

International Student Workshop on Laser Applications 2011 - ISWLA'11

Monday May 30, 2011		
	16.00	Registration Desk Open
	19.30	Welcome Party

Tuesday May 31, 2011		
	08.00	Breakfast
	09.00	<i>Conference Opening</i> Dr. Ing. Ion Morjan Director of the National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania
INVITED LECTURE	09.15	<i>"ELI Nuclear Physics"</i> Prof. Dr. Nicolae Zamfir Horia Hulubei National Institute of Physics and Nuclear Engineering - IFIN HH, Bucharest-Magurele, Romania
INVITED LECTURE	10.00	<i>"Laser 50: From the First Laser to ELI - Unfolding History"</i> Prof. Dr. Dan C. Dumitras Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania
	11.00	Coffee break
INVITED LECTURE	11.30	<i>"Matrix treatment of optical systems and laser beams: first-order design of laser optics"</i> Prof. Dr. George Nemes ASTiGMAT™, Santa Clara, CA 95050, USA
	12.15	<i>"Modern Laser Applications in Industry: innovation and efficiency"</i> V. Sava ^{1,2} , M. Udrea ^{1,3} ¹ Apel Laser S.R.L. Str. Fabricii, Nr 47, Corp Z et3 Bucharest, Romania ² Faculty of Physics, University of Bucharest, Romania ³ Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania
	12.30	<i>"Optical emission by micro- and nano-droplets"</i> M. Boni, V. Nastasa, I.R. Andrei, G.V. Popescu, M.L. Pascu Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania

	12.45	<p><i>“Stability properties of medicines solutions: spectral evidence and wire like formation”</i></p> <p>A. Militaru¹, A. Smarandache¹, L. Frunza², J.M. Pages³, M.L. Pascu¹</p> <p>¹Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p> <p>²National Institute of Material Physics, Magurele, Romania</p> <p>³UMR-MD1, Faculté de Pharmacie, Université Méditerranée, IFR88, Marseille, France</p>
	13.00	Lunch
INVITED LECTURE	14.30	<p><i>“Photophysical studies on amino acids and proteins oxidation”</i></p> <p>A. Staicu¹, M. Enescu², A. Pascu¹, S. Foley², M. Boni¹, M.L. Pascu¹</p> <p>¹Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p> <p>²Laboratoire de Chimie Physique et Rayonnement Alain Chabaudet UMR EA, Université de Franche-Comté, 16 Route de Gray, 25030, Besancon, France</p>
	15.00	<p><i>“IR Stimulated Raman-Spectroscopy for Advanced Gear-Oil Analysis”</i></p> <p>D. G. Dorigo, B. R. Wiesent, Ö. Şimşek, G. Pérez, C. Ana, A. W. Koch</p> <p>Institute for Measurement Systems and Sensor Technology, Technische Universität München, Theresienstr. 90 / N5, D-80333, Munich</p>
	15.15	<p><i>“Experimental control of the LFF frequency by current modulation in a semiconductor laser with optical feedback”</i></p> <p>I.R. Andrei¹, C.M. Ticos¹, M. Bulinski², M. L. Pascu¹</p> <p>¹ Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p> <p>²Faculty of Physics, University of Bucharest, Romania</p>
	15.30	<p><i>“Thermal and microstructural analysis of some hybrid metal-organic complex materials and thin films deposition by MAPLE”</i></p> <p>C. Constantinescu</p> <p>Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p>

