PERSONAL INFORMATION Florin BĂLTĂREȚU

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Sex Male | Date of birth 06/04/1969 | Nationality Romanian

POSITION

• Associated Professor in Thermodynamics & Heat Transfer
Department of Thermal Sciences, Technical University of Civil Engineering Bucharest
• Vice-Rector for Scientific Research and International Relations
Technical University of Civil Engineering Bucharest

WORK EXPERIENCE

1993-present

2004-present	Associated Professor (Conferențiar universitar)
2000-2004	Lecturer (Șef lucrări universitar)
1997-2000	Assistant (Asistent universitar)
1993-1997	Junior Assistant (Preparator universitar)

Technical University of Civil Engineering Bucharest,
Building Services Engineering Faculty (http://instalatii.utcb.ro/)

EDUCATION AND TRAINING

1994-2001 **Ph.D. in Mechanical Engineering (Thermal Sciences)**
Mathematical and numerical modelling of transfer processes in turbulent buoyant jets (with a personal CFD code)

1988-1993 **Engineer Degree, Building Services Engineering**

Technical University of Civil Engineering Bucharest,
Building Services Engineering Faculty (http://instalatii.utcb.ro/)

PERSONAL SKILLS

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	B2
French	B2	C1	B2	B2	B1
Italian	B2	C1	B2	B2	B1

Organisational / managerial skills
▪ Vice-Dean of the Building Services Engineering Faculty 2011-2016
▪ Head of Department of Thermal Sciences, 2016-2019
▪ Vice-Rector for Scientific Research and International Relations, 2020-present

Computer skills
▪ Specialized software (*ANSYS Fluent + UDF, COMSOL Multiphysics, FDS, TRNSYS, EES*)
▪ Programming (*C, C++, Fortran, Pascal, Python*)
▪ Scientific software (*Scilab/Xcos, Matlab, Mathematica, Mathcad*)
▪ Graphics, CAD (*TikZ, CorelDraw, Tecplot, AutoCAD*)
▪ LaTeX./Beamer, Microsoft Office

ADDITIONAL INFORMATION

Teaching activity (University)

1993-1997/2000	Junior assistant / Assistant
	Technical University of Civil Engineering Bucharest (UTCB)
1997-1998	Associated Lecturer
	IUAV (Istituto Universitario di Architettura di Venezia), Venice, Italy
2000-2004/present	Lecturer / Associated Professor
	Technical University of Civil Engineering Bucharest (UTCB)

Teaching - University courses (Licence / Undergraduate level)

1993-present	Engineering Thermodynamics (in Romanian and in French)
	Heat Transfer (in Romanian and in French)
	Building Services Engineering Faculty (UTCB)
	Département d'Ingénierie Civile, Filière Francophone (UTCB)
1997-1998	Fisica tecnica (in Italian)
	Istituto Universitario di Architettura di Venezia, Italie
1998-present	Physics of Atmospheric Pollution (in Romanian)
	Building Services Engineering Faculty (UTCB)
2003-2008	Procèdes thermiques – module de cours (in French)
	Institut National Polytechnique de Grenoble (INPG),
	Ecole Nationale Supérieure d'Hydraulique et de Mécanique (ENSHMG)
2021-present	Energy from Renewable Resources 2 (in English)
	Pollution/depollution (in English) – course module in Air Pollution
	European University EU CONEXUS minors

Teaching - University courses (Master level)

2008-2011	Energétique urbaine et sources renouvelables d'énergie (in French)
2012-2020	Energy Management and Efficiency for Buildings (Urban Energetics) (in English)
	Ecole Nationale Supérieure de l'Energie, l'Eau et l'Environnement (Grenoble-INP)
2009	Complements of Heat and Mass Transfer (in Romanian)
2009-present	Advanced Engineering Thermodynamics (in Romanian)
2016-present	Thermodynamique technique avancée (in French)
	Modélisation et simulation de transfert de chaleur et de masse dans le bâtiment (in French)
	Modélisation et simulation des équipements techniques (in French)
2019-present	Modelling and simulation of fire dynamics in buildings (in Romanian)
	Building Services Engineering Faculty (UTCB)

Research stages

2004 (3 months), 2007 (6 months) 2010-2019 (2 months each year)	Numerical modelling in metal alloy solidification under electromagnetic field, MHD and related problems – ESA-MICAST II (2004, Rhône-Alpes scholarship), IMPRESS et ESA-MICAST III (2007), ANR-SMACS (2010), ESA-MICAST IV (2011), ESA-MICAST IV et ESA-CETSOL 4 (2012), ESA-MICAST IV (2013) programs [ESA = *European Space Agency*, MICAST = *Microstructure Formation in Castings of Technical Alloys under Diffusive and Magnetically Controlled Convective Conditions*, IMPRESS = *Intermetallic Materials Processing in Relation to Earth and Space Solidification*, CETSOL = *Columnar-to-Equiaxed-Transition in Solidification Processing*, SMACS = *Etude de la formation des microstructures et des macroségrégations en solidification d'alliages*]
	Scientific Researcher CNRS / Invited Researcher,
	Laboratoire SIMAP/EPM (former Madylam)
	Institut Polytechnique de Grenoble (Grenoble-INP), France

Other important research contracts

2005-2006	Thermodynamic analysis of cryogenic cycles for helium liquefaction
2006-2008	Modelling of the dynamic energy loads processes for buildings and their thermal energy supply systems
2006-2008	Evaluation of the operating state of the thermal energy systems in buildings
2013	Analysis of heating systems for anaerobic digestion systems

Main research directions	Numerical modelling in heat transfer and fluid flow
	Numerical modelling in metal alloy solidification under electromagnetic field
	Mathematical modelling of turbulence and transition
	Modelling of refrigeration and HVAC systems
	Renewable energy sources and cogeneration systems
	Optimization of thermal energy systems
Awards	Teacher of the Year, Faculty of Building Services Engineering, UTCB, 2016
Publications	8 books and university handbooks
	more than 50 articles in peer-review journals and in proceedings
	more than 25 research contracts
	reviewer *Energy & Buildings, Applied Thermal Engineering (Elsevier)*
	Metall. & Mat. Trans. B (Springer)
	editor-in-chief *Modelling in Civil and Environmental Engineering*