

## Andrei Berceanu

### *Curriculum Vitae*

**Date of Birth:** 13<sup>th</sup> of June 1983, in Bucharest, Romania

## Employment

2017–...     ◇ **Postdoctoral Research Assistant**, ELI-NP

## Education

- 2010–2016     ◇ **Ph.D. in Theoretical Condensed Matter Physics**, Universidad Autónoma de Madrid  
                  **Supervisor:** Francesca Maria Marchetti  
                  **Thesis:** *Scattering & topological properties of driven-dissipative quantum fluids*  
                  **Distinction:** Cum Laude, International Doctorate
- 2008–2009     ◇ **Researcher**, Lorentz Institute for theoretical physics, Leiden, Netherlands  
                  **Group of:** Carlo Beenakker
- 2006–2008     ◇ **TopMaster in Nanoscience**, University of Groningen, Netherlands  
                  **One year research project with M. Mostovoy:** *Skyrmions in Doped FeTiO<sub>3</sub>*  
                  **Distinction:** Cum Laude
- 2005–2006     ◇ **Erasmus exchange student at the University of Groningen**  
                  **B.Sc. project with J. Knoester:** *Pump-probe spectroscopy of J-aggregates*
- 2002–2006     ◇ **B.Sc. Physics**, University of Bucharest  
                  **Distinction:** top 5% students

## Awards

- 2019            ◇ **HPC-Europa3 grant PI**, with team at LNF-INFN
- 2018            ◇ **EUCALL Exchange Program SIMEX work package**
- 2015            ◇ **Awarded ESF POLATOM Exchange Grant of 10000€**, for the project *Berry phase effects in exciton-polaritons*
- 2013            ◇ **Awarded position of Profesor Ayudante**, at *Universidad Autónoma de Madrid*
- 2010-2013     ◇ **Early Stage Researcher**, within the frame of Marie Skłodowska-Curie Innovative Training Network “Clermont4”
- 2006            ◇ **Awarded M.Sc. scholarship** by the Zernike Institute for Advanced Materials, Groningen
- 2002            ◇ **First place**, Bucharest Physics Olympiad

## Publications

- [8]     ◇ A.C. Berceanu, Y. Niu, *Temperature effect on neutron capture rates in tin isotopes*, **Submitted to Phys. Rev. C (2019)**
- [7]     ◇ J. F. Ong, K. Seto, A.C. Berceanu, S. Aogaki and L. Neagu, *Feasibility studies for all-optical and compact  $\gamma$ -ray blaster by 1 PW laser pulse*, **Plasma Phys. Control. Fusion** **61**, 084009 (2019)
- [6]     ◇ H. M. Price, A.C. Berceanu, T. Ozawa, and I. Carusotto, *Momentum-space Landau levels in arrays of coupled ring resonators*, **Proc. SPIE** **9762**, 97620W (2016)
- [5]     ◇ A. C. Berceanu, H .M. Price, T. Ozawa, and I. Carusotto, *Momentum-space Landau levels in driven-dissipative cavity arrays*, **Phys. Rev. A** **93**, 013827 (2016)
- [4]     ◇ A. C. Berceanu, L. Dominici, I. Carusotto, D. Ballarini, E. Cancellieri, G. Gigli, M. H. Szymańska, D. Sanvitto, and F. M. Marchetti, *Multicomponent polariton superfluidity in the optical parametric oscillator regime*, **Phys. Rev. B** **92**, 035307 (2015)
- [3]     ◇ A. Berceanu, E. Cancellieri and F.M. Marchetti, *Drag in a resonantly driven polariton fluid*, **J. Phys.: Condens. Matter** **24**, 235802 (2012)

## Publications (continued)

- [2] ◇ G. Tosi, F. M. Marchetti, D. Sanvitto, C. Anton, M.H. Szymanska, A. Berceanu, C. Tejedor, L. Marrucci, A. Lemaitre, J. Bloch, L. Vina, *Onset and dynamics of vortex-antivortex pairs in polariton OPO superfluids*, **Phys. Rev. Lett.** **107**, 036401 (2011)
- [1] ◇ J.K. Asbóth, A.R. Akhmerov, A.C. Berceanu, and C.W.J. Beenakker, *Pseudodiffusive transmission of nodal Dirac fermions through a clean d-wave superconductor*, **Phys. Rev. B** **80**, 224517 (2009)

