# Serena CENATIEMPO

#### Personal data

Birth: Italy – December 20, 1983

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#### **POSITIONS**

| 2016-present | <b>Postdoc</b> , Mathematics Area – Gran Sasso Science Institute (IT)        |
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| 2014 - 2016  | Postdoc, research group Prof. B. Schlein – University of Zurich (CH)         |
| 2013 - 2014  | Hausdorff Postdoc, research group Prof. B. Schlein – University of Bonn (DE) |
| 2012 - 2013  | Research fellow, supervisor Prof. A. Giuliani – University of Roma Tre (IT)  |

#### **EDUCATION**

| 02/2013 | <b>PhD</b> in Physics, supervisor Prof. A. Giuliani – Sapienza, University of Rome(IT) |
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| 10/2008 | Master degree in Physics, supervisor Prof. R. Figari – University of Napoli (IT)       |
| 03/2006 | Bachelor degree in Physics, supervisor Prof. R. Figari – University of Napoli (IT)     |

#### **Pubblications**

- [1] The excitation spectrum of Bose gases interacting through singular potentials, with C. Boccato, C. Brennecke and B. Schlein, math-ph/1704.04819 (2017)
- [2] Complete Bose-Einstein condensation in the Gross-Pitaevskii regime, with C. Boccato, C. Brennecke and B. Schlein, math-ph/1703.04452 (2017)
- [3] Analysis of fluctuations around non linear effective dynamics,
  To appear on: "Advances in Quantum Mechanics: Contemporary Trends and Open
  Problems", G. Dell'Antonio and A. Michelangeli eds., Springer-INdAM series (2017)
- [4] Quantum Many-Body Fluctuations Around Nonlinear Schrdinger Dynamics, with C. Boccato and B. Schlein, Ann. Henri Poincar 18: 113 (2017)
- [5] Renormalization theory of a two dimensional Bose gas: quantum critical point and quasi-condensed state, with A. Giuliani, Jour. Stat. Phys. 157, 755-829 (2014)
- [6] Low dimensional interacting bosons. PhD Thesis, math-ph/1211.3772 (2013)

#### Talks

- 2017 Trieste Quantum Days 2017, Trieste (IT) conference
- 2016 Sapienza, University of Rome (IT) lecture talks and seminar Contemporary Trends in the Mathematics of Quantum Mechanics, Rome(IT) - conference SISSA, Trieste (IT) - seminar GSSI, L'Aquila (IT) - seminar
- 2015 Renormalization in Statistical Physics and Lattice Field Theories, Montpellier (FR)- conf. Trials in Quantum Mechanics and Surroundings 2015, Como (IT) conference LMU, Munich (DE) seminar University of Stuttgart (DE), double talk
- 2014 Mathematical Physics, Analysis and Stochastics, Heidelberg (DE) conference Many-Body Quantum Systems, Warwick (UK) - conference University of Roma Tre (IT) - seminar
- 2013 ETH-Zutich (CH) seminar
- 2012 University of Milano (IT) seminar
   ICMP 12, topical session, Aalborg (DK) conference
   Quantum Mechanics and surroundings, L'Aquila (IT) conference

### EVENTS BY INVITATIONS AND VISITS

| Sept. 2016 | Workshop "Many-Body Quantum Systems and Effective Theories",<br>Oberwolfach (DE) - 1 week |
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| May 2016   | Workshop "The Renormalization Group", Oberwolfach (DE) - 1 week                           |
| ·          |   |
| Nov. 2012  | University of Rouen (FR), by invitation of Dr. Margherita Disertori – 1 week              |
| May 2012   | Hausdorff Trimester Program, Bonn (DE) – 3 weeks  |
| March 2011 | Workshop "The Renormalization Group", Oberwolfach (DE) - 1 week                           |

#### Teaching

- 2016 2017 Teaching activities at GSSI, L'Aquila Introduction to quantum many particle problems (PhD course) Effective equations for many body quantum systems (PhD course)
- 2014 2015 Teaching activities at the Institute of Mathematics, University of Zurich
  Teaching assistant for Analysis 3 (2nd year class, ODEs and measure theory)
  Teaching assistant for the course on *Thomas–Fermi and Hartree–Fock theory*for atoms and molecules (master and graduate students)
- 2010 2012 Teaching activities at University Campus Biomedico, Rome Teaching assistant for *Mechanics and Thermodynamics* (1st year class)

#### OTHER ACTIVITIES

• Referee for Jour. Stat. Phys.

## LANGUAGES

Italian: mother-tongue English: fluent, C1 level

German: intermediate, B1 level French: elementary, A2 level

Last update: May 12, 2017