



**"Gheorghe Asachi" Technical University of Iasi, Romania**



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## **CONCEPTION OF A MASTER DEGREE PROGRAM IN SOLAR ENERGY: INFRASTRUCTURE, STRUCTURE AND RESULTS**

**Ioan Luminosu<sup>1\*</sup>, Aldo De Sabata<sup>2</sup>, Dumitru Toader<sup>1</sup>,  
Dan Margineanu<sup>3</sup>, Simona Ilie<sup>1</sup>**

<sup>1</sup>*Department Physical Engineering Fundamentals, Politehnica University Timisoara,  
Bd. Vasile Pârvan No. 2, 300223, Timisoara, Romania*

<sup>2</sup>*Department of Measurements and Optical Electronics, Politehnica University Timisoara,  
Bd. Vasile Pârvan No. 2, 300223, Timisoara, Romania*

<sup>3</sup>*Department of Mechatronics, Politehnica University Timisoara, Bd. Mihai Viteazu No. 1, 300222, Timisoara, Romania*

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### **Abstract**

Sustainable development is a key issue for the modern world economy. A solution for reducing the impact of carbon dioxide emissions on climate change and for compensating depletion of conventional energy resources relies on green economy and renewable energy. Polytechnic University Timisoara has a pioneering role in research and applications of solar energy to industrial and residential systems in Romania. The "Renewable Energies - Solar Energy" master program has been introduced for providing a formal framework for environmental education and is dedicated to formation of highly qualified specialists. The program is organized by the Department of Physical Engineering Fundamentals since 2008. We present the motivation, conception, structure and results obtained by running this master program. Competences of graduates include: knowledge of thermal and photovoltaic solar energy chains, innovation in solar technology, assessment of new solar systems, ability to design automated systems for solar energy applications, operation and maintenance of solar systems and installations and management of solar systems. The curriculum and the syllabi have been designed for the creation and development of: cognitive competences, practical and applied skills, management, communication and relational abilities that are useful to the specialist working in the field of Solar Energy in the first half of the XXI century.

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\* Author to whom all correspondence should be addressed: e-mail: [ioan.luminosu@upt.ro](mailto:ioan.luminosu@upt.ro); Phone: +40 256 403370