

## CURRICULUM VITAE

**Proposed role in the project: Energy Efficiency Expert**

**Type of Expertise:** Engineering

**Category of expert: I**



1. **Family name:** MLADIN
2. **First names:** Emilia – Cerna
3. **Date of birth:** February 6, 1958
4. **Nationality:** Romanian
5. **Civil status:** Divorced
6. **Education:**

Institution [ Date from - Date to ]	Degree(s) or Diploma(s) obtained:
Ministry of Public Works, Transport and Dwellings [05/2003]	Energy auditor for buildings (installations and construction)
Clemson University, South Carolina, USA, Mechanical Engineering Department [15/08/1991 – 30/08/1995]	Ph.D. in Thermal-Fluid Sciences
University POLITEHNICA of Bucharest (UPB), Faculty of Power Engineering [15.09.1977 - 15.06.1982]	Power Plant Engineer

7. **Language skills:** Indicate competence on a scale of 1 to 5 (1 - excellent; 5 - basic)

Language	Reading	Speaking	Writing
Romanian	1	1	1
English	1	1	1
French	1	2	2

**8. Membership of professional bodies:**

- Associate Member of Romanian Society for Engineering Thermodynamics, SRT, since 1991.
- Member of ASME (American Society of Mechanical Engineers) 1995-2009.
- **President and founding member of the Romanian Association of Energy Auditors for Buildings (AAECR) since 2006.**
- Member of the elected Scientific Council of the International Centre for Heat and Mass Transfer (ICHMT) since 2007.
- Member of the Board of Directors of the international Active House Alliance, since April 2011.
- **Member of the Committee on Energy Performance of Buildings in the Ministry of Regional Development and Public Administration (MDRAP), since 2013.**

**9. Other skills (computer literacy, etc.):**

- Training, research, publication in the fields of applied thermodynamics, heat transfer, nonlinear dynamics.
- Computer use for calculus, writing, editing, drawing, communication.

10. **Present position:** **Full Professor, University POLITEHNICA of Bucharest**, Faculty of Mechanical Engineering, Dept. of Applied Thermodynamics

11. **Years within the firm:** 35 years

**12. Key qualifications:**

- **full professor** at the POLITEHNICA University of Bucharest.
- coordinator and / or participant to a great number of international or national funded projects in relation to **energy efficiency in buildings**.
- **performed a large number of energy audits** accompanied with recommended EE measures for **residential and public buildings**.
- independent expert in the **evaluation / monitoring / final assessment of international EE projects**. I am the main **author of guides, books and papers** related to building EE.
- **official trainer of buildings' energy auditors** while have trained a number of local authorities on EE issues. I was also team leader responsible for the preparation of country reports on climate change and energy efficiency in buildings (residential in principle).
- **chairman of a number of workshops and conferences on EE in buildings**. In 2012, I was the chairman of the international symposium on "Sustainable energy in buildings and urban areas" (SEBUA 2012) - International Centre of Heat and Mass Transfer (ICHMT).
- Member with leadership of many professional bodies, as shown above.
- **Invited professor at Clemson University, SC (1997) and at University de Reims Champagne Ardenne, FR (2008).**

