

# Europass

## Personal information

First name, Surnames **Constantin Dan, Buioca**  
Address Platoului, 10/30/C/36, 332006 Vulcan, RO  
Telephones (+40)354884485; (+40)768.06.72.00  
Fax (+40)254.54.62.38  
E-mail [buioca@upet.ro](mailto:buioca@upet.ro), [dan\\_buioca@yahoo.com](mailto:dan_buioca@yahoo.com)  
Nationality Romanian  
Date of birth 27.12.1958  
Gender Male



## Desired employment / Occupational field

**University of Petroșani**

## Work experience

Occupation or position held Associate Professor  
Main activities and responsibilities Preparation and delivering Physics lectures and labs for Engineering students  
Name and address of employer University of Petroșani  
Type of business or sector Education and research

## Education and training

Dates 1991-1999  
Title of qualification awarded PhD  
Principal subjects/occupational skills covered PhD in Technical Physics  
Name and type of organisation providing education and training University Babeș-Bolyai Cluj-Napoca  
Dates 1998  
Title of qualification awarded Specialist  
Principal subjects/occupational skills covered Specialist in mining risk and impact of mining activity on environment  
Name and type of organisation providing education and training Ecole Nationale Supérieure des Techniques Industrielles et des Mines d'Alès, France  
Dates 1978-1982  
Title of qualification awarded BSci  
Principal subjects/occupational skills covered Physics  
Name and type of organisation providing education and training University of Craiova, Faculty of Natural Sciences, Specialization Physics

## Personal skills and competences

Other languages  
Self-assessment  
*European level (\*)*

**English**

**French**

Understanding		Speaking				Writing			
		Listening		Spoken interaction		Reading			
C1	experienced user	C2	experienced user	C2	experienced user	C1	experienced user	C1	experienced user
C1	experienced user	C2	experienced user	C2	experienced user	C1	experienced user	C1	experienced user

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

Professional skills and competences

Physics of magnetic fluids, Environmental physics, Physics of sensors and transducers, Modeling and simulation of physical phenomena, Didactical physics.

Scientific skills and competences (significant works)

