
French	basic communication skills