

List of publications – Dr. Alexandru I. NICOLIN

Peer-reviewed publications:

1. M. MACHHOLM, A.I. NICOLIN, C.J. PETHICK, and H. SMITH, *Spatial period doubling in Bose-Einstein condensates in an optical lattice*, Phys. Rev. A **69**, 043604 (2004)

– 47 citations in articles:

Mod. Phys. Lett. **18**, 173 (2004); Phys. Rev. E **70**, 016605 (2004); Phys. Lett. A **330**, 95 (2004); Phys. Rev. A **70**, 043625 (2004); Phys. Rev. E **70**, 066610 (2004); Phys. Rev. E **71**, 025601 (2005); Phys. Rev. A **71**, 033622 (2005); Phys. Rev. A **72**, 013603 (2005); Laser Phys. **15**, 1180 (2005); Phys. Rev. A **72**, 033602 (2005); Phys. Rev. Lett. **95**, 170404 (2005); Rev. Mod. Phys. **78**, 179 (2006); Phys. Rev. Lett. **96**, 020406 (2006); J. Phys. B: At. Mol. Opt. Phys. **39**, S231 (2006); Phys. Rev. E **74**, 036610 (2006); Phys. Rev. A **74**, 063612 (2006); J. Non. Science **17**, 59 (2007); Chin. J. Phys. **45**, 219 (2007); Phys. Rev. A **76**, 041601 (2007); Phys. Rev. A **77**, 012712 (2008); Nonlinearity **21**, R139 (2008); J. Math. Anal. Appl. **347**, 521 (2008); J. Phys. B: At. Mol. Opt. Phys. **41**, 225403 (2008); Rev. Math. Phys. **21**, 229 (2009); Phys. Rev. Lett. **102**, 093905 (2009); J. Phys. B: At. Mol. Opt. Phys. **42**, 085302 (2009); J. Non. Math. Phys. **16**, 207 (2009); Comm. Theor. Phys. **52**, 68 (2009); Phys. Rev. A **80**, 063815 (2009); Phys. Rev. A **81**, 023605 (2010); Phys. Rev. A **81**, 043611 (2011); Phys. Rev. A **83**, 043610 (2011); Phys. Rev. A **83**, 063606 (2011); J. Exp. Theor. Phys. **113**, 407 (2011); Phys. Rev. A **84**, 063602 (2011); Rom. Rep. Phys. **64**, 105 (2012); Phys. Scr. **T149**, 014004 (2012); Phys. Rev. Lett. **108**, 140402 (2012); Phys. Rev. Lett. **108**, 225303 (2012); Phys. Rev. A **86**, 063636 (2012); Phys. Rev. A **87**, 013635 (2013); J. Phys. B: At. Mol. Opt. Phys. **46**, 035301 (2013); Phys. Rev. A **87**, 023623 (2013); Eur. Phys. J. B **86**, 199 (2013); Phys. Rev. A **88**, 013848 (2013); Phys. Lett. A **377**, 2408 (2013); Nonlin. Dyn. **75**, 461 (2014)

– 4 citations in books:

Experimental results related to DNLS equations, M. A. Porter, in *The discrete nonlinear Schrödinger equation Mathematical analysis, numerical computations and physical perspective*, pp. 175 – 189, Ed. P. G. Kevrekidis, Springer, 2009; *Bose-Einstein condensation in dilute gases*, C. J. Pethick and H. Smith, pp. 401 – 443, Cambridge University Press, 2008; *Optical lattices: Theory*, A. Smerzi and A. Trombettoni, in *Emergent non-linear phenomena in Bose-Einstein condensates Theory and Experiment*, pp. 247 – 265, Eds. P. G. Kevrekidis et al., Springer, 2008; *Bose-Einstein condensates in optical lattices: Experiments*, O. Morsch, in *Emergent non-linear phenomena in Bose-Einstein condensates Theory and Experiment*, pp. 267 – 283, Eds. P. G. Kevrekidis et al., Springer, 2008