- BUIOCA, C.D., *Microscopic Analysis of out-door Dust Sedimented in the „Iceland Volcano Week”*, Proceedings of Int. Conf. CONFERENG 2010, Univ. “Constantin Brancusi” Tg. Jiu, Romania, Annals of the “Constantin Brancusi” University of Tg. Jiu, Eng. Series, No.2/2010, pp. 398-405
- BUIOCA, C.D., Buioca, M., *Physics Status in Roumanian High Schools*, Proceedings of International Symposium UNIVERSITARIA SIMPRO 2010, Petrosani, Romania, Vol. Mathematics – Informatics and Physics, pp. 19-24.
- BUIOCA, C.D., *Modeling and Simulation of one-dimensional accelerated moving objects with MathCAD*, Proceedings of International Symposium UNIVERSITARIA SIMPRO 2010, Petrosani, Romania, Vol. Mathematics – Informatics and Physics, pp. 25-30.
- BUIOCA, C.D., *Increasing Measurements Accuracy in Mechanical Experiments by Using MathCAD Data Interpolation*, Annals of University of Petrosani, Mechanical Engineering Series, 2010.
- BUIOCA, C.D., *Modelling and simulation of physical phenomena with MathCAD*, Vol. I, *Mechanical phenomena*, Universitas Publ. House, Petrosani, Romania, 2010
- BUIOCA, C.D., *PhysCAMP, a Computer Aided Modeling Platform for Physics*, Proceedings of International Conference ELSE2009, pp. 289 – 296, Bucharest, Romania, 2009.
- BUIOCA, C.D., *Interpolation of experimental data with MathCAD*, Proceedings of Int. Conf, Univ. “Constantin Brancusi” Tg. Jiu, Romania, 2009, Annals of the “Constantin Brancusi” University of Tg. Jiu, Eng. Series, No.2/2009, pp.97-106.
- BUIOCA, C.D., *“Real-like” lab on-line – basic principles and case study for light refraction*, Proceedings of Int. Conf, Univ. “Constantin Brancusi” Tg. Jiu, Romania 2009, Annals of the “Constantin Brancusi” University of Tg. Jiu, Eng. Series, No.2/2009, pp.107-116.
- BUIOCA, C.D., *Interpolation with MathCAD: a method to find physical laws from experimental data*, Proceedings of Int. Conf. TIM09, pp. 81-82, Timisoara, 2009.
- C.D. BUIOCA, *Effects of Ultracentrifugation, HGMS and Exchange of Liquid Matrix on Ferrofluids Properties*, Proceedings of International Symposium SIMPRO 2008, Petrosani, Romania, Vol. Mathematics – Informatics and Physics, pp. 65-66.
- C.D. BUIOCA, *On Ferrofluids Properties Control by Physical Methods*, Proceedings of 11<sup>th</sup> International Conference on Electrorheological Fluids and Magnetorheological Suspensions, ERMRO8, Dresden 25-29 Aug., Germany, pp. 126.
- C.D. BUIOCA, *On Computer Aided Design of Gravitational Sedimentation Chambers*, Proceedings of International Multidisciplinary Conference, Constantin Brancusi University, Tg. Jiu, Romania, 2008, Annals of “Constantin Brancusi” University of Tg. Jiu, No. 2 (2008), pp. 445-450
- C.D. BUIOCA, S. NOAGHI, V. IUSAN, M. BUIOCA, A. STANCI, *Nano- and Microparticles characterization using Brownian Diffusion Measurements*, Journal of Magnetism and Magnetic Materials, Volume 272, p. E1063-E1065, 2004.
- V. IUSAN, C.D. BUIOCA, A. STANCI, *Magnetofluidic Effects usable for Sensors Achievement*, Journal of Magnetism and Magnetic Materials, 272, pp. 2367-2369, 2004.
- C.D. BUIOCA, *Applications of magnetic fluids to electric currents sensing*, Proceedings of The 29<sup>th</sup> Annual Congress of the American Romanian Academy of Arts and Sciences (ARA), 7-12, Bochum, Germany, 2004.
- V. IUSAN, I. STOICOIU, S. HADGIA, C.D. BUIOCA, A. STANCI *About production and quality improvement of magnetic fluids obtained in our laboratory*, Proceedings of the International Symposium UNIVERSITARIA ROPET 2004, Petrosani, Romania, Vol. Mathematics, Informatics and Physics (2004) 87-92.
- A. STANCI, C.D. BUIOCA, V. IUSAN, *Magnetofluidic transducer for position determination of extraction machines*, Proceedings of the International Symposium UNIVERSITARIA ROPET 2004, Petrosani, Romania, Vol. Mathematics, Informatics and Physics (2004) 93-94.
