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**Marian Vladescu
Razvan Tamas
Ionica Cristea**
Editors

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Contents

Part One

xi	<i>Authors</i>
xv	<i>Conference Committees</i>
xix	<i>Introduction</i>

PLENARY SESSION

10010 02	Interferometric correlator for acoustic radiation and underlying structural vibration (Invited Paper) [10010-42]
10010 03	Plasma and particles (Invited Paper) [10010-67]
10010 04	Electromagnetic and acoustic bimodality for the detection and localization of electrical arc faults (Invited Paper) [10010-158]
10010 05	The use of 2D Hilbert transform for phase retrieval of speckle fields (Invited Paper) [10010-85]
10010 06	On-wafer high temperature characterization system (Invited Paper) [10010-161]
10010 07	Study regarding the spline interpolation accuracy of the experimentally acquired data (Invited Paper) [10010-31]
10010 08	Enhanced automated platform for 2D characterization of RFID communications (Invited Paper) [10010-155]

ADVANCED MATERIALS AND NEW TECHNOLOGIES

10010 09	Synthesis and photophysics of conjugated azomethine polyrotaxanes [10010-18]
10010 0A	Metal nanoparticles (other than gold or silver) prepared using plant extracts for medical applications [10010-126]
10010 0B	Ion-beam synthesis of zinc-based nanoparticles in SiO₂ [10010-70]
10010 0C	AC electric properties of nanocomposite (FeCoZr)_{0.818}(CaF₂)_{0.182} annealed in the tubular furnace [10010-71]
10010 0D	Features of the formation of structure and properties of transition metals boridonnitrides composite films [10010-77]

10010 OE	Structural analysis of multilayer metal nitride films CrN/MoN using electron backscatter diffraction (EBSD) [10010-80]
10010 OF	Structural features of the multilayer nitride coatings formation [10010-81]
10010 OG	Synthesis and characterization of novel main chain bisazobenzene polyphosphonates [10010-108]
10010 OH	New complexes of silver (I) with N-hydroxy-succinimide [10010-121]
10010 OI	Low energy switching driver for printed electrochromic displays [10010-148]
10010 OJ	Comparative shear tests of some low temperature lead-free solder pastes [10010-150]

DIFFRACTIVE, MICRO-OPTICS, AND OPTICAL SIGNAL PROCESSING

10010 OK	Cooperative entangled effects between the cavity mode components of Raman process [10010-26]
10010 OL	Methods and means of Fourier-Stokes polarimetry and the spatial frequency filtering of phase anisotropy manifestations [10010-15]
10010 OM	Methods and means of Stokes-polarimetry microscopy of optically anisotropic biological layers [10010-16]
10010 ON	Methods and means of Fourier-Stokes polarimetry and the spatial-frequency filtering of phase anisotropy manifestations in endometriosis diagnostics [10010-50]
10010 OO	Influence of the coordination number Z on the micro-Raman spectra of ternary chalcogenide glasses [10010-48]
10010 OP	Absorption and emission spectra of $\text{Ga}_{1.7}\text{Ge}_{25}\text{As}_{8.3}\text{S}_{65}$ glasses doped with rare-earth ions [10010-56]
10010 OQ	Energy transfer of non-equidistant radiators via the nonlinear excitation mechanism inside of an optical cavity [10010-84]
10010 OR	Real-time digital holographic interferometry set-up for phase gradient study in dynamic phase objects using spatial modulator [10010-137]

SENSORS, MICROSYSTEMS, AND INSTRUMENTS

10010 OS	Optical measurements for excitation of CdTe quantum dots [10010-14]
10010 OT	Smart communication with LabView [10010-38]
10010 OU	Design of multi-band microstrip polygonal contour filter for microwaves [10010-41]
10010 OV	Development of tools and techniques for monitoring underwater artifacts [10010-39]