	15.45	<p><i>“Molecular modifications of chlorpromazine prepared as solution in micro-droplets form by exposure to laser radiation”</i></p> <p>V. Nastasa¹, A. Militaru¹, L. Amara², M.L. Pascu¹</p> <p>¹Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p> <p>² Unit of Mycobacteriology and 2UPMM, Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa, Lisbon, Portugal</p>
	16.00	Coffee Break
INVITED LECTURE	16.30	<p><i>“The nanoparticles synthesis by laser pyrolysis”</i></p> <p>Catalin Luculescu</p> <p>Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p>
	17.00	<p><i>“3D Micro-target Engineering for Laser-Matter Interaction Studies”</i></p> <p>F. Jipa, M. Zamfirescu, D. Ursescu, R. Dabu</p> <p>Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p>
	17.15	<p><i>“Transient analysis of a V system with incoherent pumping and spontaneously generated coherence”</i></p> <p>O. Budriga</p> <p>Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p>
	17.30	<p><i>“Reconfigurable soliton waveguides recorded with blue laser diodes for light guiding at telecom wavelengths”</i></p> <p>S.T. Popescu¹, A. Petris¹, V.I. Vlad¹, E. Fazio²</p> <p>¹Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p> <p>²University “La Sapienza” of Rome, Italy</p>
	17.45	<p><i>“Formation of 3D gratings by interferometric-mask method in LiNbO₃:Fe crystals”</i></p> <p>A. Badalyan, R. Hovsepyan, V. Mekhitarayan, P. Mantashyan, R. Drampyan</p> <p>Institute for Physical Research, National Academy of Sciences of Armenia, 0203, Ashtarak-2, Armenia</p>
	18.00	<p><i>“Computer controlled laser”</i></p> <p>C. Chitu^{1,2}, R. Constantin Inpuscatu¹, A. Vintila¹</p> <p>¹Energetic High School, Grivitei Street, No. 1, 105600, Campina, Romania</p> <p>²University of Bucharest, Faculty of Physics, Atomistilor Street, Magurele, Romania</p>
	18.15	Free time

	19.00	Dinner
	20.30	BONE FIRE(folk music and boiled wine) KARAOKE

Wednesday June 1 st , 2011		
	08.00	Breakfast
INVITED LECTURE	09.00	<i>"Modification of molecular structures in liquid phase by interaction with laser beams"</i> Prof. Dr. Mihai Lucian Pascu Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania
	09.45	<i>"Imaging C. Elegans embryogenesis by Third Harmonic Generation microscopy"</i> G. J. Tserevelakis, G. Filippidis, E. M. Megalou, A. J. Krmpot, M. Vlachos, C. Fotakis, N. Tavernarakis ¹ Foundation for Research and Technology - Hellas, Institute of Electronic Structure and Laser, N. Plastira 100, P.O. Box 1385, 71110 Heraklion, Greece ² Physics Department, University of Crete, P.O. Box 2208, 71409 Heraklion, Greece
	10.00	<i>"Dynamic and static measurements of oxygenation and blood volume by Diffuse Optical Tomography (DOT)"</i> M. Patachia ^{1,2} , D.C.A. Dutu ¹ , S. Banita ¹ , R. Cernat ¹ , D.C. Dumitras ¹ ¹ Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania ² Faculty of Physics, University of Bucharest, Romania
	10.15	<i>"The effect of substrate roughness and chemistry on the cellular response"</i> Ch. Simitzi, M. Barberoglou, A. Ranella, C. Fotakis, I. Athanassakis, E. Stratakis ¹ Foundation for Research and Technology - Hellas, Institute of Electronic Structure and Laser, N. Plastira 100, P.O. Box 1385, 71110 Heraklion, Greece ² Physics Department, University of Crete, P.O. Box 2208, 71409 Heraklion, Greece

	10.30	<p><i>“Laser ablation in the ENT surgery”</i> M. Petrus¹, D.C. Dumitras¹, C. Sarafoleanu², C. Manea², C. Iosif², E.M. Carstea³, D.C.A. Dutu¹ ¹Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania ²St. Maria Hospital, Bucharest, Romania ³National Institute of R&D Optoelectronics INOE 2000</p>
	10.45	<p><i>“Analysis of ethylene and ammonia as biomarkers for patients with renal failure”</i> C. Popa^{1,2}, A.M. Bratu¹, D.C.A. Dutu¹, C. Matei, S. Banita¹, and D.C. Dumitras¹ ¹Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania ²Faculty of Physics, University of Bucharest, Romania</p>
	11.00	Coffee break
INVITED LECTURE	11.30	<p><i>“From scientific research to industrial production – a few examples in surface engineering”</i> C. Ruset¹, E. Grigore¹, I. Munteanu¹, N. Budica¹, I. Cernica¹, H. Maier², R. Neu², G. Matthews³, D. Heinen⁴, S. Bausch⁴, V. Zoita^{1,5} ¹Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania ²Max-Planck Institut für Plasmaphysik, Euratom Association, 85748 Garching, Germany ³Culham Centre for Fusion Energy, Euratom Association, Abingdon, UK ⁴Fraunhofer Institute for Production Technology, 52074 Aachen, Germany</p>
	12.15	<p><i>“Enhanced carrier trapping efficiency in ZnO/Si micro-cones”</i> E. Magoulakis^{1,2}, E. L. Papadopoulou¹, E. Stratakis¹, C. Fotakis^{1,2}, P. A. Loukakos¹ ¹Foundation for Research and Technology - Hellas, Institute of Electronic Structure and Laser, N. Plastira 100, P.O. Box 1385, 71110 Heraklion, Greece ²Physics department, University of Crete, P.O. Box 2208, 71409 Heraklion, Greece</p>

