



Europass Curriculum Vitae

Personal information

First name/ Surname **RAPORTARU Mihaela Carina**

Address Bucharest, Romania

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Nationality Romanian

Gender Female

Occupational field Research & Development

Work experience

Dates Aug. 2014 – present

Occupation or position held **Scientific Researcher III**

Main activities and responsibilities Investigation of mesoscopic quantum systems through advanced computational methods; publication of scientific papers; participation in national and international congresses and conferences; participation in national and international projects in the field of high performance computing; Grid users certification in IFIN-HH; contributions to GRID development in IFIN-HH; coordination of the research activity of students

Name and address of employer Department of Computational Physics and Information Technologies (DFCTI), "Horia Hulubei" National Institute of R&D for Physics and Nuclear Engineering (IFIN-HH), 30th Reactorului St, Magurele, Ilfov

Type of business or sector County, Romania; website: <http://www.ifin.ro>
Research & Development

Dates Dec. 2013-Sept. 2016

Occupation or position held **Research Assistant**

Main activities and responsibilities Computational investigations into the dynamics of Bose-Einstein condensates immersed in a thermal cloud

Name and address of employer University of Bucharest, Faculty of Physics, 405 Atomistilor St, Magurele, Ilfov County, Romania

Type of business or sector Research & Development

Dates Oct. 2010 – Aug. 2014

Occupation or position held **Technology Development Engineer**

Main activities and responsibilities Investigation of nonlinear dynamic phenomena of Bose-Einstein condensates; publication of scientific papers; participation in national and international congresses and conferences; participation in national and international projects in the field of high performance computing; Grid users certification in IFIN-HH; contributions to the development of GRID in IFIN-HH.

Name and address of employer Department of Computational Physics and Information Technologies (DFCTI), "Horia Hulubei" National Institute of R&D for Physics and Nuclear Engineering (IFIN-HH), 30th Reactorului St, Magurele, Ilfov County, Romania; website: <http://www.ifin.ro>

Type of business or sector Research & Development

Dates Oct. 2005 – Oct. 2010

Occupation or position held **Research Assistant**

Main activities and responsibilities Publication of scientific papers; participation in national and international congresses and conferences; participation in national and international projects as a member of the research team; configuration of parallel computing clusters; software installation; GRID development; data network maintenance.

Name and address of employer Department of Computational Physics and Information Technologies (DFCTI), "Horia Hulubei" National Institute of R&D for Physics and Nuclear Engineering (IFIN-HH), 30th Reactorului St, Magurele, Ilfov County, Romania; website: <http://www.ifin.ro>

Type of business or sector Research & Development

Education and training

Dates 2007- 2012

Title of qualification awarded **PhD in Physics**

Principal subjects/ occupational skills covered *The study of nonlinear and stochastic behavior of Bose-Einstein condensates*, coordinated by Prof. Univ. Dr. Virgil Băran. PhD title awarded according to Ministerial Order 3250MD/20-II-2013

Summary available at:
<http://dfcti.ifin.ro/docs/RezumatPhDMCR.pdf>

Name and type of organization providing education and training University of Bucharest, Faculty of Physics

Dates 2005-2007

Title of qualification awarded **M. Sc., Master in Earth, Atmosphere and Environmental Physics**

Principal subjects/ occupational skills covered Atmosphere Physics, Environmental Physics, Earth Physics

Name and type of organization providing education and training University of Bucharest, Faculty of Physics

Dates 2000-2005

Title of qualification awarded **B. Sc., Diplomat Engineer, Specialization in Physics-Informatics**

Principal subjects/ occupational skills covered Computational Physics

Name and type of organization providing education and training University of Bucharest, Faculty of Physics

Dates 1996-2000

Title of qualification awarded **Baccalaureate diploma**

Principal subjects/ occupational skills covered Physics, Mathematics

Name and type of organization providing education and training Pedagogic high-school, Alexandria, Romania

Personal skills and competences

Mother tongue(s) **Romanian**

Other language(s)

Self-assessment

European level

English

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B2	Independent	B2	Independent	B2	Independent	B2	Independent	B2	Independent

Social skills and competences Good social skills, Team spirit, Excellent communication skills

Organizational / managerial skills President of the Youth Commission at Alma Mater Trade Union Federation, Vice-President of the Youth Commission at Cartel Alfa Trade Union Confederation, Secretary of the IFIN-HH Trade Union

Computer skills and competences

- GRID administration and registration authority, HPC cluster configuration
- Experienced scientific programmer (Fortran, C/C++, OpenMP, MPI), proficient in MATLAB and MATHEMATICA
- Experienced scientific communicator, proficient LaTeX user
- Computational physics in mesoscopic systems (Bose-Einstein condensates and nuclear systems)

