

**PERSONAL INFORMATION Daniel Tudor COTFAS**

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**POSITION  
IOSUD UTBV**

Transilvania University of Braşov  
PhD Coordinator  
Doctoral studies field : Electronic engineering, telecommunications and information technology  
Since: 2019

**EXPERTISE FIELD AND  
RESEARCH INTEREST AREAS**

Renewable energy: conversion of solar energy into electricity and heat; hybrid systems:  
photovoltaic cells and panels / thermoelectric generators / solar thermal collectors.  
Optoelectronics  
Data acquisition and processing

**WORK EXPERIENCE**

- Feb.2015-now     Assoc. Professor  
Electronics and Computers Department, Electrical Engineering and Computers Science Faculty,  
Transilvania University of Braşov, Romania
- Oct 2004-Feb 2015     Lecturer  
Electronics and Computers Department, Electrical Engineering and Computers Science Faculty,  
and Physics Department, Technological Engineering Faculty, Transilvania University of Braşov,  
Romania
- Oct 2002-Sep 2004     Assistant Professor  
Physics Department, Technological Engineering Faculty  
Transilvania University of Braşov, Romania
- Sep 1995-Sep 2002     Teacher of Mathematics  
Gr. Şc. Ind. Construcţii – Maşini “Astra” Braşov

**EDUCATION AND TRAINING**

- 2019     Habilitation in Electronic engineering, telecommunications and information technology  
Transilvania University of Braşov
- 2002-2008     PhD - Investigation on parameters affecting the photoconversion efficiency in  
Pv-cells based on Si and CdTe  
Transilvania University of Braşov
- 2000-2002     Master’s degree, Statistics, Probability and Systems reliability  
Transilvania University of Braşov
- 1990-1995     Bachelor’s degree, Mathematics and Physics  
Transilvania University of Braşov

**PERSONAL SKILLS**

Mother tongue(s)     Romanian

Other language(s)

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction		Listening

English	B1	B2	B1	B1	B1
French	A1	A2	A1	A1	A1

Communication skills	Good communication skills and teamwork abilities
Organisational / managerial skills	Management skills gained through leading projects
Job-related skills	Using research equipment, experiments, data processing and analysis
Digital skills	Advanced knowledge of Microsoft Office, LabVIEW, Origin, Comsol
Other skills	Renewable energy, Mathematics, Physics, Optics, Optoelectronics, Virtual instrumentation

## INFORMATII SUPLIMENTARE

Publications	<ul style="list-style-type: none"> <li>▪ 1 book in International publishing house</li> <li>▪ 2 chapters of books in International publishing houses</li> <li>▪ 6 books in Romanian publishing houses</li> <li>▪ 45 papers ISI</li> <li>▪ 16 papers BDI</li> <li>▪ 27 conference papers</li> <li>▪ 2 patents applications</li> </ul>
Presentations	<p>Keynote Speaker:</p> <ul style="list-style-type: none"> <li>▪ Renewable &amp; Sustainable Energy, Paris 2018</li> <li>▪ International Conference on Energy and Mechanical Engineering, EME 2017, Chengdu, China</li> </ul>
Projects	<ul style="list-style-type: none"> <li>▪ Cercetări asupra sistemelor solare hibride fotovoltaice/termoelectrice/termice PV/TEG/STC. <b>(2015-2017) Parteneriate II 135/1.10.2015</b> (UEFISCDI, 545600 lei)</li> <li>▪ Tehnologii de precipitare dispersă în stare solidă, la nivel nanometric, folosind câmpuri termice cu cicluri staționare și tranzitorii alternante. <b>(2008-2011) Parteneriate II 72 163</b> (CNMP, 225000 lei)</li> <li>▪ The study of the evolution of the photovoltaic cells parameters during the ageing process using the concentrated light and the temperature, <b>(2014) Sfera II</b> (CORDIS FP7- INFRASTRUCTURES, 18050 Euro)</li> <li>▪ The ageing time evolution of the solar cells in function of the concentrated light levels, <b>(2015) Sfera II</b> (CORDIS FP7- INFRASTRUCTURES, 18630 Euro)</li> <li>▪ The behaviour of the solar hybrid structures in medium and high concentrated light, <b>(2016) Sfera II</b> (CORDIS FP7- INFRASTRUCTURES, 18050 Euro)</li> <li>▪ Study of new thermoelectric generator's important parameters in concentrated light, <b>(2017) Sfera II</b> (CORDIS FP7-INFRASTRUCTURES, 20415 Euro)</li> </ul>
Honours and awards	<ul style="list-style-type: none"> <li>▪ Gold medal EUROINVENT 2015 – The 7th European Exhibition of Creativity and Innovation</li> <li>▪ National Instruments Graphical System Design Achievement Awards 2013 Education Winner</li> <li>▪ National Instruments Graphical System Design Achievement Awards 2013 NI Community's Choice</li> <li>▪ National Instruments Graphical System Design Achievement Awards 2013 Editor's Choice Award</li> <li>▪ Best paper (poster) at REV 2012 Embedded system for mini solar vehicle (<a href="http://rev-conference.org/REV2012/">http://rev-conference.org/REV2012/</a>)</li> <li>▪ 1st prize at 2012 Romania NIDays Paper Contest</li> </ul>
Memberships	<ul style="list-style-type: none"> <li>▪ International Association of Online Engineering</li> <li>▪ Romanian Physics Society</li> <li>▪ Creding</li> </ul>
H Indexes	Google Scholar: 12; Scopus: 10; Web of Science Clarivate Analytics: 7

