



## Europass Curriculum Vitae

### Personal information

First name(s) / Surname(s) **Cornel Mironel Niculae**  
Address(es) 21, TeiŃa, 051884, Bucharest, Romania  
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Fax(es)  
E-mail cniculae@gmail.com  
Nationality Romanian  
Date of birth May 11, 1955  
Gender Male

### Occupational field **Education, Physics**

#### Work experience

Dates **September 1998 onward**  
Occupation or position held Assistant professor  
Main activities and responsibilities Teaching and instruction, scientific work and research  
Name and address of employer University of Bucharest, 36-46, M. Kogălniceanu Blvd, Sector 5, 050107, Bucharest, ROMANIA  
Type of business or sector Education, public sector  
Dates **August 2000 – January 2002**  
Occupation or position held Head of the Information Technology Centre (in regime of cumulating of functions)  
Main activities and responsibilities Direct the work of other IT professionals, such as computer software engineers and computer programmers, computer systems analysts, and computer support specialists (17 employees).  
Name and address of employer Romanian Radio Broadcasting Company, 60-64 General Berthelot, Sector1, 010165, Bucharest, ROMANIA  
Type of business or sector Media, public sector  
Dates **September 1990 – august 1998**  
Occupation or position held Assistant professor  
Main activities and responsibilities Instruction, scientific work and research  
Name and address of employer University of Bucharest, Bd. M. Kogălniceanu 36-46, Sector 5, 050107, Bucharest, ROMANIA  
Type of business or sector Education, public sector  
Dates **September 1986- August 1990**  
Occupation or position held Researcher  
Main activities and responsibilities scientific work and research in the Polygraph Research Laboratory  
Name and address of employer Central printing industry, 1 PiaŃa Scantei, Bucharest, Romania  
Type of business or sector Industry, public sector

#### Education and training

Dates 1992-1998  
Title of qualification awarded PhD  
Principal subjects/occupational skills covered Thesis title: The study of the movement of charged particles in radio frequency fields

Name and type of organisation providing education and training Institute of Atomic Physics, Bucharest, Romania

Level in national or international classification ISCED 6

Dates 1980-1981

Title of qualification awarded BSc + MSc in Physics

Principal subjects/occupational skills covered Basic and advanced knowledge in Physics and Apply physics

Name and type of organisation providing education and training University of Bucharest, Bucharest, Romania

Level in national or international classification ISCED 5

### Personal skills and competences

Mother tongue(s) **Romanian**

Other language(s) **English, French**

Self-assessment <i>European level</i> (*)	Understanding		Speaking		Writing
	Listening	Reading	Spoken interaction	Spoken production	
<b>English</b>	B2	B2	B1	B1	B2
<b>French</b>	B2	B2	B1	B1	B1

(\*) [Common European Framework of Reference for Languages](#)

Social skills and competences - Team work: I have worked in various types of teams from research and industry  
- Manager skills: I was head of a centre for information technology at Radio Romania for 17 months

Organisational skills and competences Good team organizer  
(While I was working for Radio Romania created the IT department from scratch.)

Technical skills and competences Advanced knowledge of electronic circuits' design from the idea through the whole printed circuit boards' technology, debugging and prototyping to the release of the final product  
Adaptability to advances in technology

Computer skills and competences Expert level in C, C++, JavaScript, Perl, Php, and MySQL. Advanced level in Java, VRML, Medium level in Pascal, Fortran, and Python  
Good knowledge of Microsoft Office Products; Good Knowledge of Windows and Linux operating Systems. Good knowledge of Scilab, Maple, and MathCAD environments.

Artistic skills and competences Wood sculpture

Other skills and competences Gardening

Driving licence Amateur: Category B.

### Additional information

Recent Projects:

- I have designed and developed a CMS (content management system) for the website of the University of Bucharest. It was put into operation in April 2011.

Current Research:

- Mathematical modelling and computer simulation of small clouds of ions in electromagnetic traps
- Nonlinear dynamics and chaos
- Charge particle optics
- Modern educational tools and technologies used in teaching physics in secondary and tertiary (academic) education.