10010 0W	Universal system for the automation of test setups [10010-66]
10010 0X	New approach for processing data provided by an INS/GPS system onboard a vehicle [10010-69]
10010 0Y	3D THz hyperspectrum applied in security check-in [10010-78]
10010 0Z	Persistent scatterers detection on synthetic aperture radar images acquired by Sentinel-1 satellite [10010-82]
10010 10	Terahertz spectroscopic investigations of hazardous substances [10010-83]
10010 11	Assessment of illumination conditions in a single-pixel imaging configuration [10010-89]
10010 12	Sensors system design for discrimination between humans and animals [10010-91]
10010 13	Cyber physical systems based on cloud computing and internet of things for energy efficiency [10010-101]
10010 14	Optical investigation of electromagnetic fuel atomizers [10010-113]
10010 15	Investigations upon the effects of an auxiliary brake system on the working parameters of diesel engines [10010-115]
10010 16	Preparation of the cast glass-coated amorphous magnetic microwires [10010-117]
10010 17	Research and investigation of a communication chain on optical fiber with a Fabry-Perot power diode for the automotive industry [10010-124]
10010 18	Study on determining the photometric parameters for a white LED using a light meter [10010-127]
10010 19	Temperature measurements of high power LEDs [10010-131]
10010 1A	Data mining methods for parameters forecasting of a small solar plant [10010-135]
10010 1B	The influence of vibrations on time reference signals generated using quartz crystals [10010-141]
10010 1C	A new mechatronic set-up and technique for investigation of firearms [10010-143]
10010 1D	Analysis of power supply circuits for electroluminescent panels [10010-147]
10010 1E	Embedded systems for controlling LED matrix displays [10010-152]
10010 1F	Maintenance-free super-capacitor-based WSN power supply [10010-156]
10010 1G	Studying the thermal regime of power LEDs by using the embedded protection diode [10010-62]
10010 1H	Piezoelectric devices for generating low power [10010-163]

MICROPHOTONICS AND MICRONANOTECHNOLOGIES

- 10010 1I **Microelectronics and nanotechnology, and the fractal-like structure of information, knowledge, and science** [10010-6]
- 10010 1J **Photoconductivity of amorphous $\text{Ge}_x\text{As}_x\text{Se}_{1-2x}$ and $(\text{As}_4\text{S}_3\text{Se}_3)_{1-x}\text{Sn}_x$ thin films** [10010-23]
- 10010 1K **Technology and optical characterization of luminophore coordination compounds $\text{Eu}(\text{o-MBA})_3\text{Phen}$ and NC PEPC/ $\text{Eu}(\text{o-MBA})_3\text{Phen}$** [10010-40]
- 10010 1L **Influence of spray nozzle shape upon atomization process** [10010-43]
- 10010 1M **Experimental investigation of micro heat pipe with extra fluid** [10010-30]
- 10010 1N **Studies concerning the effect of large droplets creation during fuel atomization** [10010-36]
- 10010 1O **Convection's enhancement in thermal micro pipes using extra fluid and shape memory material** [10010-28]
- 10010 1P **Heat transfer at the sintered layer-polysynthetic material interface inside heat micro pipes** [10010-49]
- 10010 1Q **Heat transfer within a flat micro heat pipe with extra liquid** [10010-52]
- 10010 1R **Optical registration of transformer oil absorption processes in electrical pressboard nano-capillaries** [10010-72]

Part Two

- 10010 1S **Impedance of $(\text{CoFeZr})_{0.559}(\text{PbZrTiO}_3)_{0.441}$ nanocomposite annealed in a tubular furnace** [10010-73]
- 10010 1T **The influence of strong electric fields on the DC conductivity of the composite cellulose, insulating oil, and water nanoparticles** [10010-74]
- 10010 1U **Technological studies for plasmonic metasurfaces** [10010-88]
- 10010 1V **Mechanical action of the transverse spin flows in evanescent fields** [10010-95]
- 10010 1W **Nanomaterials and preservation mechanisms of architecture monuments** [10010-103]
- 10010 1X **Doppler effect in opposite propagating modes of cavity** [10010-104]
- 10010 1Y **Analysis of curved shape micro-mirrors for on-chip communication** [10010-142]

