Program

Joint International Student Conference on Photonics & Modern Laser Applications Conference 2018

ISCP-INDLAS 2018

Alba Iulia, Romania

September 3-7, 2018

Monday, 3rd of September 2018

17^{00}	Arrival
18^{00}	Registration

Tuesday, 4th of September 2018

8^{30}	**Registration**
9^{15}	**Opening Ceremony**
9^{30}	Plenary Lecture - Gabriel Popescu - Basic and Clinical Science Applications Using SLIM and GLIM
10^{30}	Invited Lecture - Catalin Ticos - Pushing charged microparticles with an electron beam in a plasma crystal
11^{00}	Coffee Break
11^{30}	Invited Lecture - Ioan Dancus - Extreme Light Infrastructure – Nuclear Physics and the High Power Laser System
12^{00}	Oral presentation - Agota Simon - Interaction of laser exposed phenothiazine droplets with target surfaces approached in view of microgravity applications
12^{15}	Lunch
14^{00}	Plenary lecture - Rick Trebino - Measuring Everything You've Always Wanted to Know About a Light Pulse
15^{00}	Oral presentation - Adrian Scurtu - Coaxial plasma gun used in space propulsion
15^{15}	Oral presentation - Gellert Kiss - Photon Induced Electron Dynamics in Diatomic Molecules by XUV Laser Pulses
15^{30}	Oral presentation - Catalina Alice Brandus - Construction and optimization of a SESAM - mode locked NdYVO4 laser
15^{45}	Oral presentation - Bogdan Calin - Additive manufacturing of microstructures for laser-driven particle acceleration
16^{00}	Coffee Break
16^{30}	Invited Lecture - Ionut Andrei - Laser sources for optofluidics
17^{00}	Oral presentation - Laurentiu Angheluta - Advantages of Photogrammetry as a Competitive Technology for Cultural Heritage 3D Documentation
19^{00}	Welcome Dinner

Wednesday, 5th of September 2018

9^{30}	Plenary Lecture - Nicolaie Pavel - Laser Ignition - A Review of Laser Spark Plug Development and Achievements in Engine Ignition
10^{30}	Invited Lecture - Felix Sima - Biomaterial 2D and 3D processing by innovative laser technologies: application to cancer cell study

11^{00}	Coffee Break
11^{30}	Invited lecture - **Valentin Craciun** - Pulsed Laser Deposition: a Versatile Technique for Growing Thin Films to Investigate Radiation Induced Effects
12^{00}	Oral presentation - **Angela Vlad** - Photoresponsive layered double hydroxides thin films containing organic dyes
12^{15}	Lunch
14^{00}	Invited lecture - **Razvan Dabu** - Hybrid amplification – an advanced approach for multi-PW femtosecond laser systems development
14^{30}	Invited lecture - **Nicu Scarisoreanu** - Raising the multifunctionality of laser processed perovskite thin films/nanostructures through chemical pressure and epitaxial strain
15^{00}	Oral presentation - **Geo Georgescu** - Linear optical constants' dependency on thickness of zinc selenide thin films
15^{15}	**Poster Session I**
16^{15}	Coffee Break
16^{45}	**Poster Session II**
18^{00}	Free time

Thursday, 6th of September 2018

9^{30}	Invited Lecture - **Adrian Petris** - Experimental investigation of the ultrafast optical nonlinearity by third harmonic generation
10^{00}	Invited Lecture - **Cristina Achim** - CO_2 laser-based photoacoustic system for trace gas analysis in life sciences
10^{30}	Invited Lecture - **Mircea Udrea** - Industrial Laser Applications – State of the Art
11^{00}	Coffee Break
11^{30}	Oral presentation - **Lucian Ratoiu** - Laser Ablation Applications on Contemporary Polychrome Artworks
11^{45}	Oral presentation - **Tatiana Tozar** - Generation and identification of antimicrobial species from medicines exposed to laser radiation in view of fighting multiple drug resistance acquired by bacteria
12^{00}	Lunch
14^{00}	Alba Carolina Guided Tour
20^{00}	Gala Dinner

Friday, 7th of September 2018

9^{30}	Awards Ceremony
9^{45}	Closing Ceremony
10^{00}	Departure

LIST OF CONTRIBUTIONS

PLENARY LECTURES

1. G. Popescu, "*Basic and Clinical Science Applications Using SLIM and GLIM*";

2. R. Trebino, P. Zhu, T. Jones, R. Jafari, "*Measuring Everything You've Always Wanted to Know About a Light Pulse*";

3. N. Pavel, G. Croitoru, O. V. Grigore, M. Dinca, T. Dascalu, "*Laser Ignition - A Review of Laser Spark Plug Development and Achievements in Engine Ignition*".