- C.D. BUIOCA *The design of electro-mechanical actuators using ferrofluids*, Proceedings of the International Symposium UNIVERSITARIA ROPET 2004, Petrosani, Romania, Vol. Mathematics, Informatics and Physics (2004) 101-102.
- C.D. BUIOCA, *Solving Physical Equations with MathCAD*, Annals of University of Petrosani, Physics, Vol. 6, 2004, 149-156.
- V. IUSAN, C.D. BUIOCA, A. STANCI, *Magnetofluidic sensors for pressure measurements*, Annals of University of Petrosani, Physics, Vol. 6, 2004, 95-98.
- A. STANCI, C.D. BUIOCA, V. IUSAN, *Magnetofluidic sensors for limitation of pressure*, Annals of University of Petrosani, Physics, Vol. 6, 2004, 23-68.
- V. IUSAN, C.D. BUIOCA, A. STANCI, *INTRODUCTION TO THEORETICAL MECHANICS, DIDACTICAL AND PEDAGOGICAL* Publ. House, Bucharest, 2004.
- C.D. BUIOCA, *NOISES AND SOUND POLLUTION*, Publ. House UNIVERSITAS, 2004.
- IUSAN, V., STANCI, A., BUIOCA, C.D. *Magnetofluidic Sensors for Measurement of Force, Impulse, Mass and Density*, Annals of University of Petrosani, Physics, Vol. 5, 45-54, 2003.
- STANCI, A., IUSAN, V., BUIOCA, C.D., *Capacity Sensor for Mass Measurement*, Annals of University of Petrosani, Physics, Vol. 5, 55-58, 2003.
- BUIOCA, C.D., IUSAN, V., STANCI, A., *An example of Computational Physics for Magnetic Fluids*, Annals of University of Petrosani, Physics, Vol. 5, 121-126, 2003.
- V. IUSAN, A. STANCI, C.D. BUIOCA, *About Continuity Equation in Classical and Quantum Physics*, Proceedings of the International Symposium UNIVERSITARIA ROPET 2003, Petrosani, Romania, Vol. Mathematics, Informatics and Physics (2003) 131-134.
- A. STANCI, C.D. BUIOCA, V. IUSAN, *Physical Sensor for Measurement of Pressure*, Proceedings of the International Symposium UNIVERSITARIA ROPET 2003, Petrosani, Romania, Vol. Mathematics, Informatics and Physics (2003) 135-136.
- C.D. BUIOCA, V. IUSAN, A. STANCI, *A new Type Electric Motor with Magnetic Fluid*, Proceedings of the International Symposium UNIVERSITARIA ROPET 2003, Petrosani, Romania, Vol. Mathematics, Informatics and Physics (2003) 137-139.
- V. IUSAN, N. ILIAS, A. SERAFINCEANU, C.D. BUIOCA, A. STANCI, *Magnetofluidic Sensor Based on Magnetic Trap*, International Conference on Magnetism, Rome, Italy, 765, 2003.
- C.D. BUIOCA, V. IUSAN, A. STANCI, C. PETRESCU, M. BUIOCA, *Toroidal Electric Motor with Magnetic Fluid*, International Conference on Magnetism, Rome, Italy, 757, 2003.
- C.D. BUIOCA, C. ZOLLER, *The Improvement of Electromagnetic Actuators using Magnetic Fluids*, International Conference on Magnetism, Rome, Italy, 533, 2003.
- C.D. BUIOCA, *AIR DE POLLUTION*, Publ. House Edypro Press, 2003.
- C.D. BUIOCA, *PROCESSING OF EXPERIMENTAL DATA*, Publ. House Edypro Press, 2003.
- C.D. BUIOCA, A. STANCI, V. IUSAN, C. ZOLLER, *Computer Aided Design of a New Type Magnetofluidic Actuator*, Journal of Magnetism and Magnetic Materials 252, pp 318-320 (2002)
- L.M. POP, C.D. BUIOCA, V. IUSAN, M. ZIMNICARU, *Long Term Stability of Magnetic Fluids in Low Gradient Magnetic Fields*, Journal of Magnetism and Magnetic Materials 252, pp 46-48 (2002)
- C.D. BUIOCA, A. STANCI, V. IUSAN, R. PARLEA, *Nondestructive Testing of Rock Cutting Knives using Magnetic Fluids*, Annals of University of Petrosani, Physics, Vol. 4 (2002) 33-28.
- A. STANCI, V. IUSAN, C.D. BUIOCA, *Magnetofluidic Sensors for Reception of Information about Acceleration and Characteristics of Vibrations*, Annals of University of Petrosani, Physics, Vol. 4 (2002) 39-50.
- A. STANCI, C.D. BUIOCA, V. IUSAN, *Magnetofluidic Sensor with Cylindrical Coil for Mechanical Vibrations Measurement*, Annals of University of Petrosani, Physics, Vol. 4 (2002) 51-56.
- V. IUSAN, A. STANCI, C.D. BUIOCA, *About Quantum Particles and Associate waves*, Proceedings of the International