MODELING, DESIGN, AND SIMULATION

- 10010 1Z **Processing in (linear) systems with stochastic input** [10010-8]
- 10010 20 **Computer fluid dynamics (CFD) study of a micro annular gear pump** [10010-10]
- 10010 21 **Computer fluid dynamics (CFD) study of a plate heat exchanger working with nanofluids**
[10010-11]
- 10010 22 **3D simulation for solitons used in optical fibers** [10010-20]
- 10010 23 **On the performance of variable forgetting factor recursive least-squares algorithms**
[10010-25]
- 10010 24 **Considerations about optimization of the flow into a blending tank** [10010-27]
- 10010 25 **Simulation of nonlinear electron dynamics in tetramer metal-carbon nanoclusters**
[10010-53]
- 10010 26 **Experimental researches of marine wave parameters in the Black Sea Basin** [10010-55]
- 10010 27 **The analysis of MAI in large scale MIMO-CDMA system** [10010-57]
- 10010 28 **Noise analysis in power distribution systems** [10010-58]
- 10010 29 **High performance genetic algorithm for VLSI circuit partitioning** [10010-59]
- 10010 2A **Time-frequency analysis of transient signals in power distribution systems** [10010-60]
- 10010 2B **Supercharging an internal combustion engine by aid of a dual-rotor bi-flux axial
compressor** [10010-63]
- 10010 2C **Influence of the cooling degree upon performances of internal combustion engine**
[10010-65]
- 10010 2D **Quality engineering tools focused on high power LED driver design using boost power
stages in switch mode** [10010-68]
- 10010 2E **Modeling of the thermal comfort in vehicles using COMSOL multiphysics** [10010-97]
- 10010 2F **Bistability properties of magnetic micro-nanowires** [10010-94]
- 10010 2G **Mathematical modeling and simulation of a thermal system** [10010-100]
- 10010 2H **Investigation of electromagnetic couplings between planar open-loop triangular-shaped
resonators in microstrip and in multilayer technologies** [10010-102]
- 10010 2I **Management system to a photovoltaic panel based on the measurement of short-circuit
currents** [10010-110]
- 10010 2J **PLM in the context of the maritime virtual education** [10010-111]

10010 2K	Storing wind energy into electrical accumulators [10010-114]
10010 2L	Environments for online maritime simulators with cloud computing capabilities [10010-118]
10010 2M	Avoiding the parametric roll [10010-120]
10010 2N	Destructive effects induced by the electron beam in scanning electron microscopy [10010-64]
10010 2O	Original data preprocessor for Femap/Nastran [10010-32]
10010 2P	Original analytic solution of a half-bridge modelled as a statically indeterminate system [10010-34]
10010 2Q	Original analytical model of the hydrodynamic loads applied on the half-bridge of a circular settling tank [10010-37]
10010 2R	Natural ways to improve the power factor [10010-132]
10010 2S	Using frequency converter for commanding and controlling for the rotational speed of an AC motor which acting a motor-propeller group [10010-133]
10010 2T	Developing smart lighting LED-based device by using light parameterization and control method [10010-130]
10010 2U	Analysis and simulation of industrial distillation processes using a graphical system design model [10010-138]
10010 2V	Numerical system for monitoring pressurized equipment [10010-140]
10010 2W	A new approach in the development of quality management systems for (micro)electronics [10010-144]
10010 2X	Study of improving artificial lighting in industrial environments [10010-128]
10010 2Y	Electrical and optical evaluation aspects of public lighting systems [10010-146]
10010 2Z	Comparative studies on dimming capabilities of retrofit LED lamps [10010-149]
10010 30	E-learning platform for automated testing of electronic circuits using signature analysis method [10010-153]
10010 31	Measurement strategy and analytic model to determine firing pin force [10010-154]
10010 32	Harmonic distortions measured on board of a maritime vessel [10010-157]
10010 33	Streamlining the functioning of the FSO systems by choosing the optimal transmission/ reception components [10010-160]
10010 34	Parameter extraction of an organic solar cell using asymptotic estimation and Lambert W function [10010-165]