## Talks & Posters

- ◇ 18-22 February 2019 Lecture at **2nd PIconGPU User Workshop** (Dresden, Germany) *Python postprocessing*
- ◇ 4-6 July 2018 Invited talk at **Carpathian Summer School of Physics** (Sinaia, Romania) *Plasma Physics through Computer Simulations: the particle-in-cell method*
- ◇ 24-29 June 2018 Poster at **Nuclear Photonics** (Brasov, Romania) *Optical production of nuclear isomers*
- ◇ 20-22 November 2017 Poster at **Computational Plasma Physics Conference** (York, UK) *Electron laser wakefield acceleration for the production of nuclear isomers*
- ◇ 6-9 November 2017 Poster at **International Conference on Extreme Light** (Szeged, Hungary) *Electron laser wakefield acceleration for the production of nuclear isomers*
- ◇ 5-7 November 2014 Talk at the workshop **Quantum Correlations out of Equilibrium** (ETH Zurich, Switzerland) *On polariton superfluidity in the optical parametric oscillator regime*
- ◇ 9-13 September 2013 Talk at the **OECS** (Rome, Italy) *Dissipation effects in OPO polaritons*
- ◇ 27-29 August 2013 Poster at **Clermont4** (Cambridge, UK) *Dissipation effects in microcavity OPO polaritons*
- ◇ 27-31 May 2013 Poster at the 14<sup>th</sup> **International Conference on Physics of Light-Matter Coupling in Nanostructures** (Hersonissos, Crete, Greece) *Dissipation effects in microcavity optical parametric oscillators*
- ◇ 25-27 Jan 2012 Poster at 7<sup>th</sup> **GEFES** (Sevilla, Spain) *Dissipation in a coherently driven polariton fluid*
- ◇ 30 Jun 2011 Talk at **Clermont 4** (Madrid, Spain) *Dissipation in polariton superfluids*
- ◇ 13 Sep 2010 Invited talk at **CNRS** (Grenoble, France) *Pseudodiffusive transmission of Dirac Fermions through a d-wave superconductor*
- ◇ 29 Aug - 10 Sep 2010 Poster at **Les Houches Doctoral Training Session Frontiers of Condensed Matter** (Les Houches, France) *Pseudodiffusive transmission of Dirac Fermions through a d-wave superconductor*
- ◇ 18-19 Jan 2009 Poster at **Physics@Veldhoven** (Netherlands) *Ferromagnetic Insulator State in Doped FeTiO<sub>3</sub>*
- ◇ 8 Jun 2007 Member of the organizing committee and speaker at the **Aiming at Life Nanoscience Symposium** (Groningen, Netherlands) with talk entitled *Biological Quantum Dots*

## Schools & Visits to International Institutions

- ◇ 5 Sep 2019 - 31 Oct 2019 **Visit to INFN-LNF**, Frascati, Italy
- ◇ 11-22 Mar 2019 **CERN School High Gradient Wakefield Accelerators**, Sesimbra, Portugal
- ◇ 11-31 Mar 2018 **Visit to HZDR**, Dresden, Germany
- ◇ 8 Dec 2014 - 15 Jun 2015 **Secondment, University of Trento**, Trento, Italy
- ◇ 12-23 Jan 2015 **Workshop on Strongly correlated fluids of light and matter**, Villazzano, Italy
- ◇ 17 Feb - 17 Apr 2014 **Secondment at the University of Trento with I. Carusotto**, Trento, Italy
- ◇ 24 Jun - 24 Jul 2013 **Secondment, University of Sheffield with D. Whittaker**, Sheffield, UK
- ◇ 6-18 Aug 2012 **Visit to the TCM Group, Cavendish Laboratory**, Cambridge, UK
- ◇ 10-14 Jul 2012 **International Summer School of ITN SpinOptronics**, St. Petersburg, Russia
- ◇ 21-23 May 2012 **Polatom ESF Physics School**, Toledo, Spain
- ◇ 17-24 Sep 2011 **International School of Nanophotonics and Photovoltaics**, Maratea, Italy
- ◇ 17-25 Jun 2011 **Visit to the TCM Group, Cavendish Laboratory**, Cambridge, UK
- ◇ 2-6 May 2011 **School on Cold Atoms, Polaritons and Nanoscience**, Chersonissos, Greece
- ◇ 13-17 Oct 2010 **Clermont 4 Project meeting**, Heraklion, Crete, Greece
- ◇ 15-27 Jun 2009 **Beg Rohu school of statistical physics and condensed matter**, Quiberon, France
- ◇ 29 Mar - 5 Apr 2009 **Capri Spring School**, Capri, Italy

## Teaching

- ◇ 3 Nov - 4 Dec 2014 **Practicas de Laboratorio de Física General** para Grado en Física, Universidad Autónoma de Madrid, 60 hours, 32 students
- ◇ 4-7 Mar 2013 **Practicas de Laboratorio de Física General** para Grado en Ingeniería Química, Universidad Autónoma de Madrid, 16 hours, 35 students

## Skills/Other

- ◇ **Foreign Languages:** English proficient (267/300 Toefl score), Spanish proficient, Italian proficient, French intermediate
- ◇ **Scientific computing:** Linux(Gentoo, Arch, Debian), Bash, Fortran, C++, Python, Mathematica, Matlab, Julia, R
- ◇ **Other:** Git, HPC, LAMP, CMS, SysAdmin knowledge (cron jobs etc)