2. H.E. NISTAZAKIS, M.A. PORTER, P.G. KEVREKIDIS, D.J. FRANTZESKAKIS, A.I. NICOLIN, and J.K. CHIN, *Fractional-period excitations in continuum periodic systems*, Phys. Rev. A **74**, 063617 (2006)

– 1 citation in articles:

Nonlin. Dyn. **75**, 461 (2014)

3. A.I. NICOLIN, M.H. JENSEN, and R. CARRETERO-GONZÁLEZ, *Mode locking of a driven Bose-Einstein condensate*, Phys. Rev. E **75**, 036208 (2007)

– 7 citations in articles:

Phys. Rev. A **79**, 045602 (2009); Phys. Rev. Lett. **103**, 123901 (2009); Phys. Rev. Lett. **103**, 155001 (2009); Opt. Express **18**, 17709 (2010); Phys. Rev. E **84**, 016603 (2011); Phys. Rev. A **84**, 032123 (2011); Rom. Rep. Phys. **64**, 105 (2012)

4. A.I. NICOLIN, R. CARRETERO-GONZÁLEZ, and P.G. KEVREKIDIS, *Faraday waves in Bose-Einstein condensates*, Phys. Rev. A **76**, 063609 (2007)

– 18 citations in articles:

Phys. Rev. A **78**, 043613 (2008); Phys. Scr. **78**, 45009 (2008); Nonlinearity **21**, R139 (2008); Ann. Phys. – Berlin **324**, 709 (2009); Phys. Rev. A **81**, 033626 (2010); New. J. Phys. **12**, 73020 (2010); Phys. Rev. A **83**, 013603 (2011); Phys. Rev. A **84**, 013618 (2011); J. Phys. B: At. Mol. Opt. Phys. **44**, 115303 (2011); Cent. Eur. J. Phys. **10**, 335 (2012); Rom. Rep. Phys. **64**, 105 (2012); Phys. Scr. **T149**, 014003 (2012); Phys. Rev. A **86**, 023620 (2012); J. Phys. A: Math. Theor. **45**, 455305 (2012); Rom. J. Phys. **58**, 171 (2013); Phys. Rev. A **87**, 023616 (2013); J. Phys. B: At. Mol. Opt. Phys. **46**, 065303 (2013); New J. Phys. **15**, 113012 (2013)

– 1 citation in books:

Extended solutions and modulational instability, P. G. Kevrekidis, in *The discrete nonlinear Schrödinger equation Mathematical analysis, numerical computations and physical perspective*, pp. 175 – 189, Ed. P. G. Kevrekidis, Springer, 2009

5. A.I. NICOLIN, M.H. JENSEN, J.W. THOMSEN, and R. CARRETERO-GONZÁLEZ, *Resonant energy transfer in Bose-Einstein condensates*, *Physica D* **237**, 2476 (2008)

– 5 citations in articles:

Phys. Rev. A **79**, 045602 (2009); *Phys. Plasmas* **16**, 52306 (2009); *Physica D* **238**, 1561 (2009); *Rom. Rep. Phys.* **64**, 105 (2012); *Nonlin. Dyn.* **75**, 461 (2014)

6. A.I. NICOLIN and R. CARRETERO-GONZÁLEZ, *Nonlinear dynamics of Bose-condensed gases by means of a q-Gaussian variational approach*, *Physica A* **387**, 6032 (2008)

– 7 citations in articles:

Phys. Rev. A **80**, 013617 (2009); *Braz. J. Phys.* **39**, 468 (2009); *Network – Comp. Neural* **24**, 779 (2011); *Phys. Rev. A* **83**, 063809 (2011); *Rom. Rep. Phys.* **64**, 105 (2012); *Phys. Rev. E* **86**, 036607 (2012); *Phys. Rev. E* **88**, 042916 (2013)

7. A.I. NICOLIN, *Effective wave equation for the dynamics of high-density disk-shaped Bose-Einstein condensates*, *Rom. Rep. Phys.* **61**, 641 (2009)

– 2 citations in articles:

Rom. Rep. Phys. **64**, 105 (2012); *Phys. Rev. A* **88**, 043638 (2013)

8. A.I. NICOLIN and M.C. RAPORTARU, *Faraday waves in high-density cigar-shaped Bose-Einstein condensates*, *Physica A* **389**, 4663 (2010)

– 5 citations in articles:

Rom. Rep. Phys. **64**, 105 (2012); *Phys. Scr.* **T149**, 014003 (2012); *Phys. Lett. A* **376**, 1740 (2012); *Comp. Phys. Comm.* **183**, 2021 (2012); *Phys. Rev. E* **88**, 042916 (2013)

9. A.I. NICOLIN, *Band structure of a Bose-Einstein condensate loaded into an optical lattice*, *Rom. Rep. Phys.* **63**, 187 (2011)

– 1 citation in articles:

Rom. Rep. Phys. **64**, 105 (2012)

10. A.I. NICOLIN and M.C. RAPORTARU, *Faraday waves in one-dimensional Bose-Einstein condensates*, *Proc. Rom. Acad. Series A* **12**, 209 (2011)

– 2 citations in articles:

Rom. Rep. Phys. **64**, 105 (2012); *Phys. Scr.* **T149**, 014003 (2012)

11. A.I. NICOLIN, *Resonant wave formation in Bose-Einstein condensates*, *Phys. Rev. E* **84**, 056202 (2011)

– 14 citations in articles:

Cent. Eur. J. Phys. **10**, 335 (2012); *Rom. Rep. Phys.* **64**, 105 (2012); *Phys. Scr.* **T149**, 014003 (2012); *Phys. Lett. A* **376**, 1740 (2012); *Comp. Phys. Comm.* **183**, 2021 (2012); *Phys. Rev. A* **86**, 023620 (2012); *Phys. Rev. A* **87**, 023616 (2013); *Phys. Rev. A* **87**, 023621 (2013); *J. Phys. B: At. Mol. Opt. Phys.* **46**, 065303 (2013); *Wave Motion* **50**, 785

(2013); Phys. Rev. A **88**, 013624 (2013); Phys. Rev. A **88**, 022117 (2013); Phys. Rev. A **88**, 033621 (2013); Nonlin. Dyn. **75**, 461 (2014)

12. A.I. NICOLIN, *Faraday waves in Bose-Einstein condensates subject to anisotropic transverse confinement*, Rom. Rep. Phys. **63**, 1329 (2011)

– 7 citations in articles:

Rom. Rep. Phys. **64**, 105 (2012); Phys. Scr. **T149**, 014003 (2012); Comp. Phys. Comm. **183**, 2021 (2012); Phys. Rev. A **87**, 023616 (2013); J. Phys. B: At. Mol. Opt. Phys. **46**, 065303 (2013); Phys. Rev. A **88**, 013624 (2013); Phys. Rev. A **88**, 033621 (2013)

13. A.I. NICOLIN, *Variational treatment of Faraday waves in inhomogeneous Bose-Einstein condensates*, Physica A **391**, 1062 (2012)

– 9 citations in articles:

Rom. Rep. Phys. **64**, 105 (2012); Phys. Scr. **T149**, 014003 (2012); Phys. Lett. A **376**, 1740 (2012); Comp. Phys. Comm. **183**, 2021 (2012); Phys. Rev. A **86**, 023620 (2012); J. Phys. B: At. Mol. Opt. Phys. **46**, 065303 (2013); Wave Motion **50**, 785 (2013); Phys. Rev. A **88**, 013624 (2013); Phys. Rev. E **88**, 042916 (2013)

14. A. BALAŽ and A.I. NICOLIN, *Faraday waves in binary nonmiscible Bose-Einstein condensates*, Phys. Rev. A **85**, 023613 (2012)

– 22 citations in articles:

Rom. Rep. Phys. **64**, 105 (2012); Phys. Scr. **T149**, 014003 (2012); Phys. Lett. A **376**, 1740 (2012); Comp. Phys. Comm. **183**, 2021 (2012); J. Phys. B: At. Mol. Opt. Phys. **45**, 115301 (2012); Phys. Rev. A **86**, 023614 (2012); Phys. Rev. A **86**, 023620 (2012); Phys. Rev. A **86**, 023629 (2012); Phys. Rev. A **86**, 033606 (2012); Phys. Rev. A **87**, 013625 (2013); Phys. Rev. A **87**, 023616 (2013); Phys. Rev. A **87**, 023621 (2013); New J. Phys. **15**, 035008 (2013); J. Phys. B: At. Mol. Opt. Phys. **46**, 065303 (2013); Wave Motion **50**, 785 (2013); Phys. Rev. Lett. **110**, 250401 (2013); Phys. Rev. A **87**, 063633 (2013); Phys. Rev. A **88**, 013624 (2013); Phys. Rev. A **88**, 022117 (2013); Phys. Rev. E **88**, 042916 (2013); Phys. Rev. A **88**, 043638 (2013); Nonlin. Dyn. **75**, 461 (2014)

15. A.I. NICOLIN, *Density waves in dipolar Bose-Einstein condensates*, Proc. Rom. Acad. Series A **14**, 35 (2013)

– 2 citations in articles:

Phys. Rev. A **88**, 013624 (2013); Phys. Rev. A **88**, 053630 (2013)

16. S. BALASUBRAMANIAN, R. RAMASWAMY, and A.I. NICOLIN, *Faraday waves in cigar-shaped Bose-Einstein condensates with radially inhomogeneous scattering lengths*, Rom. Rep. Phys. **65**, 820 (2013)

– 0 citations:

17. A. BALAŽ, R. PAUN, A.I. NICOLIN, S. BALASUBRAMANIAN, and R. RAMASWAMY, *Faraday waves in collisionally inhomogeneous Bose-Einstein condensates*, Phys. Rev. A **89**, 023609 (2014)

– 0 citations:

Total number of citations*: 154

*According to Thomson Reuters Web of Science; **self-citations are excluded**

Conference proceedings

1. A.I. NICOLIN, I. VIDANOVIĆ, and A. BALAŽ, *Faraday waves and collective modes in Bose-Einstein condensates*, in *ICT Innovations 2011*, pp. 247 – 257, Ed. L. Kocarev, Series: *Advances in Intelligent and Soft Computing*, Springer, 2012
2. A.I. NICOLIN and I. RATA, *Density waves in dipolar Bose-Einstein condensates by means of symbolic computations*, in *High-Performance Computing Infrastructures for South East Europe's Research Communities*, pp. 15 – 21, Eds. M. Dulea et al., Series: *Modeling and Optimization in Science and Technologies*, Springer, 2014
3. M.C. RAPORTARU and A.I. NICOLIN, *Nonlinear dynamics of Bose-Einstein condensates by means of symbolic computations*, in *ICT Innovations 2012 Conference Web Proceedings*, pp. 9 – 15, Eds. S. Markovski and M. Gusev, ISSN 1857-7288 [<http://ictinnovations.org>]

Book chapters

1. A. BALAŽ and A.I. NICOLIN, *Fragmentation of a Bose-Einstein condensate through periodic modulation of the scattering length*, in *Localized Excitations in Nonlinear Complex Systems. Current State of the Art and Future Perspectives*, pp. 119 – 129, Eds. R. Carretero-Gonzalez et al., Springer, 2014

Books

1. A.I. NICOLIN and M.C. RAPORTARU, *Introduction on Bose-Einstein condensates* [in Romanian], 88 pages, Publishing House of West University, ISBN 978-973-125-379-4, 2012

PhD Thesis

A.I. NICOLIN, *Mode-locking, Faraday patterns and the variational approach to Bose-Einstein-condensed gases*, The Niels Bohr Institute, Copenhagen, Denmark, 2008

Cited in*: Phys. Rev. A **81**, 033626 (2010); Phys. Rev. A **86**, 023620 (2012)

*According to Thomson Reuters Web of Science; **self-citations are excluded**