OPTICS-INSPIRED APPROACHES FOR NON-OPTICAL APPLICATIONS: SYSTEMS, DEVICES, AND SIGNAL PROCESSING

- 10010 35 **Propagation models for non-line-of-sight scenarios** [10010-17]
- 10010 36 **Antenna gain measurements in the intermediate-field zone** [10010-75]
- 10010 37 **Autonomous robotic platforms for locating radio sources buried under rubble** [10010-76]
- 10010 38 **A synthesis approach for antennas with a quasi-linear gain variation over a wide frequency range** [10010-90]
- 10010 39 **A RF time domain approach for electric arcs detection and localization systems** [10010-96]
- 10010 3A **Development and testing of an audio forensic software for enhancing speech signals masked by loud music** [10010-119]
- 10010 3B **Steganographic embedding of a secret message in a video flow** [10010-145]

PLASMA METHODS AND DIAGNOSTICS USED FOR SURFACE TREATMENTS

- 10010 3C **Biofouling development on plasma treated samples versus layers coated samples** [10010-47]
- 10010 3D **Evolution of the construction and performances in accordance to the applications of non-thermal plasma reactors** [10010-99]
- 10010 3E **Effects of GlidArc plasma treatment on metallic surface** [10010-106]
- 10010 3F **Long thermal interactions of PAW with normal tooth structure and different dental biomaterials** [10010-164]
- 10010 3G **Treatment by gliding arc of epoxy resin: preliminary analysis of surface modifications** [10010-167]

MEDICAL OPTOELECTRONICS

- 10010 3H **Ionization pattern obtained in electrospray ionization or atmospheric pressure chemical ionization interfaces for authorized antidepressants in Romania** [10010-122]
- 10010 3I **Method for the determination of cobalt from biological products with graphite furnace atomic absorption spectrometer** [10010-129]
- 10010 3J **Optoelectronic method for determining platinum in biological products** [10010-162]

ADDITIONAL PAPER

- 10010 3K **Terpolymer polyrotaxanes: a promising supramolecular system as electron-transporting materials for optoelectronics** [10010-21]

Authors

Numbers in the index correspond to the last two digits of the seven-digit citation identifier (CID) article numbering system used in Proceedings of SPIE. The first seven digits reflect the volume number. Base 36 numbering is employed for the last two digits and indicates the order of articles within the volume. Numbers start with 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B...0Z, followed by 10-1Z, 20-2Z, etc.