	12.30	<p><i>“Functional Protein Microarrays: toward a system view of the plant cell”</i></p> <p>G. Popescu¹, S. Popescu²</p> <p>¹Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p> <p>²Boyce Thompson Institute for Plant Research, One Tower Road, Ithaca 14853, NY, USA</p>
	12.45	<p><i>“Studies of the spectral properties of Phenothiazines”</i></p> <p>A. Smarandache¹, A. Militaru¹, V. Nastasa¹, J. Kristiansen² and M.L. Pascu¹</p> <p>¹ Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p> <p>²Department of Clinical Microbiology, Sønderborg Sygehus, County of Sønderjylland, 6400-DK, Denmark</p>
	13.00	Lunch
	14.30	<p><i>“Beyond structural imaging – cornea examination using combined air-puff tonometry and OCT system with swept source laser”</i></p> <p>K. Karnowski¹, D.A. Caneiro¹, B. Kaluzny², M. Szkulmowski¹, A. Kowalczyk¹, M. Wojtkowski¹</p> <p>¹Institute of Physics, Nicolaus Copernicus University, ul. Grudziadzka 5, PL-87 100 Torun, Poland</p> <p>²Dept of Ophthalmology, Collegium Medicum UMK, Bydgoszcz, Poland</p>
	14.45	<p><i>“Broadband blue light in OCT”</i></p> <p>S. Kolenderska¹, M. Wojtkowski¹</p> <p>¹Department of Physics, Nicolaus Copernicus University, Torun, 87-100, Torun, Poland</p>
	15.00	<p><i>“Removal of Interfering Gases in LPAS Breath Biomarker Concentration Measurements”</i></p> <p>A.M. Bratu, C. Popa, C. Matei, S. Banita, D.C. Dumitras</p> <p>Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p>
	15.15	<p><i>“Principles and methods of imaging in biomedicine”</i></p> <p>C. Matei</p> <p>Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p>

	15.30	<p><i>“Ethylene concentration measurement at fruits using LPAS”</i></p> <p>S. Banita^{1,2}, D.C.A. Dutu¹, C. Matei¹, A.M. Bratu¹, M. Petrus¹, C. Achim¹, M. Patachia¹, D.C. Dumitras¹</p> <p>¹Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p> <p>²Faculty of Applied Sciences, University Politehnica Bucharest, Romania.</p>
	15.45	<p><i>“Research concerning the interaction between pulsed laser radiation and urological stones”</i></p> <p>R.F. Stancu, D. Dvornikov, B. Comanescu, M. Serbanescu</p> <p>Optoelectronica-2001 SA, 077125 Magurele, Ilfov, Romania</p>
	16.00	Coffee Break
	16.30	POSTER SESSION
	18.00	Free time
	19.00	Dinner
	20.30	FOLK MUSIC RECITAL

Thursday June 2 nd , 2011		
	08.00	Breakfast
	09.00	<p><i>“Method for measuring the effective pulse duration of nanosecond laser pulses”</i></p> <p>L. Neagu¹, L. Rusen¹, A. Zorilă¹, A. Stratan¹, G. Nemeş^{1,2}</p> <p>¹Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p> <p>²ASTiGMATTM, Santa Clara, CA 95050, USA</p>
	09.15	<p><i>“Experimental study of femtosecond laser-induced periodic surface structures on metals”</i></p> <p>C. Radu¹, A. Dinescu², M. Zamfirescu^{1,2}</p> <p>¹Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p> <p>² National Institute for Research and Development in Microtechnology, Str. Erou Iancu Nicolae 126A, 077190 Bucharest, Romania</p>

