



## Europass Curriculum Vitae

### Personal information

First name(s) / Surname(s) **Andrei Barborica**  
Address(es) 3 Giuseppe Verdi, Apt 2, 020257, Bucharest, Romania  
Telephone(s) +40-37-330-1150 Mobile: +40-77-122-6939  
Fax(es) +40-31-405-0582  
E-mail andrei.barborica@fizica.unibuc.ro  
Nationality Romanian  
Date of birth May 22<sup>nd</sup>, 1963

### Desired employment / Occupational field

#### Associate Professor

#### Work experience

|                                      |   |
|--------------------------------------|---|
| Dates                                | Mar.2005 – present  |
| Occupation or position held          | Associate Professor   |
| Main activities and responsibilities | Biomedical Engineering, Electronic Physics  |
| Name and address of employer         | University of Bucharest, Physics Department, Bucharest, Romania                                   |
| Dates                                | Feb.1997 – Feb 2005   |
| Occupation or position held          | Assistant Professor   |
| Main activities and responsibilities | Biomedical Engineering, Electronic Physics  |
| Name and address of employer         | University of Bucharest, Physics Department, Bucharest, Romania                                   |
| Dates                                | Feb.1992 – Feb 1997   |
| Occupation or position held          | Lecturer  |
| Main activities and responsibilities | Electronic Physics  |
| Name and address of employer         | University of Bucharest, Physics Department, Bucharest, Romania                                   |
| Dates                                | May 1990 - Feb. 1992  |
| Occupation or position held          | Physicist   |
| Main activities and responsibilities | Material Science, Laser-Matter Interaction  |
| Name and address of employer         | Institute of Atomic Physics, Institute of Physics and Technology of Materials, Bucharest, Romania |
| Dates                                | Oct. 1988-April 1990  |
| Occupation or position held          | Physicist   |
| Main activities and responsibilities | Electronic measurement instruments and sensors design   |
| Name and address of employer         | Industrial and Electronic Measurement Instruments Co. (IEMI) – Bucharest, Romania                 |

### Education and training

Dates 1998-2004  
 Title of qualification awarded Postdoctoral Fellow  
 Principal subjects/occupational skills covered Systems neuroscience, electrophysiology and behavior in awake behaving non-human primates (macaque monkeys)  
 Name and type of organisation providing education and training Columbia University, Center for Neurobiology and Behavior and David Mahoney Center for Mind and Brain Unit 87, Kolb Research Annex Rm 518, 1051 Riverside Dr. New York, NY 10032

Dates 1990-1994  
 Title of qualification awarded PhD  
 Principal subjects/occupational skills covered Laser-induced morphological transformations of surfaces, under the supervision of Prof. Ion N. Mihailescu  
 Name and type of organisation providing education and training Institute of Atomic Physics, Bucharest, Romania

Dates 1983-1988  
 Title of qualification awarded MSc  
 Principal subjects/occupational skills covered Technological Physics, grade point average over 5 years of 98.1%.  
 Name and type of organisation providing education and training University of Bucharest, Physics Department, Bucharest, Romania

**Personal skills and competences**

Mother tongue(s) **Romanian**

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

Self-assessment  
 European level (\*)

**English**  
**French**

| Understanding |              |         |         | Speaking           |          |                   |          | Writing |          |
|---------------|--------------|---------|---------|--------------------|----------|-------------------|----------|---------|----------|
| Listening     |              | Reading |         | Spoken interaction |          | Spoken production |          |         |          |
| C2            | Mastery      | C2      | Mastery | C2                 | Mastery  | C2                | Mastery  | C2      | Mastery  |
| B2            | Communicator | C2      | Mastery | B1                 | Achiever | B1                | Achiever | B1      | Achiever |

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

Organisational skills and competences Managed teams of researchers and design engineers

Technical skills and competences Biomedical engineering;  
 Electrophysiological methods; Multichannel extracellular recordings; Deep Brain Stimulation;  
 Neural data analysis;  
 Measurement of low signals; Extraction of signal from noise; Methods for digital signal processing;  
 Analog circuitry design; A-D converters; logic circuitry design using digital signal processors and microcontrollers; C++ and assembly language programming of DSPs and microcontrollers;

Computer skills and competences Computer operating systems: WINDOWS, UNIX (DEC,SUN, HP), STRATUS VOS  
 Computer programming: Matlab, C#, Java, C++ (UNIX, PC-WINDOWS-Object-Oriented, Embedded, DSP), Visual Basic, Pascal, Fortran, Assembler

Other skills and competences

Laser-matter interaction; Dynamical systems theory;  
Temperature measurement (through contact or thermal radiation); pyroelectric detectors;

Driving licence

Romania, New York State (US)

**Additional information**

**References**

Prof. Michael E. Goldberg,

Columbia University, Center for Neurobiology and Behavior and David Mahoney Center for Mind and Brain Unit 87, Kolb Research Annex Rm 507, 1051 Riverside Dr., New York, NY 10032, Phone: 212-543-6931 ext 101, Fax 212-543-5816, e-mail: meg2008@columbia.edu

Assoc Prof. Vincent P. Ferrera,

Columbia University, Center for Neurobiology and Behavior and David Mahoney Center for Mind and Brain Unit 87, Kolb Research Annex Rm 504, 1051 Riverside Dr., New York, NY 10032, Phone: 212-543-6931 ext 301, Fax 212-543-5278, e-mail: vpf3@columbia.edu

Prof. Ion N. Mihailescu,

National Institute for Laser, Plasma and Radiation Physics

Lasers Department, PO Box MG-54, Bucharest V, RO-76900, Romania, Phone: +40-21-780-5385 ext. 1815, Fax: +40-21-423-1791, +40-21-423-1470, e-mail: mihailes@ifin.nipne.ro