### 13. Professional experience (selected projects)

Date from - Date to	Location	Company / Client	Position	Description
24.09.2019 – 23.09.2022	EU-MS	European Commission - H2020	Partner - responsible	X-tendo - eXTENDING the energy performance assessment and certification schemes via a mOdular approach
11.2019-04.2020	Romania	City of Alba-Iulia, City of Tarnaveni	Expert for energy in buildings	Energy auditing of high-schools, cultural buildings, sport facilities with and without swimming pools.
10.08.2019-20.12.2019	Romania	European Bank for Reconstruction and Development	Expert for energy in buildings	Analysis of 56 buildings for potential of saving energy and economical efficiency of recommended measures.
08.09.2018-31.12.2019	Romania	Romanian Chamber of Deputies	Leader on energy auditing of buildings	Energy certification and audit of the Parliament Palace in Bucharest
01.06.2018-31.06.2021	Romania	World Bank	Expert for energy in buildings	Energy certification of a new building for hospital Arsenie Bagdasar in Bucharest, Romania
25.07.2016-12.08.2016	Latvia	EU Structural and Cohesion Fund 2014-2020	Expert for project evaluation	“Growth and Employment for Latvia” - Research, technology development and innovation in the field of renewable energy sources use in buildings and industry.
2014-2017	Romania	European Commission, IEE fund	Member of project Steering Committee	NeZeR „Promotion of smart and integrated NZEB renovation measures in the European renovation market”. Renovation measures for multi-family buildings, member of jury for the national project contest.
2013-2015	Romania	Wienerberger, S.A.	Energy efficiency consultant	Design of a nearly zero energy home within the European project “e4”
Jan. 2012 – June 2012	Romania	EXERGIA SA	Energy Expert	Project “Development of an Investment Programme for Buildings Rehabilitation” JASPERS Framework Contract, Lot No. 3 / Implemented by EXERGIA, member of the COWI Consortium
Nov. 2011- Dec. 2015	Romania	UNDP - Romania	Key Expert	Partner in the UNDP-GEF Project: “ <b>Energy Efficiency in Low Income Households</b> and Regions of Romania” 2011-2015.
Apr. 2011-	International	Active House Alliance	Member of the Board of Directors	Member of the task force for the initial specifications, currently in charge with knowledge sharing within the alliance. Co-author of the AHA guidelines on how to build/retrofit an active house. AAEC is co-founder of the international alliance for the new concept of Active House ( <a href="http://www.activehouse.info">www.activehouse.info</a> ).
1.12.2010 – 30.11.2012	Romania	Politehnica University of Bucharest	Long term Expert	POSDRU/90/2.1/S/62083 “Fii independent autorizandu-te (Be independent by becoming an expert)”, project ID: 62083,

03.06.2011-03.12.2011	Romania	Romanian Association of Construction Materials Producers (APMCR)	Training Expert	POSDRU/81/3.2/S/59614 "Formarea profesionala si cresterea adaptabilitatii angajatilor si intreprinzatorilor din sectorul productiei de materiale de constructii prin promovarea utilizarii noilor tehnologii (Professional training and growth of employees adaptability and entrepreneurs from the construction material sector by promotion of the new technologies".
10.01.2011-10.01.2013	Romania	University POLITEHNICA Bucharest	Trainer	Public Administration Training and Coaching in Renewable Energy Systems (PATRES), IEE/09/728S12.558244
2007-2011	Romania	Stakeholders for energy efficiency in buildings	Chairman	Chairman and organizer of 5 national conferences on <b>Energy Efficiency in Buildings</b> , by AAEC Bucharest Dec. 2007, Bucharest Nov. 2008, Bucharest Oct. 2009, Bucharest Oct. 2010, Bucharest Oct. 2011.
2008-2011	Romania	AMCSIT Politehnica (research agency)	Energy expert	<b>Participant at the first Passive House design and construction</b> for Romanian climatic conditions (Contract 214/26.09.2008, for 2008-2010) – Innovation and research project financed by AMCSIT.
2009-2011	EU	European Commission – DG TREN	Expert	Independent Expert for project reviewing for the European Commission – DG TREN, Polygeneration.
2000-2011	Romania	Ministry of regional development and tourism	Energy expert	Invited expert to evaluate proposals for Norms, Regulations and Laws on Building Energy Uses in Romania.
1998-2001	Romania, Greece and France	European Commission, Leonardo da Vinci Project	Project Coordinator	Coordinator of the EU Project Leonardo da Vinci (DG XXII), in cooperation with French, Greek and Romanian Research institutes (ADEME, EETAA, UTI, SOCER and IPCT) – "Development And Implementation of a System of Flexible Training Modules for <b>Energy Auditors for Buildings</b> , based on Competency Analysis and Vocational Qualification Profiles" Contract No. RO/99/2/09142/PI/II.1.1.c/FPC, concluded between the Contractor and the European Commission.
2008-2010	EU	European Commission, IEE project	Energy performance certifier	Partner in IEE/07/553/SI2.499204 project IMMOVALUE: Improving the market impact of energy certification by <b>introducing energy efficiency and life-cycle costs</b> into property valuation practice.
2008-2010	EU	European Commission DG TREN D2, DG	Expert	Independent Expert for project evaluation and monitoring for the European Commission – DG TREN D2, DG Information Society and Media.
02/2010	Belgium	European Commission DG TREN-ICT	Invited expert	Participant at the EC Conference "Information and Communication Technologies for Energy Efficiency 2010" held in Brussels on 23rd and 24th February 2010.
04/2010-09/2010	Romania	UNDP - Romania	Key Expert	National key-expert for the UNDP-PPG " <b>Energy Efficiency in Low Income Households and Regions of Romania</b> ".
2010	Romania	International Alliance	Partner with AAEC	Founding member (as with AAEC) of the Active House Alliance, an international organization founded in 2010. Member of the Board of Directors ( <a href="http://www.activehouse.info">www.activehouse.info</a> ).
11/2009	Geneva	United Nations	Invited expert	Participant at the 18th Annual Session of the Committee on Sustainable Energy, 18– 20 November 2009, UN Office at Geneva.