Driving license

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ADDITIONAL INFORMATION

- **Registration Authority Manager** for IFIN-HH responsible for GRID certification (2007-present)
- **Censor** for Romanian Association for Promotion of Advanced Computational Methods in Scientific Research
- **Member** of the Romanian Association for Promotion of Advanced Computational Methods in Scientific Research
- **Coordinator** on behalf of IFIN-HH of the Memorandum of Understanding with University of Information Science and Technology "St. Paul the Apostle" Ohrid, Republic of Macedonia for the period 2015-2018
- **Scientific Secretary** for RO-LCG 2014 Conference on *Grid, Cloud and High Performance Computing in Physics Research* (<http://rolcg2014.ifin.ro>), Magurele, Romania
- **Scientific Referee** for the conferences RO-LCG 2012 (<http://www.itim-cj.ro/rolcg2012/contact.html>), RO-LCG 2014 (<http://rolcg2014.ifin.ro>), CIIT 2015 (<http://ciit.finki.ukim.mk/>) and the journals Romanian Reports in Physics and Romanian Journal in Physics.
- **Coordinator of student internships** in DFCTI, IFIN-HH, Magurele, Romania
- **Author** of IFIN-HH internal procedure: "Attribution of GRID user certificates"

Publication list:

1. *Techniques and solution for monitoring the RO-14-ITIM Grid site*, Felix Farcas, Albert Stefan, Larisa Olaru, Liviu Miclea, Gabriel Popeneciu, Mihaela Raportaru, Proceedings of 2010 IEEE International Conference on Automation, Quality and Testing, Robotics AQTR 2010 - THETA 17th edition, May 28-30, 2010, Cluj-Napoca, Romania, ISBN: 978-1-4244-2576-5, TOME III pp 148-152
2. *Change density influence on macroscopic deformation energy*, R.A Gherghescu, D.N. Poenaru, W. Greiner, M. Raportaru, B. Popovici, International Journal of Modern Physics E, Volume **19**, Issue 07, pp. 1411-1423 (2010)
3. *Faraday waves in high-density cigar-shaped Bose-Einstein condensates*, Alexandru I. Nicolin, Mihaela Carina Raportaru, Physica A, Volume **389**, Issue 21, p. 4663-4667 (2010) → **20 citations**
4. *Faraday waves in one-dimensional Bose-Einstein condensates*, Alexandru I. Nicolin, Mihaela-Carina Raportaru, Proceedings of the Romanian Academy, Series A, Volume **12**, Number 3/2011, pp. 209–211 → **8 citations**
5. *Formation of Faraday and resonant waves in driven Bose-Einstein Condensates*, Mihaela-Carina Raportaru, Romanian Reports in Physics, vol. **64**, No.1, p.105-115 (2012) → **7 citations**
6. *Nonlinear dynamics of Bose-Einstein condensates by means of symbolic computations*, Mihaela Carina Raportaru, Alexandru I. Nicolin, ICT Innovations 2012 Web proceedings, ISSN 1857-7288, pp.9-16 (2012)
7. *Analytical description of the nonlinear dynamics of Bose-Einstein condensates by means of genetic algorithms*, Mihaela Carina Raportaru, Jane Jovanovski, Boro Jakimovski, Dragan Jakimovski, Anastas Mishev, Romanian Journal of Physics, vol. 59, No. 7-8, pp. 677-685 (2014) → **3 citations**

8. *Effective low-dimensional equations for Bose-Einstein*, Alexandru I. Nicolin, Mihaela Carina Raportaru, Antun Balaz, Rom. Rep. Phys., vol. 67, No.1, p.143-157, 2015→**12 citations**
9. *The speed-up of a Boltzmann-Vlasov code*, R. Tabacu, M.C. Raportaru, E. Slusanschi· V. Baran, A. I. Nicolin, Romanian Journal of Physics, vol. 60, No. 9-10, pp. 1441-1449 (2015)→**2 citations**
10. *Effective polynomial and non-polynomial Schrodinger equations for the 0K dynamics of Bose-Einstein condensates*, Mihaela Carina Raportaru, Alexandru Nicolin, Proceedings of 12th International Conference for Informatics and Information Technology 2015, ISBN 978-608-4699-05-7, pp31-34 (2015)
11. *Effective polynomial and non-polynomial Schrodinger equations for the 0K dynamics of Bose-Einstein condensates*, Mihaela Carina Raportaru, Alexandru Nicolin, Proceedings of 12th International Conference for Informatics and Information Technology 2015, ISBN 978-608-4699-05-7, pp31-34 (2015)
12. *Faraday and resonant waves in binary collisionally-inhomogeneous Bose-Einstein condensates*, J. Sudharsan, Radha Ramaswamy, Mihaela Carina Raportaru, Alexandru Nicolin, Antun Balaz, Journal of Physics B: Atomic, Molecular and Optical Physics, Vol. 49 165303 (2016) →**1 citation**
13. *Testing voice-based biometrics authentication platforms for Romanian utterances through infrequent consonant clusters*, A. Cocioceanu, M. Barbulescu, T. Ivanoaica, M. Raportaru, A.I. Nicolin, RoEduNet Conference: Networking in Education and Research, 2016 15th, ISSN 2247-5443, 16497499 (2016)

Books:

1. *Introducere în teoria condensatelor Bose-Einstein*, A.I. NICOLIN și M.C. RAPORTARU, 88 pagini, Editura Universității de Vest, 2012, ISBN 978-973-125-379-4
2. *MATLAB and MATHEMATICA for Scientific Computing*, A.I. NICOLIN și M. C. RAPORTARU, electronic form available at <http://dfcti.ifin.ro/docs/students/MM.pdf>

List of conferences:

1. *Techniques and solution for monitoring the RO-14-ITIM Grid site*, Felix Farcas, Albert Stefan, Larisa Olaru, Liviu Miclea, Gabriel Popeneciu, Mihaela Raportaru, IEEE International Conference on Automation, Quality and Testing, Robotics AQTR 2010 - THETA 17th edition, May 28-30, 2010, Cluj-Napoca, Romania
2. *Competition between Faraday and resonant waves in driven Bose-Einstein condensates*, M.C. Raportaru – TIM 2011 Conference, Timisoara, Romania
3. *Nonlinear dynamics of Bose-Einstein condensates by means of symbolic computations*, M.C. Raportaru, A.I. Nicolin, ICT Innovation Conference, Ohrid, Macedonia, 2012
4. *Noise-driven transitions in nonlinear lattices*, M.C. Raportaru, 9th ISCBPU, International Student Conference of Balkan Physical Union -9th ISCBPU's, Constanta, Romania, 2012
5. *Formation of Faraday and Resonant Waves in Driven High-Density Bose-Einstein Condensates*, M.C. Raportaru, HP-SEE User Forum, Belgrad, Serbia, 2012
6. *A novel non-polynomial Schrödinger equation for high-density cigar-shaped condensates*, M.C. Raportaru, A.I. Nicolin, The 13th International Balkan Workshop on Applied Physics-IBWAP 2013, Constanța, România, 2013
7. *High-Performance Computing methods in the study of ultra-cold gases*, M.C.Raportaru, CIIT 2014-11th International Conference on Informatics and Information Technology, Bitola, Macedonia, 2014
8. *Symbolic and numerical computing for Bose-Einstein condensates*, A.I. Nicolin, M.C. Raportaru, TIM14 Physics Conference- Physics without frontiers, 20-22 November 2014, Timisoara, Romania, 2014
9. *Symbolic and numerical computing for Bose-Einstein condensates*, A.I. Nicolin, M.C. Raportaru, RO-LCG 2014 Conference, 03-05 November 2014, Bucuresti, Romania, 2014

10. *Analytical description of the nonlinear dynamics of Bose-Einstein condensates by means of genetic algorithms*, Mihaela Carina Raportaru, Jane Jovanovski, Boro Jakimovski, Dragan Jakimovski, Anastas Mishev, The 14 th International Balkan Workshop on Applied Physics, 2-4 July, Constanta, Romania, 2014
11. *Thermal transition in nonlinear lattices*, Mihaela Carina Raportaru, 6th ICT Innovations Conference 2014, 9-12 September, Ohrid, R. Macedonia, 2014
12. *High-Performance Computing algorithms for the nonlinear dynamics of Bose-Einstein condensates*, Mihaela Carina Raportaru, Jane Jovanovski, Boro Jakimovski, Dragan Jakimovski, Anastas Mishev, TIM 14 Physics Conference- Physics without frontiers, 20-22 November 2014, Timisoara, Romania, 2014
13. *Effective polynomial and non-polynomial Schrodinger equations for the OK dynamics of Bose-Einstein condensates*, Mihaela Carina Raportaru, Alexandru Nicolin, 12th International Conference for Informatics and Information Technology, Bitola, Macedonia, 2015
14. *Symbolic calculations of the static and dynamical properties of Bose-Einstein condensates*, Mihaela Carina Raportaru, Alexandru Nicolin, 12th International Conference for Informatics and Information Technology, Bitola, Macedonia, 2015
15. *Testing voice-based biometrics authentication platforms for Romanian utterances through infrequent consonant clusters* Cocioceanu, A; Barbulescu, M; Ivanoaica, T; Raportaru, M; Nicolin, A.I., RoEduNet Conference: Networking in Education and Research, Bucuresti, Romania, 2016
16. *Computer-based statistical description of phonetical balance for Romanian utterances*, Adrian Cocioceanu, Teodor Ivanoaica, Alexandru Nicolin, Mihaela Carina Raportaru, 8th ICT Innovation Conference, Ohrid, Macedonia, 2016
17. *Effective one- and two- dimensional equations for the dynamics of three-dimensional Bose-Einstein condensates*, Mihaela Carina Raportaru, Alexandru Nicolin and Antun Balaz, TIM17 Physics Conference, 25-27 May 2017, Timisoara, Romania
18. *Frequency-rank distributions of Romanian words*, Adrian Cocioceanu, Mihaela Carina Raportaru and Alexandru I. Nicolin, TIM17 Physics Conference, 25-27 May 2017, Timisoara, Romania
19. *Density waves in binary in Bose-Einstein condensates*, Mihaela Carina Raportaru, Alexandru Nicolin and Antun Balaz, TIM17 Physics Conference, 25-27 May 2017, Timisoara, Romania