Acomi, Nicoleta, 2M	Chilibon, Irinela, 1H
Ahmad, Mohammad Ayaz, 2U	Ciomea, V. I., 0P
Ailincăi, Luminița Iuliana, 3F	Ciucur, Violeta-Vali, 2R, 2S
Algiu, Madalina, 39	Cochet, V., 3G
Anchidin, Liliana, 35, 36, 37, 39	Codescu, M. M., 16
Ancuța, Cristian, 2M	Codreanu, Norocel, 2Z
Andrei, Cristian, 2M	Colțuc, Daniela, 11
Angelsky, O. V., 05, 1V	Constantinescu, Rodica, 0W
Anton, Iulia-Alina, 24, 26	Craciun, Alexandru, 0S
Apostol, Adela, 02	Cretu, Alexandru, 13
Araújo, João Pedro, 0E	Crudu, Andra Manuela, 0H
Astaneî, D., 3D, 3E	Cucu, Traian C., 0J
Axinte, Tiberiu, 11, 1Z	Culeac, Ion, 1K
Bacis, Irina Bristena, 17	Czarnacka, Karolina, 0B
Bacivarov, Angelica, 2W, 30	Damian, Cristian, 11
Bacivarov, Ioan C., 2W, 30	Damian, V., 0Y, 10
Badalan (Draghici), Niculina, 19	Dănilă, Octavian, 34
Banu, M. A., 2N	Danisor, Alin, 07, 0X, 28, 2A, 36, 37
Baranov, S. A., 16, 25, 2F	Dănișor, Cosmin, 0Z
Bărar, Ana, 34	Dascalescu, Anca-Elena, 2Q
Barca, Cristian, 0U	Datcu, Mihai, 0Z
Barhalescu, Mihaela, 2P	Datcu, Octaviana, 3B
Bari, Farida, 36	Deacu, Daniela, 36, 38, 39
Bazgan, Sergiu, 1X	Diaconu, Bogdan, 0T
Beiu, Roxana Mariana, 1Y	Digulescu, A., 04
Bendiksen, Oddvar O., 02	Dinescu, Adrian, 1U
Beniuga, Marius, 14, 1L, 1N	Dinescu, D., 0O
Berceanu, Madalina-Georgiana, 27	Dinu, Simona, 29
Bită, Bogdan I., 1U, 2N	Dobra, Remus, 2U, 2V
Boca, Maria Loredana, 2U, 2V	Dobre, Robert Alexandru, 0I, 18, 1D, 3A, 3B
Boiko, Oleksandr, 0F, 1S	Dordea, Stefan, 32
Bojan, M., 10	Dordescu, Marian, 2I, 2K, 2R
Bondar, Oleksandr, 0E	Doroffei, Mirela, 3F
Bondariev, Vitalii, 0C	Drăghici, F., 06
Bordian, Olga, 1K	Drăgulescu, Ana-Maria Claudia, 12
Bostănar, Andra-Cristina, 3F	Drumea, Andrei, 19, 1B, 1D, 1E
Boștină, Alina, 2M	Dubolazov, A. V., 0L, 0M, 0N
Boștină, Aurel, 2M	Dulamă, Ioana Daniela, 1W
Branzei, Mihai, 0J	Duma, Virgil-Florin, 1Y
Brezeanu, G., 06	Dumitrache, C. L., 3C
Briset, J. L., 3D	Dumitrascu, Ana, 0X, 36
Bucurica, Ioan Alin, 1W	Elisei-Iliescu, Camelia, 23
Butca, Cristina, 13	Enachescu, M., 0O
Buturuga, Alexandru, 0W	Enaki, Nicolae A., 0K, 0Q, 1X
Călimănescu, Ioan, 20, 21	Erdodi, G. M., 2K
Candel, I., 04	Exnar, P., 3C
Caragea, Genica, 3I, 3J	Farcas, A., 09, 3K
Carja, Ionela-Daniela, 0G	Farcas, F., 09, 3K
Caruntu, George, 0X	Faubert, F., 3G

Feies, Valentin, 0S
 Felea, C., 3D, 3E
 Fierăscu, Irina, 1W
 Fierăscu, Radu-Claudiu, 1W
 Fleaca, C., 10
 Forje, Mărgărita, 3J
 Fratu, Octavian, 0U, 12, 13
 Frunzulica, Rodica, 2G
 Garoi, Florin, 11
 Gavrilă, Camelia, 2E, 2G
 Gavrilă, Bogdan, 0U
 Gherghina, Cătălina, 2W, 30
 Ghita, S., 3C
 Ghilezan, Alin, 0V
 Goncharov, Alexander A., 0D, 0F
 Gorinchoy, N. N., 25
 Gorsky, M. P., 0L
 Grecu, Iulia, 3H, 3J
 Grădinaru, Andrei Cristian, 2B, 2C
 Grosu, Neculai, 0S
 Halunga, Simona, 0U, 12, 27
 Hanzu-Pazara, Radu, 2S
 Hnatiuc, B., 3C, 3D, 3E, 3G
 Hnatiuc, Eugen, 3D, 3E, 3F
 Hnatiuc, Mihaela, 0T, 0V, 3C
 Horhoță, Luminița, 3H
 Iaseniu, O. V., 0O, 0P, 1J
 Ileana, Ioan, 2D, 2T, 2X
 Ioana, C., 04
 Ion, Mihaela-Lucia, 1W
 Ion, Rodica-Mariana, 1W
 Ionescu, Ciprian, 0I, 17, 2Z
 Ionică, Mihai, 3H, 3I, 3J
 Iov, Cătălin J., 0T
 Iovu, Mihail S., 0O, 0P, 1J, 1K
 Ivansky, D. I., 1V
 Jenaru, Andreea, 2S
 Jeníková, Zdenka, 03
 Kanarovskii, E. Yu., 16, 25, 2F
 Kierczyński, Konrad, 1T
 Kilpatrick, James, 02
 Kołtunowicz, Tomasz N., 0D
 Komarov, Fadei F., 0B
 Kravchenko, Yaroslav O., 0F
 Kurt, Ünal, 2Y
 Kusko, Cristian, 1U
 Lakusta, I. I., 0M, 0N
 Lazar, Iulian, 0V
 Lesenciuc, Ioan, 1C, 31
 Logofătu, Petre C., 0R, 0Y, 11
 Lupan, E. V., 0P
 Macovei, Radu Alexandru, 3J
 Makhavikou, Maksim A., 0B
 Maksymyak, A. P., 1V
 Maksymyak, P. P., 1V
 Mănăilă-Maximean, Doina, 34
 Manea, Adrian, 0S
 Manea, Viorel, 33
 Mara, Constantin, 0U
 Marc, Gheorghe, 2D, 2T, 2X, 2Y

