

## PERSONAL INFORMATION

**Petru Adrian COTFAS** pcof@unitbv.roPOSITION  
IOSUD UTBv

PhD Coordinator  
Doctoral studies field: Electronics Engineering, Telecommunications and Information Technologies  
Since 2019

EXPERTISE FIELD AND  
RESEARCH INTEREST AREAS

Renewable energy;  
Virtual Instrumentation;  
Data acquisition and data processing

## WORK EXPERIENCE

2015 - present **Associate Professor**  
2003-2015 **Lecturer**  
1997-2003 **Assistant Professor**

Transilvania University of Brasov , Bd. Eroilor 29, 500036, Brasov, Romania, [www.unitbv.ro](http://www.unitbv.ro)

- Didactic and research activities

## EDUCATION AND TRAINING

December 2019 **Habilitation in Electronics Engineering, Telecommunications and Information Technologies**

Virtual Instrumentation – Applications in Remote Laboratories and Renewable Energy Sources

- Transilvania University of Brasov 29 Eroilor, 500036 Brasov (Romania)

1999-2007 **PhD in Materials Science and Engineering**

Computerized Systems for Studying the Decarburized Layers Using the Fluctuations and Noises Physics, Scientific coordinator: Prof. Dr. Eng. Cornel Samoila

- Transilvania University of Brasov 29 Eroilor, 500036 Brasov (Romania)

1997-1998 **Postgraduate studies**

Mathematic methods and software products

- Transilvania University of Brasov 29 Eroilor, 500036 Brasov (Romania)

1997-2001 **Bachelor degree studies**

Mathematics and Computer Science

- Transilvania University of Brasov 29 Eroilor, 500036 Brasov (Romania)

1992-1997 **Bachelor degree studies**

Mathematics - Physics

- Transilvania University of Brasov 29 Eroilor, 500036 Brasov (Romania)

## PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
Replace with language	B2	B2	B2	B2	B2

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:

- professor;
- research projects coordinator;
- collaboration with industry.

Organisational / managerial skills Good organizer and coordinator

- Coordinator of two national financed projects, two third-party projects, and member in the research team of several international and national financed projects and cooperation programmes
- (TEMPUS, NATO, World Bank, Socrates, Minerva, Matnantech, Sfera etc.)

Job-related skills Great experience in the field of virtual instrumentation applied for measurement, monitoring and control. Strong knowledge in the fields of:

- Photovoltaic cells and hybrid systems characterization;
- Online laboratories
- Electronic circuit design for measurement and control systems;
- Data acquisition and data processing.

Digital competences Advanced programming skills in NI LabVIEW, strong skills for using the MS Office software, very good skills in electronic circuit design using NI Multisim and NI Ultiboard, good programming skills in Matlab.

ADDITIONAL INFORMATION

Projects As project coordinator

1. SFERA III "The study of the rapid variation effect of concentrated light over the photovoltaic cells", 2019:EU Horizon2020, contract no:823802;
2. PN II - CNMP, "Research on the development of a new class of alloys (Al-Cu-Mn) and the achievement of a standard of thermomechanical fatigue for alloys with shape memory" contract no. 72-161/01.10.2008, Budget 300000lei, 2008-2011;
3. Grant AT 2/301/2002, Ministry of Education and Research, "Research on the application of virtual instrumentation as a method of measurement, testing and control", Budget 8600000lei(vechi) 2002-2003;
4. Third-party project Miele Tehnica SRL, Contract no. 9639/30.08.2019: Optical system for inspection of fuses, 2019;
5. Third-party project National Instrument contract 2423/03.03.2014, "Vendor Master Services Agreement", Budget 8431\$, 2014
6. Third-party project IAR Brasov contract 12172/10/09/2013, "Wireless system for energy and water management", Budget 2500 Euro, 2013

Honours and awards

1. Gold Medal - EUROINVENT2015;
2. National Instruments Graphical System Design Achievement Awards 2013 Education Winner;
3. Developing a Renewable Energy Laboratory Using NI ELVIS, NI LabVIEW, and NI myDAQ, NI
4. Community's Choice and Editor's Choice Award recipient;
5. 1st prize at 2012 Romania NIDays Paper Contest;
6. Best paper at REV 2012 Embedded system for mini solar vehicle (<http://revconference.org/REV2012/>);
7. "Award for outstanding contribution made to streamline the process of scientific research" -

awarded

9. by the University Transilvania in the event "Transylvania University Awards" – 2005.

#### Memberships

1. IEEE (Institute of Electrical and Electronics Engineers) - IEEE Education Society și IEEE Instrumentation and Measurement Society;
2. International Association of Online Engineering;
3. Romanian Physics Society;
4. Creding - COALIȚIA ROMÂNĂ pentru EDUCAȚIE in INGINERIE.