### Annexes



## Annexes

### Areas of interest

- Charged Particle Optics and Surface Physics Instrumentation;
- Mathematical modelling and computer simulation of small clouds of ions in electromagnetic traps;
- Nonlinear dynamics and chaos;
- Modern educational tools and technologies used in teaching physics in secondary and tertiary (academic) education;
- Modeling of social behavior and patterns under critical events or natural disasters;
- Modeling the influence of wrong or misleading decisions on shaping the trend and the longterm development of education in natural sciences;

### Selective list of publications

- Marcela Niculae, **C.M.Niculae**, and E. Barna, *Non-formal science education promoting learning through experiment*, Romanian Reports in Physics, **63(3)**, 2011
- C. M. Niculae and Marcela Niculae, *Reconsidering of Slow Fast Method in Deriving Pseudopotential Function for Radiofrequency Traps*, Romanian Journal of Physics, 55(1-2), pp13-23 (2010)
- C. M. Niculae and Marcela Niculae, *Numerical method for calculating of potential distribution in non-ideal multipole ion guides*, Optoelectronics and Advanced Materials-Rapid Communications, 3(10), pp 1073 – 1075, (2009)
- C. M. Niculae and Marcela Niculae, *The influence of the static field on the motion stability of a hexapole rf trap*, Optoelectronics and Advanced Materials-Rapid Communications, 3(10), pp 1065 – 1072, (2009)
- Mădălina Cruceru, D. Bartos, I. Cruceru, G. Caragheorghopol, O. G. Dului, A. Barborica, P. Cristea, C. M. Niculae, R. C. Bobulescu, *A coordinate sensitive detector for particles generated in high energy reactions*, Romanian Reports in Physics, 61(3), 513- 521 (2009)
- Marcela Niculae, C.M. Niculae and Roxana Doncu, *Acquiring Knowledge of Physics by a Hands-On Approach in Romanian Primary School*, Proceedings of the 7th General Conference of the BPU, Alexandroupolis, 9-13 September 2009.

### I was a Research Team Member of the following Scientific Contracts

- CEEX 05-D10/2005 (2005-2008)
- CEEX 06-11-17/2006 (2006-2008)
- CEEX 06-10-79/2006 (2006-2008)

### Scientific communications

- Marcela Niculae, C.M.Niculae, and E. Barna, *A web based tool supporting IBSE method*, The 7th International Scientific Conference eLSE – eLearning and Software for Education, April 28-29, 2011.
- Marcela Niculae, C.M. Niculae, E. Barna, *Virtual training of students for laboratory work*, The 7th International Conference eLearning and Software for Education, Bucharest, April 28-29, 2011.
- P. Ciotirnae, D. Siposan, C.M. Niculae, and R.D. Raicu, *Bio inspired model for the traffic optimization into laser communication networks*, Proceedings of the 10th International Congress of Dermatology, p 295, Prague, 20-24 Mai 2009.
- C.M.Niculae and M. Niculae, *Training high school students for learning Special Relativity*, The 7th General Conference of the BPU, Alexandroupolis, 9-13 September 2009.
- **C. M. Niculae**, *Teaching software languages: A powerful way to develop technical skills of students*, 10th INTERNATIONAL BALKAN WORKSHOP ON APPLIED PHYSICS, July 6-8, 2009, CONSTANTA, ROMANIA.
- **C.M. Niculae**, A. Barborica, P. Cristea, and R.C. Bobulescu, *A Low-noise Charge Sensitive Amplifier*, Annual Scientific Conference, Faculty of Physics, University of Bucharest, Bucharest-Magurele, June 06 2008.
- Marcela Niculae and **C.M. Niculae**, *Free educational software for teaching sciences*, Annual Scientific Conference, Faculty of Physics, University of Bucharest, Bucharest-Magurele, June 06 2008.
- **C.M.Niculae** and Marcela Niculae, *Numerically integrating DDE: Difficulties commonly encountered*, Annual Scientific Conference, Faculty of Physics, University of Bucharest, Bucharest-Magurele, June 06 2008.