Marcu, Alina E., 18, 1B
 Marcu, Ioana, 12
 Mareș, Mihai, 3F
 Mares, M., 3D
 Marghescu, Cristina, 17, 1E
 Markov, Vladimir, 02
 Melenko, S. R., 0N
 Mihai, Ioan, 15, 1L, 1M, 1N, 1O, 1P, 1Q, 2B, 2C
 Militaru, Nicolae, 2H
 Miță, Carmen, 0H
 Mnerie, Corina, 1Y
 Moldovan, Lucian, 2V
 Muntean, Maria, 1A
 Năstăsă, Valentin, 3F
 Nedelcu, Elena, 2R
 Negrescu, Cristian, 3A
 Negroiu, Rodica, 2Z
 Nováček, Vojtěch, 03
 Novakovskaya, O. Yu., 0L, 0N
 Nutu, Catalin Silviu, 1I, 1Z
 Oanta, Emil M., 07, 2J, 2O, 2P, 2Q
 Olar, O. I., 0M
 Olar, O. V., 0L
 Opielak, Marek, 0E
 Paleologu, Constantin, 23
 Panait, Cornel, 2O, 2P
 Panaitescu, Fanel-Viorel, 24, 26
 Panaitescu, Mariana, 24, 26
 Pasca, Roxana-Diana, 0A
 Pasculescu, Dragos, 2U, 2V
 Paun, Mirel, 36, 37, 39
 Pellerin, N., 3G
 Pellerin, S., 3G
 Petrescu, D. I., 2K
 Petrescu, Teodor, 35, 37, 38, 39
 Petrică, Gabriel, 30
 Pislari, Tatiana, 0Q
 Plotnikov, Sergei V., 0F
 Plotog, Ioan, 0J, 1B
 Popescu, Anca, 0Z
 Popescu, Marian C., 1U, 2N
 Postolnyi, Bogdan, 0E
 Prydiy, O. G., 0M, 0N
 Pușcoci, Sorin, 33
 Racz, Csaba Pal, 0A
 Racz, Levente Zsolt, 0A
 Radu, Adrian, 1W
 Radu, Simona, 3H, 3I, 3J
 Raicu, Alexandra, 2J, 2L, 2O, 2P
 Raicu, Gabriel, 2L
 Regnier, E., 3G
 Resmerita, A.-M., 09, 3K
 Riabyi, P. A., 05
 Risteiu, Mircea, 2D, 2T, 2X
 Rogalski, Przemysław, 0E, 1R
 Roșca, Irina, 3F
 Rotar, Corina, 1A
 Rotaru, A., 09
 Rusu, I., 06
 Sabau, Adrian, 2Q, 3C

