

## Personal information

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**Family name:** Ghiaus  
**Given name:** Christian  
**Nationalities:** Romanian and French

**Position:** Professor  
**Institution:** [INSA Lyon](#)  
[CETHIL Centre for energy and thermal sciences of Lyon](#)  
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SCOPUS [6603390490](#)  
Web of Science [K-1307-2012](#)



## Education and degrees

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**2006** **Habilitation to direct PhD research (HDR),** [La Rochelle Université](#), France  
*Thesis:* Adaptive buildings – control of mass and heat transfer

**1991-1996** **PhD,** [Technical University of Civil Engineering \(UTCB\)](#), Bucharest, Romania  
*Thesis:* Numerical and expert control of energy in building

**1988** **Control Systems Analyst,** [National Institute for R&D in Information Technology \(ICI\)](#), Bucharest, Romania

**1979-1984** **Engineer,** [Technical University of Civil Engineering \(UTCB\)](#), Bucharest

## Fellowships and research grants

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**1998-2000** **Post Doctoral Fellowship,** at [La Rochelle Université](#), France

**1997-1998** **Fulbright Senior Research Award,** [Kansas State University](#), United States

**1994-1995** **Doctoral Research Grant** [NUFFIC](#) (Netherlands organisation for international cooperation in higher education), [Technische Universiteit Delft](#), The Netherlands

## Professional experience

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**since 2007** **Full Professor, Center for energy and thermal sciences (CETHIL) and Civil Engineering Department (CGU), National Institute of Applied Sciences (INSA) Lyon, France**  
*Teaching:* Mass and heat transfer, Air conditioning, Energy and buildings  
*Research:* Low energy buildings design and performance evaluation, Inverse problems (parameters optimisation and control)

### *International projects*

*International Energy Agency (IEA)*

2004-2009 Annex 53: Total Energy Use in Buildings-Analysis and evaluation methods

2011-2015 Annex 58: Reliable Building Energy Performance Characterisation Based on Full Scale Dynamic Measurements

2012-2017 Annex 60: New generation computational tools for building and community energy systems based on the Modelica and Functional Mockup Interface standards

2016-2021 Annex 71: Building Energy Performance Assessment Based on In-situ Measurements

### ***National projects***

- 2007-2010 MIGRER Intelligent buildings and rational management of renewables
- 2008-2011 ABCLIMSOL Performance evaluation and optimisation of solar absorption air conditioners
- 2009-2011 4C Cooling without air conditioning.
- 2010-2013 AIDE-3D Fault detection and diagnosis of building energy systems
- 2012-2015 POUDEV Energy use policies in urban environment
- 2013-2015 IDEFFE Estimation of use and data aggregation of energy in buildings
- 2014-2018 COMETE Cloud for intelligent buildings and energy efficiency

### ***R&D projects with industrial partners***

- 2020-2023 Energy innovation in renovation
- 2018-2020 Identification of electrical consumers by data disaggregation
- 2017-2020 Estimation of a-posteriori error of QUB method
- 2016-2017 Precision analysis of QUB method

**1998-2007**      **Senior researcher, University of La Rochelle, France**  
*Laboratory of Transport Phenomena in Buildings (LEPTAB)*

### ***International projects***

#### *European Commission*

- 2004-2006 *European Low Energy Buildings*, project SAVE EIE/04/172/S07.38667, 1'562'112€
- 2003-2005 *Smart Accelerate- Acceleration of Smart Buildings Technologies and Market Penetration*, project SAVE 4.1031/Z/02-094
- 2001-2003 *URBVENT Natural ventilation in urban areas*, project NNE5-2000-00238, project coordinator
- 1999-2002 *SOLVENT Strategies for the efficient use of solar and passive ventilation in urban buildings*, project ALTENER XVII/4.1030/Z/99-225

#### *International Energy Agency (IEA)*

- 2004-2009 Annex 44: *Integrating Environmentally Responsive Elements in Buildings*
- 1997-1999 Annex 34: *Computer-Aided Evaluation of HVAC System Performance: The Practical Application of Fault Detection and Diagnosis Techniques in Real Buildings*

### ***National projects***

- 2000-2003 *Influence of atmospheric pollution on the global exposure of schoolchildren -- Research of prediction and means for protection*
- 1999-2000 *Ozone picks prediction by using neuro-fuzzy*

**1997-1998**      **Fulbright Senior Research Fellow, Kansas State University, United States**  
*Department of Mechanical and Nuclear Engineering, Institute for Environmental Research*  
**Post-doctoral research** Intelligent buildings: fault detection and diagnosis of energy systems

**1994-1995**      **Researcher, Technische Universiteit Delft, The Netherlands**  
*Mechanical Engineering Faculty, Indoor Climate Control Laboratory*  
**Doctoral research** Intelligent control of indoor climate

**1989-1997**      **Technical University of Civil Engineering, Bucharest, Romania**

- since 1996      **Associated professor**
- 1993-1996      **Lecturer**
- 1989-1993      **Assistant professor**

**1987-1989**      **Research Institute for light industry, Bucharest, Romania**  
*Department of Automatic Control*  
**Design Engineer** automation projects in Romania, Germany, China, and Zimbabwe

**1984-1986**      **Frigotehnica (Refrigerating engineering company), Bucharest, Romania**  
**Engineer** refrigerating systems

## PhD direction and scientific responsibilities

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### PhD Director at INSA Lyon, France

- 2007-2011 N. Jabbour, *Optimisation of solar absorption air-conditioners*  
2008-2011 I. Hazyuk, *Dynamical optimisation of renewable energy flux in buildings*  
2009-2013 R. Ghazal, *Models with identifiable parameters for desiccant cooling systems*  
2012-2016 I. Naveros, *Modeling heat transfer for energy efficiency assessment of buildings*  
2014-2017 L. Raillon, *Experimental identification of physical thermal models for demand response and performance evaluation*  
2014-2020 L. Negrea, *Optimization of energy efficiency for residential buildings by using artificial intelligence*  
2017-2020 N. Ahmad, *Measurement of energy performance: analysis of QUB method*  
2018-2021 M. Qureshi, *Disaggregation of electrical energy consumption in smart buildings*  
2017-2021 L. Brenner, *Dynamic modelling of refrigeration processes with exergy based evaluation*

### Co-supervision of PhD thesis, University of La Rochelle, France

- 2001-2003 V. Iordache, *Impact of the air pollution on pupils: prediction and protection*  
2003-2006 A. Chicinas, *Modelling, identification and control: application to air handling units*  
2003-2007 A. Sempey, *Account for the thermo-convective field for thermal control of indoor environment*  
2005-2008 I. Jaffal, *Towards a rational design of low energy buildings: methodology for evaluation of thermal performance*

### Member of editorial board

- since 2005 **Energy and Buildings**, Elsevier  
since 2012 **Building Performance Simulation**, Francis and Taylor  
since 2018 **Energies**, MDPI  
2011-2019 **Sustainable Cities and Society**, Elsevier

## Publications

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see [Web of Science](#), [Scopus](#), and/or [ORCID](#) for the list of publications

**Author h-index:** 19 in [Web of Science](#), 19 in [SCOPUS](#)

**47 papers in international journals** indexed by [Web of Science](#) Core Collection

**64 documents** indexed by [Scopus](#)

Journals: Energy and Buildings, Buildings and Environment, Solar Energy, Energy, Energies, Applied Energy, Applied Thermal Engineering, Atmospheric Environment, Journal of Ventilation, Control Engineering Practice, Journal of Electrical Power & Energy Systems