2007-2008	Romania	Local Authorities	Energy auditor	Invited expert to perform <b>Energy Audits for Demonstrative Projects</b> .
2006-2007	Romania	UNDP-Romania	Energy expert	UNDP expert for <b>energy efficiency projects</b> success evaluation.
2004-2005	Romania	UNDP	Climate Change Team Leader	National Capacity Self Assessment for the global environment management in Romania, Team Leader for Climate Change, Synergy team member for the UN conventions. Project UNPD-GEF: ROM/03/G41.
Aug-Dec. 2003	Romania	Ministry of constructions	Energy expert	Guide for energy efficiency measures and <b>thermal rehabilitation/modernization of residential multi-storied buildings</b> , contract 71/29.08.2003 IPCT-MTCT.
Aug. 2002- Dec. 2003	Romania	Ministry of constructions	Energy auditor	<b>Energy audits and recommended solutions for blocks of flats</b> , contract 208/2002, IPCT-MTCT.
Nov. 2002	Romania	UNDP - Romania	Energy expert	Alternative models to <b>assess energy performance of existing buildings</b> (UNDP project ROM/98/012 National Capacity Development to implement Agenda 21 in Romania, together with the Canadian Agency for International Development).
June/July 2002	Republic of Moldavia	Ministry of Environment/PHARE project for European Commission	Expert in energy auditing of buildings	<b>Energy auditing of representative types of blocks of flats in the city of Balti</b>
June 1999	Romania	Energy market stakeholders	Energy expert	Invited expert at National Debates: PURE (Rational use of energy - present and future) and URB-EXPO (Sustainable Urban Technique).
1997-1998	Greece and Romania	Greek Governmental Agency EETAA	Coordinator of the Program	Coordinator of the Program " <b>Implementation of Energy Efficiency in Public and Municipal Buildings</b> ", in cooperation with the Greek Governmental Agency EETAA.
1997-1999	EU	European Commission	Energy expert	Participant at the EU PHARE Program No.276910/0002-1997: Twinning for Change - An East-West Partnership for Energy Efficiency.

