

### PERSONAL INFORMATION

# Cristiana-Verona CROITORU, PhD. MSc. Eng.



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Skype cristianaverona

Sex F | Date of birth 24.08.1983 | Nationality Romanian

#### WORK EXPERIENCE

### February 2008 - now

#### Lecturer

Technical University of Civil Engineering, Faculty of Building Services

- Researcher and teaching duties: courses, seminaries, laboratories, technical projects (Ventilation and Air Conditioning, Ecology, Sustainable Buildings, CO2 Reduction in Atmosphere)
- Coordinator of 2 research projects: SOLECT- Environment improvement of Sludge dewatering from the wastewater treatment system of SEAU Glina by Optimizing the Local Effluent Capture and Treatment- Principal Investigator, 133.000 Euro; SCOPE-intelligent Solar COllector with Phase change materials intEgration- Principal Investigator, 100.000 Euro

Business or sector Research and Education

### April 2012- October 2015

## **Principal Investigator**

Politehnica University Bucharest, Faculty of Mechanics and Mechatronics

Principal investigator for smart building facade research grant

Business or sector Research

### 2012- now

## Co-Founder

Institute of Eco-Innovation

Energy and Environment expert, Sustainability Manager

Business or sector Non-governmental Association for a sustainable Environment

## **EDUCATION AND TRAINING**

### October 2015

### Sustainability Manager

European Certification and Qualification Association, Krems, Austria

Certified Sustainability Manager

### January 2014

## **BREEAM In Use International Auditor**

Building Research Establishment, UK

 BREEAM In-Use Auditor helps building managers and owners to reduce the running costs and to improve the environmental performance of existing buildings.

#### December 2013

### Romanian Building Energy Efficiency Auditor, degree I

Development Ministry, Romania

• Energy efficiency assessment of buildings for envelope and building services.

### September 2013

# Training and specialization research stage in optical methods of investigation

University of La Rochelle, France

Particle Image Velocimetry systems.

### July 2012

## Project manager

Labour and family Ministry, Romania

• Scientific and technical projects coordination, writing proposal, team coordination etc.

### March 2012 BREEAM International Assessor

Building Research Establishment, UK

 BREEAM International certification provides a multi-criteria approach to the environmental aspects associated with the construction and renovation of a building. Points are awarded for each of these aspects on the basis of performance achieved, and a weighting system is used to aggregate these scores to obtain an overall final score.

### 2011-2014 Post-doctoral researcher

Technical University of Civil Engineering Bucharest, Romania

· CFD; Thermal Comfort; Indoor Quality, Building Energy Efficiency, PIV researcher

### 2008 - 2011 PhD

Technical University of Civil Engineering Bucharest, Romania

 Thesis title: "Numeric and experimental studies regarding the influence of turbulence intensity on thermal comfort of the occupants in ventilated buildings"

### March-July 2010 PhD research stage

Royal Military Academy Brussels, Mechanics Department- Belgium

 Doctoral research scholarship at Royal Military Academy Brussels- Belgium: "Numerical investigation with CFD methods"

### 2008-2009 Pedagogical formation certificate

Technical University of Civil Engineering Bucharest, Romania

#### 2007 - 2008 Master

Technical University of Civil Engineering Bucharest, Romania

Master in Comfort and Energy Efficiency

#### 2004-2005 Master

University of La Rochelle, France

• Master 1 Equipements Techniques et Energétiques, University of La Rochelle, Erasmus scholarship

### 2002 - 2007 License

Technical University of Civil Engineering Bucharest, Romania

 Building services engineering; Thermal Comfort; Indoor Air Quality, Building energy efficiency, Sustainable buildings

### PERSONAL SKILLS

### Mother tongue(s) Romanian

### Other language(s)

UNDERSTANDING		SPEAKING		WRITING			
Listening	Reading	Spoken interaction	Spoken production				
C2	C2	C2	C2	C2			
C1	C2	C1	C1	C2			
Language certificate issued by University of La Rochelle, France							

English

French

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user Common European Framework of Reference for Languages