Symposium UNIVERSITARIA ROPET 2002, Petrosani, Romania, Vol. Mathematics and Physics (2002) 77-80.  
A. STANCI, V. IUSAN, C.D. BUIOCA, *Physical Sensor for volume measurement*, Proceedings of the International Symposium UNIVERSITARIA ROPET 2002, Petrosani, Romania, Vol. Mathematics and Physics (2002) 83-86.  
C.D. BUIOCA, A. STANCI, V. IUSAN, *Magnetic Fluids Viscosity Measurements for Clusters Revealing*, Proceedings of the International Symposium UNIVERSITARIA ROPET 2002, Petrosani, Romania, Vol. Mathematics and Physics (2002) 87-90.  
C.D. BUIOCA, V. IUSAN, A. STANCI, *Computer Aided Design of a High Electric Current Magnetofluidic Sensor*, *Sensors and Actuators A* 94 (2001) 161-164.  
A. STANCI, V. IUSAN, C.D. BUIOCA, *Some Magnetofluidic Sensors for Reception of Mechanical Information*, *Annals of University of Petrosani, Physics*, Vol. 3 (2001) 65-78.  
C.D. BUIOCA, V. IUSAN, A. STANCI, *Determination of Hydrodynamic Particle Dimension in Magnetic Fluids*, *Annals of University of Petrosani, Physics*, Vol. 3 (2001) 79-86.  
C.D. BUIOCA, V. IUSAN, A. STANCI, *On the Mean Spherical Model in Magnetic Fluids*, Proceedings of the International Symposium UNIVERSITARIA ROPET 2001, Petrosani, Romania, Vol. Mathematics and Physics (2001) 129-132.  
V. IUSAN, C.D. BUIOCA, A. STANCI, *From classical to quantum phenomena in mechanics*, Proceedings of the International Symposium UNIVERSITARIA ROPET 2001, Petrosani, Romania, Vol. Mathematics and Physics (2001) 99-102.  
A. STANCI, V. IUSAN, C.D. BUIOCA, *Magnetofluidic Sensor for Density of the Liquids* Proceedings of the International Symposium UNIVERSITARIA ROPET 2001, Petrosani, Romania, Vol. Mathematics and Physics (2001) 103-104.  
C.D. BUIOCA, V. IUSAN, L. POP, *Long Time Magnetization Curves of Magnetic Fluids in Constant Magnetic Fields*, *Annals of University of Petrosani, Physics*, Vol. 2 (2000) 43-48.  
C.D. BUIOCA, V. IUSAN, S. HADGIA, A. STANCI, *Magnetofluidic Device for Mercury Recover from Residual Industrial Water*, *Annals of University of Petrosani, Physics*, Vol. 2 (2000) 49-52.  
S. HADGIA, C.D. BUIOCA, E. TRAIŞTA, *Coal Desulfuration by Magnetic Methods*, *Annals of University of Petrosani, Physics*, Vol. 2 (2000) 75-78.  
V. IUSAN, A. STANCI, C.D. BUIOCA, L. POP, *Magnetofluidic sensors*, Proceedings of the International Symposium UNIVERSITARIA ROPET 2000, Petrosani, Romania, Vol. Exact Sciences (2000) 59-62.  
C.D. BUIOCA, V. IUSAN, A. STANCI, L. POP, *Vibrating viscometer for the study of colloidal systems*, Proceedings of the International Symposium UNIVERSITARIA ROPET 2000, Petrosani, Romania, Vol. Exact Sciences (2000) 67-70.  
V. IUSAN, C.D. BUIOCA, S. HADGIA, *Magnetic fluids of low viscosity*, *Journal of Magnetism and Magnetic Materials* 201 (1999) 38-40.  
C.D. BUIOCA, *Physical Methods in Air Depollution*, *Annals of University of Petrosani, Physics*, Vol. 1 (1999) 65-68.  
V. IUSAN, C.D. BUIOCA, *Trends in Magnetic Fluids Physics and Applications*, *Annals of University of Petrosani, Physics*, Vol. 1 (1999) 117-124.  
C.D. BUIOCA, L. POP, *On the Magnetic Susceptibility of the Magnetic Fluids*, *Annals of University of Petrosani, Physics*, Vol. 1 (1999) 131-136.  
V. IUSAN, C.D. BUIOCA, C. COTAE, O. LEAHU, *A New Method for the Determination of the Particles Hydrodynamic Dimension in Magnetic Fluids*, *EUROMAT99*, Munchen, Germany, 1999.  
C.D. BUIOCA, S. HADGIA, L. POP, A. STANCI, *PHYSICAL MECHANICS AND ACOUSTICS – LABORATORY WORKS*, Publ. House UNIVERSITAS, 1999.  
C.D. BUIOCA, *MAGNETIC AND RHEOLOGIC PROPERTIES OF MAGNETIC FLUIDS*, Publ. House UNIVERSITAS, 1999  
S. HADGIA, V. IUSAN, C.D. BUIOCA, *About nonmagnetic particles trajectory through a magnetofluidic spectrometer characterized by an izodynamic magnetic field*, *Magnitnaia Hidrodinamica*, 33, 4 (1997) 435-437.  
V. IUSAN, C.D. BUIOCA, *Exchange of liquid matrix in magnetic fluids by HGMS*, *Romanian Reports in Physics*, Vol. 47, Numbers 3-5 (1995) 281.  
V. IUSAN, S. HADGIA, C.D. BUIOCA, I. STOICOIU, A. STANCI, *Installation for non-metallic minerals purifying*, *Mines, Petroil, Gases*, No. 2, Vol. 51 (1995) 40 (in Romanian).  
V. IUSAN, C. BUIOCA, *A new method to obtain magnetic fluids with high conversion parameter of magnetic properties*, *Abstracts of European Magnetic Materials and Applications, EMMA'95*, Viena, Austria (1995) 327.  
C.D. BUIOCA, V.Z. IUSAN, *Influence of centrifugation and HGMS on conversion parameter in magnetic fluids*, *IEEE Trans. Mag.*, Vol. 30, No. 2, part II (1994) 1095-1097.

Computer skills and competences Windows; MS Office; MathCAD; Lectora; Processing and analysis of sound, image and video files.

Petrosani, 29<sup>th</sup> October 2015

Associate Professor, PhD, Constantin Dan Buioca