Sakhnovskiy, M. Yu., 0L, 0M, 0N	Yerdybaeva, Nazgul K., 0F
Santa, Szabolcs, 0A	Yunda, Andrey N., 0D, 0F
Schiopu, Paul, 0R, 0S, 22	Zamfir, Oana-Liliana, 3I
Serbanescu, Ionut, 0X	Zburlea, Elena, 2R, 32
Serbezeanu, Diana, 0G	Zenkova, C. Yu., 05, 1V
Sibiescu, Doina, 0H	Zhytaryuk, V. G., 0L
Sidor, M., 0L, 0M	Zubareva, Vera, 1K
Sima, Adrian, 0R	Żukowski, Paweł, 1T
Soltys, I. V., 0L	
Špatenka, Petr, 03, 3C	
Sprinceana, Siviu, 1M, 1O, 1P, 1Q	
Stan, Liviu-Constantin, 20, 21	
Stanciu, Mihai, 3B	
Stanomir, Dumitru, 3A	
Știrbescu, Raluca-Maria, 1W	
Stoica, I., 3E	
Stoichescu, Dan Alexandru, 0W, 33	
Suciu, Cornel, 14, 15, 1C, 31	
Suciu, George, 13	
Suciu, Victor, 13	
Șuică-Bunghez, Ioana-Raluca, 1W	
Sultan, Carmen, 3H	
Svasta, Paul, 19, 1F	
Tamas, Razvan, 07, 0X, 23, 35, 36, 37, 38, 39	
Tasu, Antonio Sorin, 35, 36, 37, 38	
Tebeica, C. M., 22	
Teodorescu, L., 06	
Teodorescu, Sofia, 1W	
Ticu, Ionela, 0X	
Toma, Petrica D., 2G	
Tomescu, Roxana M., 1U, 2N	
Toropoc, Mirela, 2G	
Truță, Elena, 3H	
Tulbure, Adrian, 1A, 2Y	
Udrea, Cristian, 11	
Ursache, M., 3D, 3E	
Ursu, Laura, 3F	
Ushenko, A. G., 0L, 0M, 0N	
Ushenko, V. A., 0L, 0M, 0N	
Ushenko, Yu. A., 0L, 0M, 0N	
Vacková, Taťana, 03	
Vartires, Andreea, 2E	
Varzaru, Gaudentiu, 0J	
Vasile, Alexandru, 17, 2Z	
Vasile, C., 04	
Vasile, F., 22	
Vasile, T., 0Y, 10	
Vasiliu, Ana Lavinia, 3F	
Verlan, Victor, 1K	
Vidrascu, Mihai G., 1F	
Viscol, Oana, 3H, 3J	
Vizireanu, Radu, 0U	
Vizitiu, Mihaela, 0H	
Vlad-Bubulac, Tăchiță, 0G	
Vlădescu, Marian, 08, 0S, 18, 1F, 1G, 22, 34, 3H, 3I, 3J	
Voicu, Carmen, 27	
Vuza, Dan Tudor, 08, 1G	
Wartel, M., 3G	
Yaltychenko, O. V., 16, 25, 2F	

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- 6 Modeling, Design, and Simulation
 Nicolae Enaki, Alin Danisor, Emil Oanta, Gheorghe Marc,
 Octaviana Datcu, Viorel Manea
- 7 Optics-Inspired Approaches for Non-Optical Applications: Systems,
 Devices, and Signal Processing
 Razvan Tamas, Cornel Ioana
- 8 Plasma Methods and Diagnostic Used for Surface Treatments
 Bogdan Hnatiuc, Petr Spatenka
- 9 Medical Optoelectronics
 Mona Mihailescu, Gabriel Popescu

Introduction

The eighth edition of the International Conference on Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies (ATOM-N 2016), was hosted for the fifth time in Constanta, Romania, one of the most important academic, cultural, and industrial centers in Romania, located in the historical region of Dobrogea, on the Black Sea (Pontus Euxinus) seaside.

The present edition marks 16 years of ATOM-N conference existence, time in which 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 2016 took place 25–28 August 2016, and was organized into nine main sessions (from which two new special 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; Optics-inspired Approaches for Non-optical Applications: Systems, Devices, and Signal Processing; Plasma Methods and Diagnostics Used for Surface Treatments; and Medical Optoelectronics. This was for the fourth time in the conference history when students contributions have been evaluated and awarded.

We received abstracts from scientists all over Europe and United States (from over six countries). Due to the efforts of the scientific and program committees, 143 papers have been accepted for presentation, from which 127 have been selected for publishing in the conference proceedings as follows: seven invited (plenary) lectures, 38 oral lectures, and 82 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 have had both an interesting professional experience, as well as moments of relaxation, while discovering the multicultural aspects of the academic city of Constanta.

**Marian Vladescu
Razvan Tamas
Ionica Cristea**