### Communication skills

good communication skills gained through my experience as lecturer and conference speaker



#### Organisational / managerial skills

- leadership skills from working with people
- team work- I have worked in different research teams
- organisational skills- Member of Young Researchers Conference from TUCEB, <a href="www.yrc.utcb.ro">www.yrc.utcb.ro</a> organizing Committee of EENVIRO 2013-2017, <a href="www.eenviro.ro">www.eenviro.ro</a>
- member of Scientific Committee of EENVIRO 2016 International Conference and International Conference – Towards a Sustainable Urban Environment (EBUILT-2016)

#### Job-related skills

- International Relations responsible for Faculty of Building Services
- In charge with CSR and sustainability management for Faculty of Building Services
- responsible for educational process

### Digital competence

SELF-ASSESSMENT						
Information processing	Communication	Content creation	Safety	Problem solving		
Proficient user	Proficient user	Proficient user	Independent user	Independent user		

Levels: Basic user - Independent user - Proficient user <u>Digital competences - Self-assessment grid</u>

### Computer operator diploma

- good command of office suite (word processor, spread sheet, presentation software, access)
- good command of photo editing software : Adobe Illustrator
- computer skills: Windows, MSOffice, ANSYS Fluent, Lab View, Mathcad, ACAD, Pascal, Visual Basic, C++; Design Builder, HAP, IES VE

Other skills • art craft

Driving licence B since 2002.

#### ADDITIONAL INFORMATION

#### Publications and other indices:

5 ISI Journal Papers, 10 ISI Conference Proceedings, 1 Patent pending, 25 IDB Journal Papers,

Revewer at 5 ISI indexed journals: Indoor and Built Environment, Applied Thermal Engineering, Journal of Thermal Biology, ASHRAE Transactions, Journal of Energy Engineering;

Hirsch Index - Web of Science: 2, Scopus: 4, Google Scholar: 5

#### Association affiliation:

American ASHRAE Society:

ISIAQ

AIIR RoGBC

Asociatia Roama de Ingineria Vantului

ECOASSIST Nongovernmental association (Energy specialist),

ZERO WASTE ROMANIA

Eco-Innovation Institute- Co-founder



### Journal Publications

#### Research papers cited in Web Of Science:

- F. BODE, A. MESLEM, C. CROITORU, Numerical simulation of a very low Reynolds cross-shaped jet, Journal Mechanika, ISSN 1392-1207, pp. 512-517 (6p), 19 (5), 2013,
- MESLEM, V. SOBOLIK, F. BODE, K. SODJAVI, Y. ZAOUALI, I. NASTASE, C. CROITORU, Flow dynamics and mass transfer in impinging circular jet at low Reynolds number. Comparison of convergent and orifice nozzles, International Journal of Heat and Mass Transfer, vol 67 (dec 2013) 25–45 (21 pag), ISSN: 0017-9310
- MESLEM, F. BODE, C. CROITORU, I. NASTASE, Comparison of turbulence models in simulating jet flow from a cross-shaped orifice, European Journal of Mechanics - B/Fluids, 2014, vol. 44, pp. 100-120, ISSN 0997-7546. 2014.
- CROITORU, C., NASTASE, I., BODE, F., MESLEM, A., DOGEANU, A., Thermal comfort models for indoor spaces and vehicles—Current capabilities and future perspectives, Renewable and Sustainable Energy Reviews 44, 304-318, 2015
- C. CROITORU, I. NASTASE, F. BODE, A. MESLEM, Thermodynamic investigation on an innovative unglazed transpired solar collector, Solar Energy, 131, pp. 21-29, 2016
   Conference proceedings cited in Web Of Science (selection):