#### Summary of the main achievements

- International books:1
- International chapters of book: 4
- national books: 5
- ISI papers: 46 from which 24 in journals (IF<sub>WOS</sub>=69,7)
- BDI papers:18
- Conference proceedings: 48 (international conferences) and 18 (national conferences)
- Patents: 2 proposals

#### Relevant publications

1. S.Mahmoudinezhad, **P.A.Cotfas**, D.T.Cotfas, L.A.Rosendahl, A.Rezania, Response of thermoelectric generators to Bi<sub>2</sub>Te<sub>3</sub> and Zn<sub>4</sub>Sb<sub>3</sub> energy harvester materials under variant solar radiation, Renewable Energy, Vol.146, 2020, pp 2488-2498 ;
2. D.T. Cotfas, **P. A. Cotfas**, Multiconcept Methods to Enhance Photovoltaic System Efficiency, International Journal of Photoenergy, Volume 2019, Article ID 1905041;
3. D.T. Cotfas, P. A. Cotfas, Comparative Study of Two Commercial Photovoltaic Panels under Natural Sunlight Conditions, International Journal of Photoenergy, Volume 2019, Article ID 8365175;
4. Daniel T.Cotfas, Adrian M.Deaconu, Petru A.Cotfas, Application of successive discretization algorithm for determining photovoltaic cells parameters, Energy Conversion and Management, Vol. 196, 2019, pp 545-556;
5. S. Mahmoudinezhad, S. Ahmadi Atouei, **P.A. Cotfas**, D.T. Cotfas, L.A. Rosendahl, A. Rezania, Experimental and numerical study on the transient behavior of multijunction solar cell-thermoelectric generator hybrid system, Energy Conversion and Management, Vol. 184, 2019, pp. 448-455;
6. S. Mahmoudinezhad, A. Rezania, **P.A. Cotfas**, D.T. Cotfas, L.A. Rosendahl, Transient behavior of concentrated solar oxide thermoelectric generator, Energy 168, 2019, 823-832;
7. S. Mahmoudinezhad, A. Rezania, D.T. Cotfas, **P.A. Cotfas**, L.A. Rosendahl, Experimental and numerical investigation of hybrid concentrated photovoltaic - Thermoelectric module under low solar concentration, Energy 159, 2018, pp. 1123-1131;
8. **P. A. Cotfas**, D.T. Cotfas, P.N. Borza, D. Sera, R. Teodorescu, "Solar Cell Capacitance Determination Based on an RLC Resonant Circuit, Energies, 11, 672, 2018;
9. O.M. Machidon, A.L. Machidon, **P.A. Cotfas**, D.T. Cotfas: Leveraging Web Services and FPGA Dynamic Partial Reconfiguration in a Virtual Hardware Design Lab, International Journal of Engineering Education, Vol.33, 2(B), 2017;
10. **P.A. Cotfas**, D.T.Cotfas: Design and implementation of RELab system to study the solar and wind energy, Measurement, Vol. 93, Nov.2016, <https://doi.org/10.1016/j.measurement.2016.06.060>;
11. D.T.Cotfas, **P.A.Cotfas**, S.Kaplanis: Methods and techniques to determine the dynamic parameters of solar cells: Review, Renewable & Sustainable Energy Reviews, Vol.61, August 2016, <https://doi.org/10.1016/j.rser.2016.03.051>;
12. D. T. Cotfas and **P. A. Cotfas**: A Simple Method to Increase the Amount of Energy Produced by the Photovoltaic Panels, International Journal of Photoenergy, Vol. 2014 (2014), <http://dx.doi.org/10.1155/2014/901581>;

#### Training

1. Training School COST 804 action on "ENERGY EFFICIENCY IN LARGE SCALE DISTRIBUTED SYSTEMS", University of the Balearic Islands, Palma de Majorca, Balearic Islands, Spain, 2012
2. Training School COST MP 1004, SPA, Automotive Campus, Belgia, 2012;
3. Summer school "Highlights in Microtechnology" – Elvetia 2006
4. Summer school "Magnetism of nanoscopic systems and hybrid structures" Braşov 2003.
5. Lyon, France la "Institut National des Sciences Appliquées-INSAA", two weeks, 1999, in the frame of TEMPUS-S-JEP-12536-97 project;
6. Lyon, France la "Institut National des Sciences Appliquées", one week, 2000, in the frame of TEMPUS-S-JEP-12536-97 project;
7. Barcelona, Spain la "Universitat Politècnica de Catalunya –UPC", one week, 2000, in the frame of TEMPUS-S-JEP-12536-97 project;

## Teaching activities

1. 2013 –TEI of Patras, Grecia and summer school (two weeks);
2. 2011 –TEI of Patras, Grecia and summer school „European Summer School on the Renewable Energy Systems”, Patras 1 Iunie-14 Iulie 2011 (two weeks);
3. 2010 –TEI of Patras, Grecia and summer school: „European Summer School”, Patras 30 Iunie-14 Iulie 2010 (two weeks);
4. 2009 – University of Applied Sciences – Villach, Austria (one week 21-27 September)
5. 2009 – “TARET III” (Training in Advanced remote Technologies) 6-20 July 2009 Slovenia – Austria (one week 6-11 July)

## H Indexes

Google Scholar: 10; Scopus: 7; Web of Science Clarivate Analytics: 5