

## Alexandru I. NICOLIN

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## EMPLOYMENT

- 2013 – present**      **Senior Scientist** (in Romanian: *Cercetător Științific II*), Horia Hulubei National Institute of Physics and Nuclear Engineering, Department of Computational Physics and Information Technologies
- 2010 – 2013      Junior Scientist (in Romanian: *Cercetător Științific* and then *Cercetător Științific III*), Horia Hulubei National Institute of Physics and Nuclear Engineering, Department of Theoretical Physics
- 2009 – 2011      Coordinator of assessment activities for the Romanian Research Assessment Exercise organized within the EU-funded Strategic Project *Doctorate in Universities of Excellence – Research Assessment and Support for Scientific Publishing* (official Romanian title: *Doctoratul în Școli de Excelență – Evaluarea calității cercetării în universități și creșterea vizibilității prin publicare științifică*; see <http://www.ecs-univ.ro>)
- 2009 – 2010      Assistant Researcher (in Romanian: *Asistent Cercetare Științifică*), Horia Hulubei National Institute of Physics and Nuclear Engineering, Department of Theoretical Physics

## STUDIES

- 2014**      **Dr. Habil.** with the thesis *Pattern-forming instabilities in Bose-Einstein condensates* defended at POLITEHNICA University of Bucharest on November 27th 2014
- 2008**      **PhD in Physics** with the thesis *Mode-locking, Faraday patterns, and the variational approach to Bose-Einstein-condensed gases* coordinated by Prof. Henrik SMITH
- 2005 – 2008      PhD studies, University of Copenhagen, Niels Bohr Institute, Copenhagen, Denmark, with research stages at San Diego State University, San Diego, USA and Los Alamos National Laboratory, Los Alamos, USA
- 2003 – 2004      MSc studies at University of Copenhagen
- 2000 – 2003      BSc studies at University of Copenhagen and POLITEHNICA University of Bucharest, Bucharest, Romania

## RESEARCH

### Topics:

- Nonlinear phenomena in Bose-Einstein condensates
- Transport phenomena in mesoscopic systems

### Grants:

- Postdoctoral grant *Solitons, pattern forming instabilities and vortices in dipolar Bose-Einstein condensates* (in Romanian: *Solitoni, instabilități generatoare de structuri și vortexuri în condensate Bose-Einstein dipolare*) financed by UEFISCDI – running 2013–2015
- Postdoctoral grant *Nonlinear dynamics of Bose-Einstein condensed gases*, financed by UEFISCDI, 2010–2012

**Results:** 19 peer-reviewed ISI articles, more than 190 ISI citations (self-citations excluded), H=10

### Recent publications:

A.I. NICOLIN, Phys. Rev. E **84**, 056202 (2011)  
A.I. NICOLIN, Physica A **391**, 1062 (2012)

A. BALAŽ and A.I. NICOLIN, Phys. Rev. A **85**, 023613 (2012)

A. BALAŽ, R. PAUN, A.I. NICOLIN, S. BALASUBRAMANIAN, and R. RAMASWAMY, Phys. Rev. A **89**, 023609 (2014)

See full [list of publications](#).

## PROFESSIONAL SERVICE

**Editorial work:** Member of the Editorial Board of Romanian Reports in Physics

**Refereeing:** Referee for Physical Review Letters, Physical Review A, Physical Review E, Romanian Reports in Physics, Romanian Journal of Physics

## TEACHING

**Courses:** *Statistical Physics and Thermodynamics* delivered at Faculty of Physics, West University of Timisoara (2011 – 2012, 2012 – 2013); *Numerical treatment of ordinary differential equations* delivered at Faculty of Physics, University of Bucharest (2013 – 2014)

**Summer internships:** on *Complex and nonlinear systems* organized at the Horia Hulubei National Institute of Physics and Nuclear Engineering, Department of Computational Physics and Information Technologies

## AWARDS

*Constantin Miculescu* Physics Prize of the Romanian Academy – 2011

## HOBBIES

Classical music, photography