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**Ionica Cristea
Marian Vladescu
Razvan Tamas**
Editors

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 Dorin Dadarlat, National Research and Development Institute for Isotopic and Molecular Technologies (Romania)
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- 3 Sensors, Microsystems, and Instruments
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 Aurelian A. Popescu, National Institute of Research and Development for Optoelectronics INOE 2000 (Romania)
 Petre Catalin Logofatu, National Institute for Laser, Plasma and Radiation Physics (Romania)
- 4 Micro/Nanophotonics and Micro/Nanotechnologies
 Nicolae Enaki, Institute of Applied Physics, Academy of Sciences of Moldova (Moldova)
 Claudia Yu. Zenkova, Yuriy Fedkovych Chernivtsi National University (Ukraine)
- 5 Modeling, Design, and Simulation
 Ioana Ileana, 1 Decembrie 1918 University of Alba Iulia (Romania)
 Ioan Plotog, Politehnica University of Bucharest (Romania)
 Emil M. Oanta, Constanta Maritime University (Romania)
 Nicolae Militaru, Politehnica University of Bucharest (Romania)
- 6 Optics-Inspired Approaches for Non-Optical Applications: Systems, Devices, and Signal Processing
 Cornel Ioana, Grenoble Institute of Technology (France)
 Liviu-Constantin Stan, Constanta Maritime University (Romania)
 Mihaela Hnatiuc, Constanta Maritime University (Romania)
 Marian Vladescu, Politehnica University of Bucharest (Romania)

Introduction

The seventh edition of the International Conference on Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies (ATOM-N 2014), was hosted for the fourth time in Constanta, one of the most important academic, cultural, and industrial centers in Romania, located in the historical region of Dobrogea.

The present conference marks 14 years of ATOM-N's existence, during which time it has consistently gathered the youthful spirit, as well as the experience of the most appreciated scientists in the field of micro/nano technology and photonics/optoelectronics—topics that have, nowadays, great scientific applications worldwide.

ATOM-N 2014 took place 21–24 August 2014, and was organized into seven main sessions: Plenary Session; Advanced Materials and New Technologies; Diffractive, Micro-Optics, and Optical Signal Processing; Sensors, Microsystems, and Instruments; Modeling, Design and Simulation; Micro/Nanophotonics and Micro/Nanotechnologies; and Optics-inspired Approaches for Non-optical Applications: Systems, Devices, and Signal Processing. This was the third time in the conference's history when students contributions have been evaluated and awarded.

We received abstracts from scientists all over Europe, Asia and United States (from over 10 countries). Due to the efforts of the scientific and program committees, 121 papers were selected for presentation: 6 invited lectures, 28 oral lectures, and 87 poster papers.

We would like to express our thanks to the organizing committee for their enthusiastic and efficient work, and we extend our warmest thanks to all of the authors who presented their scientific contributions.

We hope that all of the participants of this prestigious meeting had both an interesting professional experience, as well as moments of relaxation, while discovering the multicultural aspects of the academic city of Constanta.

**Ionica Cristea
Marian Vladescu
Razvan Tamas**