#### Conferences

- I. COLDA, A. DAMIAN, C. CROITORU, Summer electrical energy consumptions for different cooling systems, Electromotion 2009, Lille, France.
- C. CROITORU, F. BODE, I. NASTASE, A. DOGEANU, A. MESLEM, Innovative solar wall performance study for low energy buildings applications(2014) International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM, 1 (4), pp. 307-314.
- C. CROITORU, A. DOGEANU, F. BODE, I. NASTASE, A. MESLEM, Heat transfer analysis for a transpired solar collector numerical model (2015) international Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM, 1 (4), pp. 939-944.
- R. CRUTESCU, I. UDREA, I. NASTASE, C. CROITORU, V. BADESCU, Preliminary Results Concerning the Thermal Comfort in a Romanian Passive House, Renewable Energy in the Service of Mankind Vol I, 779-790, 2015
- C. CROITORU, I. NASTASE, M. SANDU, C. LUNGU, Multi-criteria Design and Impact on Energy Consumption of a Residential House—A Parametric Study, Energy Procedia 85, 141-148, 2016
- C. CROITORU, I. NASTASE, I. VOICU, A. MESLEM, M. SANDU, Thermal Evaluation of an Innovative Type of Unglazed Solar Collector for Air Preheating, Energy Procedia 85, 149-155, 2016
- C. CROITORU, I. NASTASE, R. CRUTESCU, V. BADESCU, Thermal Comfort in a Romanian Passive House. Preliminary Results, Energy Procedia 85, 575-583, 2016
- I. NASTASE, C. CROITORU, A. VARTIRES, L. TATARANU, Indoor Environmental Quality in Operating Rooms: An European Standards Review with Regard to Romanian Guidelines, Energy Procedia 85, 375-382. 2016
- I. NASTASE, C. CROITORU, C. LUNGU, A Questioning of the Thermal Sensation Vote Index Based on Questionnaire Survey for Real Working Environments, Energy Procedia 85, 366-374, 2016

### Research projects

- ECOLOC Indoor Environment Management in Residential Buildings Regardig Climat Change- team member
- INADEVA Intelligent Air Diffusion for healthy environments: advanced strategies and evaluation methods; http://www.cambi.ro/inadeva/ - team member
- 3. EQUATOR Advanced Strategies for High Performance Indoor Environmental Quality in Operating Rooms; http://www.cambi.ro/equator/- team member
- **4.** EST IN URBA Solar systems with high thermal efficiency for implementation in urban environment http://cambi.ro/projects.html- team member
- QUEST Advanced air diffusion system of the crew quarters for the ISS and deep space habitation systems, STAR-CDI-C3-2016-577, Principal Investigator, 2017-2019, (450 kEuro)
- SMARTSENSE Real time SMART application for urban air quality management respecting the SENSitivE categories of population, PN-III-P2-2.1-PED-2016-1285 (150 kEuro), Principal Investigator, 2017-2018 (150 kEuro) Team member
- AFDPA Antiflutter Demonstrator with Piezoelectric Actuation, Responsible of the Partner team, PN-II-PT-PCCA-2013-4 (350 kEuro) Team member
- INSIDE Innovative strategies of HVAC systems for high indoor environmental quality in vehicles PN-II-PT-PCCA-2013-4-0569 2015-2018 (350 kEuro)
- HAM: Integrated HEAT-AIRFLOW-MOISTURE modeling within enclosures experimental validation, PN-II-ID-JRP-RO-FR-2012-0071, 2013-2015, (350 kEuro)
- SOLAIR- Innovative ventilated envelope elements for solar heat recovery in low energy buildings

   Principal Investigator, 75.000 Euro
- 11. HVAC & environment consultant in Solar Decathlon 2014 team. www.efden.org
- SOLECT- Environment improvement of Sludge dewatering from the wastewater treatment system
  of SEAU Glina by Optimizing the Local Effluent Capture and Treatment

   Principal Investigator,
  133.000 Euro
- SCOPE-intelligent Solar Collector with Phase change materials intEgration

   Principal Investigator, 100.000 Euro



### **Books**

- I. Nastase, C. Croitoru, Equipements et systèmes de ventilation et climatisation travaux pratiques, Editura Universitară 2011
- I. Nastase, C. Croitoru, Echipamente și sisteme pentru ventilarea și climatizarea clădirilor , Editura Universitară 2012