## ANNEX

**LIST OF RELEVANT PUBLICATIONS /RESEARCH (selection)**

1. Socrates Kaplanis and Eleni Kaplani "Renewable Energy Systems: Theory, Innovations and Intelligent Applications", Daniel T. Cofas and Petru A. Cofas: Chapter IX: PV Innovative Techniques and Experimental Test Sets, Nova Science Publishers, USA, 2013 ISBN: 978-1-62417-744-6.
2. S. Mahmoudinezhad, P.A. Cofas, D.T. Cofas, L.A. Rosendahl, A. Rezanian, 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* 146, 2488-2498, 2020.
3. D.T. Cofas, A Deaconu, P.A. Cofas, Application of successive discretization algorithm for determining photovoltaic cells parameters, *Energy Conversion and Management* 196, 545–556, 2019.
4. D.T. Cofas, P.A. Cofas, Multiconcept Methods to Enhance Photovoltaic System Efficiency, *International Journal of Photoenergy*, 2019.
5. D.T. Cofas, P.A. Cofas, Comparative Study of Two Commercial Photovoltaic Panels under Natural Sunlight Conditions, *International Journal of Photoenergy*, 2019.
6. D.T. Cofas, D Sera, E Kaplani, P.A. Cofas, A. Rezanian, Advancements in Photovoltaic Cell and System Technologies, *International Journal of Photoenergy*, 2019.
7. S. Mahmoudinezhad, S. Ahmadi Atouei, P.A. Cofas, D.T. Cofas, L.A. Rosendahl, A. Rezanian, Experimental and numerical study on the transient behavior of multijunction solar cell-thermoelectric generator hybrid system, *Energy Conversion and Management* 184, 448–455, 2019.
8. C.P. Fluiieraru, G. Predușcă, H. Andrei, E. Diaconu, P.A. Cofas, D.T. Cofas, Determination of Technological Features of a Solar Photovoltaic Cell Made of Monocrystalline Silicon P+PNN+, *International Journal of Photoenergy*, 2019.
9. S. Mahmoudinezhad, A. Rezanian, P. A. Cofas, D. T. Cofas, L. A. Rosendahl, Transient behavior of concentrated solar oxide thermoelectric generator, *Energy*, 168, 823-832, 2019.
10. D. T. Cofas, P. A. Cofas, O. M. Machidon: Study of Temperature Coefficients for Parameters of Photovoltaic Cells, *International Journal of Photoenergy*, 2018.
11. P. A. Cofas, D. T. Cofas, P. N. Borza, D. Sera, R. Teodorescu: Solar Cell Capacitance Determination Based on an RLC Resonant Circuit, *Energies* 11 (3), 672, 2018.
12. S. Mahmoudinezhad, A. Rezanian, D. T. Cofas, P. A. Cofas, L. A. Rosendahl: Experimental and numerical investigation of hybrid concentrated photovoltaic–Thermoelectric module under low solar concentration, *Energy* 159, 1123-1131, 2018.
13. S. Mahmoudinezhad, P. A. Cofas, D. T. Cofas, A. Rezanian, L. A. Rosendahl: Performance evaluation of a high-temperature thermoelectric generator under different solar concentrations, *Energy Procedia* 147, 624-630, 2018.
14. D. T. Cofas, P. A. Cofas, D. Ciobanu, O. M. Machidon: Characterization of Photovoltaic–Thermoelectric–Solar Collector Hybrid Systems in Natural Sunlight Conditions, *Journal of Energy Engineering* 143 (6), 04017055, 2017.
15. O. M. Machidon, A. L. Machidon, P. A. Cofas, D. T. Cofas: Leveraging Web Services and FPGA Dynamic Partial Reconfiguration in a Virtual Hardware Design Lab *International Journal of Engineering Education* 33 (2B), 865–876, 2017.
16. D. T. Cofas, P. A. Cofas, S. Kaplanis: Methods and techniques to determine the dynamic parameters of solar cells, *Renewable and Sustainable Energy Reviews* 61, 213-221, 2016.
17. P. A. Cofas, D. T. Cofas: Design and implementation of RELab system to study the solar and wind energy, *Measurement* 93, 94-101, 2016.
18. D. T. Cofas, P. A. Cofas, D. I. Floroian, L. Floroian: Accelerated life test for photovoltaic cells using concentrated light, *International Journal of Photoenergy*, 2016.
19. D. T. Cofas, P. A. Cofas, Eleni Kaplani, Cornelia Samoila: Monthly average daily global and diffuse solar radiation based on sunshine duration and clearness index for Brasov, Romania, *Journal of Renewable and Sustainable Energy* 6, 053106 (2014); doi: 10.1063/1.4896596 (FI-0.925, SRI 0.445)
20. D.T.Cofas, L. Floroian, P.A. Cofas, D. Floroian, R. Rubin, D. Lieberman, The study of the photovoltaic cells parameters in concentrated sunlight, *Optimization of Electrical and Electronic Equipment (OPTIM)*, 2014, IEEEXplore, 10.1109/OPTIM.2014.6850916
21. O. Machidon, F. Sandu, C. Zaharia, P.A. Cofas, D.T. Cofas, Remote SoC/FPGA platform configuration for cloud applications, *Optimization of Electrical and Electronic Equipment (OPTIM)*, 2014, IEEEXplore, 10.1109/OPTIM.2014.6850986
22. D. T. Cofas, P. A. Cofas: A Simple Method to Increase the Amount of Energy Produced by the Photovoltaic Panels, *International Journal of Photoenergy*, Vol. 2014 (2014), Article ID 901581, 6 pages <http://dx.doi.org/10.1155/2014/901581>, (FI-2.663, SRI 1.05)
23. D. T. Cofas, P. A. Cofas, S. Kaplanis: Methods to determine the dc parameters of solar cells: A critical review, *Renewable and Sustainable Energy Reviews*, vol. 28, 2013, pp. 588–596, (FI-5.627, SRI-2.4).
24. G. Șerban, D. T. Cofas, P. A. Cofas Crop albedo measurements after anthesis reveal significant differences among romanian wheat cultivars, *ROMANIAN AGRICULTURAL RESEARCH*, NO. 29, 2012, ISSN 1222-4227; Online ISSN 2067-5720 (FI-0.44, SRI – 0.148)
25. G. Șerban, D. T. Cofas, P. A. Cofas: Significant differences in crop albedo among romanian winter wheat cultivars, *ROMANIAN AGRICULTURAL RESEARCH*, NO. 28, 2011, Print ISSN 1222-4227; Online ISSN 2067-5720; (FI-0.44, SRI – 0.148)
26. D. T. Cofas, P. A. Cofas, P. Borza, D. Ursutiu, C. Samoila: Wireless system for monitoring the solar radiation, *Environmental Engineering and Management Journal*, Vol.10, No. 8, pp.1133-1137, August 2011; ISSN: 1582-9596 (FI-1.44, SRI – 0.111)
27. I. Olaru, V. Almasan, C. Samoila, D. Ursutiu, P. Cofas, D. T. Cofas: The characterization of the catalytic materials using the kinetic transient stage, *Metalurgia International*, vol. XVI, no.4, pp. 45-52, 2011, ISSN 1582-2214.
28. P. Vizureanu, C. Samoilă, D. T. Cofas, S. Kaplanis, The achievement of an algorithm for the design of a solar furnace, *METALURGIA INTERNATIONAL*, vol. XV, no.2, pp. 5-14, 2010.