	9.30	<p><i>“Effective area measurement of real laser beams”</i> L. Rusen¹, A. Zorila¹, L. Neagu¹, A. Stratan¹, G. Nemes^{1,2} ¹ Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania ²ASTiGMAT™, Santa Clara, CA 95050, USA</p>
	9.45	<p><i>“Development of a high power transverse diode pumped Nd:YAG rod module”</i> B. Oreshkov, A. Gaydardzhiev, I. Buchvarov, A. Trifonov Department of Physics, Sofia University, 5 James Bourchier Blvd., BG-1164 Sofia, Bulgaria</p>
	10.00	<p><i>“$\chi^{(2)}$-Lens Mode-Locking of Diode-Pumped Nd-doped Vanadate Lasers”</i> V. Aleksandrov, H. Iliev and I. Buchvarov Department of Physics, University of Sofia, 5 James Bourchier Boulevard, BG-1164 Sofia, Bulgaria</p>
INVITED LECTURE	10.15	<p><i>“Professional Associations : benefits and responsibilities”</i> Dr. Clementina Timus Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p>
	11.00	Coffee break
INVITED LECTURE	11.30	<p><i>“THz wave photonics and applications to biology and chemistry”</i> Prof. Dr. Traian Dascalu National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p>
	12.15	<p><i>“Study of laser ignition and flame kernel development in methane-air mixture”</i> G. Salamu¹, O. Sandu¹, M. Dejanu², F. Voicu¹, C. Ticos³, D. Popa², S. Parlac², N. Pavel¹, T. Dascalu¹ ¹Laboratory of Solid-State Quantum Electronics, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania ²Faculty of Mechanics and Technology, University of Pitesti, Targu din Vale Street, 110040, Pitesti, Romania ³Low Temperature Plasma Laboratory, National Institute for Lasers, Plasma and Radiation Physics, Magurele, P.O. Box MG-36, 077125, Bucharest, Romania</p>

	12.30	<p><i>“Sub-nanosecond, tunable between 3 μm and 3.5 μm OPO based on PPSLT, pumped by 0.5 kHz Nd:YAG laser”</i></p> <p>D. Chuchumishev¹, I. Buchvarov¹, A. Gaydardzhiev¹, A. Trifonov¹, O. Sandu², G. Salamu²</p> <p>¹Department of Physics, Sofia University, 5 James Bouchier Blvd., BG-1164, Sofia, Bulgaria ²National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p>
	12.45	<p><i>“Finite-Difference Time-Domain Method (FDTD) used to Simulate Micro-ring Resonator for Student Applications”</i></p> <p>A. Fazacas¹, P. Sterian,²</p> <p>¹M.Sc. at University Politehnica, Bucharest, 060811, Bucharest, Romania ²Prof. at Department Physics II, University Politehnica, Bucharest, 060811, Bucharest, Romania</p>
	13.00	Lunch
	14.00	Trip
	19.00	Dinner
	20.30	LIVE DISCO RECITAL

Friday June 3 rd , 2011		
	08.00	Breakfast
INVITED LECTURE	09.00	<p><i>“Structuring a scientific paper”</i> Prof. Dr. Jean-luc Doumond Principia, Kapellelaan 103 1950 Kraainem, Belgium</p>
	11.00	Coffee break
INVITED LECTURE	11.30	<p><i>“Structuring a scientific paper”</i> Prof. Dr. Jean-luc Doumond Principia, Kapellelaan 103 1950 Kraainem, Belgium</p>
	13.00	Lunch
INVITED LECTURE	14.30	<p><i>“Progress at the Multi-PW ELI-NP laser facility in Romania”</i> Dr. Daniel Ursescu Laser Department National Institute for Lasers, Plasma and Radiation Physics, Magurele, P.O. Box MG-36, 077125, Bucharest, Romania</p>
	15.00	<p><i>“Online damage detection using scattered radiation of the test beam”</i></p> <p>A. Zorilă, S. Sandel, L. Rusen, L. Neagu, C. Fenic, A. Stratan Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania</p>

	15.15	<p><i>“Toward control of spatio-temporal couplings in ultra-short laser pulses”</i> R. Ungureanu^{1,2}, D. Ursescu¹ ¹Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania ²Faculty of Physics, University of Bucharest, Romania</p>
	15.30	<p><i>Multiple pulses experiments at 15 TW TEWALAS laser facility</i> O. Manta^{1,2}, R. Ungureanu^{1,2}, R. Banici^{1,2}, L. Neagu¹, D. Ursescu¹ ¹ Laser Department, National Institute for Laser, Plasma and Radiation Physics, Bucharest-Magurele, Romania ²Faculty of Physics, University of Bucharest, Romania</p>
	16.30	Group Activities
	19.00	Dinner
	20.00	ROMANIAN TRADITIONAL DANCES - RETRO LIVE MUSIC RECITAL

Saturday June 4 th , 2011		
	08.00	Breakfast
	09.00	Poster and Oral Presentation Awards
	11.00	Conference Closing