#### 14. Other relevant information (Publications, etc.)

##### Books and Reports (selection):

1. Leca A., Musatescu V., Mladin E.C. et.al., Energy Management, Ed. Agir, ISBN: 978-973-720-190-4, 750 pg., 2008.
2. Mladin E.C. and Stan M., Advanced Conduction Heat Transfer and Mass Diffusion, Ed. MatrixRom, Bucharest, ISBN: 973-755-023-4, 500 pg., 2006.
3. Melinte I., Mladin E.C., Manoleli D, Blujdea V, Fenton D, Country report on the Implementation of Rio Conventions (UNFCCC, UNCCD, UNCBD), Ed. Leo Media Studio, București, ISBN: 92-95047-03-6, 118 pg., 2005
4. Mladin E.C., Georgescu M., Berbecaru D, Marinescu Al., Guide for Energy Efficiency in Buildings, Ed. M.T.M., PRODesign, Braila, 2003, ISBN: 973-85163-8-2.
5. Mladin E.C. et al., Energy Auditing for Buildings – A General Approach (in Romanian and English), MatrixRom Publisher, 2001, Bucharest, ISBN: 973-685-295-4.
6. Pavel V., Lachi M., Mai T.H., Mladin E.C., Building Installations and Equipments (Installations et équipements techniques du batiments - in French), Gh. Asachi Publisher, Iasi, 2001, I.S.B.N. 973-8050-80-4.
7. M. Marinescu, N. Baran, Vs. Radcenco, E.C.Mladin et al., Applied Thermodynamics (in Romanian), Editura Matrix Rom, 1998. I.S.B.N.: 973 – 9254 – 89 – 6.

##### Selected papers from a total of 149:

1. Mladin E.C., "The E4 Brickhouse of Romania - a Local Proved nZEB", Open Access proceedings Journal of Physics\_ Conference series 2019
2. Popa R. Mladin E., Petrescu E, Prisecaru T, "A simple en,ex marking rule for degenerate intersection points in 2D polygon clipping", Corr abs./1709.00184, 2017
3. Padet J, Mladin E.C. Cotta R., Padet C., Mixed thermal convection: fundamental issues and analysis of the planar case, Anais da Academia Brasileira de Ciências, Sept 2015, vol.87, no.3, p.1865-1885. ISSN 0001-3765.
4. Untea A., Dobrovicescu Al., Prisecaru T., Mladin E.C., Prisecaru M., Exergy Analysis of a Thermal Station ina District Heating System, International Journal of Energy for a Clean Environment, Vol. 15, issue 2, 2014, pp. 1–15. Mladin E.C., Prisecaru T., Common Errors in Assessing Energy Performance based on Design, International Journal of Energy for a Clean Environment, Vol. 15, issue 2, 2014, pp. 1–11.
5. Mladin E.C., Prisecaru T., "Common Errors In Assessing Energy Performance Based On Design", Sustainable Energy in Buildings and Urban Areas, SEBUA 2012, ICHMT Symposium, Turkey, 2012.
6. Mladin E.C., Georgescu M, Energy saving and GHG reduction assessment by inverse analysis of energy performance for existing buildings", Congres Français de Thermique, SFT 2006, Ile de Ré, ISBN: 2-905267-49-6, ISSN: 1258-164X, pg. 1163-1168.
7. Mladin E.C., Georgescu M, "Estimation of building energy efficiency potential by special techniques", International Conference on Energy and Environment, CIEM'03, Bucharest, October 22-25, 2003, Session 6, pp. 120-127
8. Mladin E.C., Georgescu M, Dana Dutianu, "Eficienta energiei in cladiri. Situatia din Romania si Acquis-ul comunitar", Mesagerul energetic 24, 2003, pag.11-15.
9. Mladin E.C., Darie G, Georgescu M., "Modeling of building energy efficiency performance", 33<sup>rd</sup> Congress on Heating, Refrigerating and Air Conditioning, Belgrade, December 4-6, 2002, 98-111.
10. Mladin E.C., "Principii de eficienta energetica in proiectarea si utilizarea cladirilor", Constructii civile si industriale nr. 28, 2002, pp. 70-73.
11. Lachi M., Mladin E.C., Padet J., "Couplage thermique entre un écoulement d'air et une plaque d'épaisseur finie exposée a un flux variable sur la face avant", Rev. Termotehnica anul VI, nr. 1 / 2002, pag. 26-31.
12. Darie G., Mladin E.C., Negreanu G., "Reduction of the Urban Sector Indirect Impact on the Environment", MED POWER 2002, 4-6 Dec. 2002, Athens (on CD).
13. Mladin E.C. and Zumbrennen D.A., "Dependence of Heat Transfer to a Pulsating Stagnation Flow on Pulse Characteristics," Journal of Thermophysics and Heat Transfer, Vol. 9, Nr. 1, 1995, pp. 181-192, SUA.

Bucharest, June 2020

Signature