29. D. Floroian, L. Floroian, R. Rubin, D. Lieberman, P. Cotfas, D. T. Cotfas, D. Ursutiu, C. Samoila, Measurements in Concentrated Sun using a Remote Controlled Robot, International Journal of Online Engineering (iJOE), vol 9, 2013.
30. P.A. Cotfas, D.T. Cotfas, C. Samoila, P. Vizureanu, B. Varga, D. Ursutiu, S. Zamfira, Indirect measurement of transformation temperatures at shape memory alloys of CuZnAl category, Metalurgia International 18 (5).
31. D. T. Cotfas, P. A. Cotfas, The Wireless Albedometer, Journal of Engineering Science and Technology Review 5 (4), 35 -37, 2012.(scopus)
32. P. N. Borza, D. T. Cotfas, P. A. Cotfas, A. Pologea, Improvements on Photovoltaic Cells Test Bench System, Journal of Engineering Science and Technology Review 5 (4), 38 - 41, 2012.
33. D.T. Cotfas, P.A. Cotfas, L. Popescu, D. Ursutiu, C. Samoila, A portable device for photovoltaic cells and panels, Bulletin of the Transilvania University of Brasov, Vol 3, 52, 2010.
34. P.A. Cotfas, D.T. Cotfas, D. Ursutiu and C. Samoila "Remote Laboratory in Photovoltaics", International Journal of Online Engineering (iJOE), vol 5, no. 3, pp.14-18, 2009, ISSN: 1861-2121.
35. D. Ursutiu, D. Iordache, P.A. Cotfas, D.T. Cotfas, C. Samoila, Web Development Techniques and Remote Laboratories, International Journal of Online Engineering (iJOE) 5 (5), pp. 81-83, 2009