



Interdisciplinary Doctoral
School
(SDI)

Field of doctoral studies:
Electronics engineering, telecommunications
and information technologies
PhD supervisor:
Asocc. Prof. PhD. Cotfas Daniel Tudor

TOPICS FOR THE ADMISSION TO DOCTORAL STUDIES

TOPIC 1: <i>Contributions to increasing the performance of photovoltaic cells and panels</i>
Factors influencing the efficiency of photovoltaic cells Cooling methods Methods of increasing solar radiation Hybrid systems
Recommended bibliografy: <ol style="list-style-type: none"> 1. D.T. Cotfas, P.A. Cotfas, Chapter IX: PV Innovative Techniques and Experimental Test Sets, Socrates Kaplanis and Eleni Kaplani "Renewable Energy Systems: Theory, Innovations and Intelligent Applications", Nova Science Publishers, USA, 2013 ISBN: 978-1-62417-744-6, pp. 525-546. 2. D.T. COTFAS, Celule fotovoltaice, Ed. Univ."Transilvania" Brasov, 2010, (ISBN978-973-598-771-8). nr.pag.253 3. D. Narducci, P. Bermel, B. Lorenzi, N. Wang, K. Yazawa, Hybrid and Fully Thermoelectric Solar Harvesting, 1st ed.; Springer International Publishing: Cham, Switzerland, 2018. 4. https://www.intechopen.com/books/green-energy-advances/thermoelectric-energy-harvesting-basic-principles-and-applications

TOPIC 2: <i>New methods and techniques for characterizing photovoltaic cells and panels</i>
Analytic methods Meta heuristic algorithms Embedded systems Solar simulator
Recommended bibliografy: <ol style="list-style-type: none"> 1. D.T. Cotfas, P.A. Cotfas, Chapter IX: PV Innovative Techniques and Experimental Test Sets, Socrates Kaplanis and Eleni Kaplani "Renewable Energy Systems: Theory, Innovations and Intelligent Applications", Nova Science Publishers, USA, 2013 ISBN: 978-1-62417-744-6, pp. 525-546. 2. D.T. COTFAS, Celule fotovoltaice, Ed. Univ."Transilvania" Brasov, 2010, (ISBN978-973-598-771-8). nr.pag.253 3. Daniel Abou-Ras Thomas Kirchartz Uwe Rau Advanced Characterization Techniques for Thin Film Solar Cells, Volume 1, Second Editor(s): 22 July 2016.

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