INVITED LECTURES

1. C. M. Ticos, D. Ticos, J. D. Williams, "*Pushing charged microparticles with an electron beam in a plasma crystal*";

2. I. Dancus on behalf of ELI-NP team, "*Extreme Light Infrastructure – Nuclear Physics and the High Power Laser System*";

3. M. L. Pascu, I. R. Andrei, M. Boni, "*Laser optofluidics and applications*";

4. F. Sima, F. Jipa, S. Iosub, E. Axente, H. Kawano, K. Sugioka, "*Biomaterial 2D and 3D processing by innovative laser technologies: application to cancer cell study*";

5. D. Craciun, G. Dorcioman, P. Garoi, D. Sporea, D. Pantelica, B. S. Vasile, C. Martin, V. Craciun, "*Pulsed Laser Deposition: a Versatile Technique for Growing Thin Films to Investigate Radiation Induced Effects*";

6. R. Dabu, "*Hybrid amplification – an advanced approach for multi-PW femtosecond laser systems development*";

7. N. D. Scarisoreanu, "*Raising the multifunctionality of laser processed perovskite thin films/nanostructures through chemical pressure and epitaxial strain*";

8. A. Petris, P. Gheorghe, "*Experimental investigation of the ultrafast optical nonlinearity by third harmonic generation*";

9. C. Achim (Popa), A.M. Bratu, M. Bercu, D.C. Dumitras, M. Mogildea, G. Mogildea, "*CO_2 laser-based photoacoustic system for trace gas analysis in life sciences*";

10. M. Udrea, "*Industrial Laser Applications – State of the art*".

ORAL PRESENTATIONS

1. Á. Simon, B. S. Calin, D. C. Tranca, M. Boni, I.R. Andrei, S. Simion, M. Bojan, I. S. Stroescu, M.L. Pascu, "*Interaction of laser exposed phenothiazine droplets with target surfaces approached in view of microgravity applications*";

2.   A. Scurtu, D. Ticos, N. Udrea, M.L. Mitu, C.M. Ticos, "*Coaxial plasma gun used in space propulsion*";

3.   G. Zs. Kiss, S. Borbély, L. Nagy, "*Photon Induced Electron Dynamics in Diatomic Molecules by XUV Laser Pulses*";

4.   C. A. Brandus, T. Dascalu, "*Construction and optimization of a SESAM - mode locked NdYVO4 laser*";

5.   B. Calin, M. Zamfirescu, F. Jipa, M. Dumitru, "*Additive manufacturing of microstructures for laser-driven particle acceleration*";

6.   L. M. Angheluta, "*Advantages of photogrammetry as a competitive technology for cultural heritage 3D documentation*";

7.   A. Vlad, F. Andrei, R. Birjega, A. Matei, M. Secu, R. Zavoianu, "*Photoresponsive layered double hydroxides thin films containing organic dyes*";

8.   G. Georgescu, A. Petris, "*Linear optical constants' dependency on thickness of zinc selenide thin films*";

9.   M. Dinu, I. Cortea, L. Ratoiu, G. R. Dascalu, R. Radvan, "*Laser ablation applications on contemporary polychrome artworks*";

10.   T. Tozar, V. Nastasa, M. Boni, M. C. Chifiriuc, M. L. Pascu, "*Generation and identification of antimicrobial species from medicines exposed to laser radiation in view of fighting multiple drug resistance acquired by bacteria*".

POSTER PRESENTATIONS

1.   I. R. Andrei, C. Onea, P.E. Sterian, I. Ionita, M. L. Pascu, "*Experimental Control of Slave Chaotic Dynamics by Master Current Modulation in a Chaotic Coupled Laser System*";

2.   I. R. Andrei, V. Nastasa, G. Popescu, M. L. Pascu, "*White light diffraction phase microscope for tissue analysis*";

3.   L. M. Angheluta, C. C. Angheluta-Constantin, "*Data management solutions for complex optoelectronic and inter-disciplinary investigations in cultural heritage*";

4.   L. Pintilie, N. Becherescu, M. Udrea, "*Preliminary results on the development of a novel laser sensor*";

5.   M. Boni, I. R. Andrei, A. Staicu, M. L. Pascu, "*Resonant and unresonant interaction of laser beams with pendant droplets containing different solutions*";

6.   A. Bratu, C. Popa, M. Petrus, "*Study of ethylene as a biomarker of oxidative stress in pregnancy*";

7.   B. Chiricuta, C. Grigorescu, M. Rusu, "*Portable laser system for real time detection of molecular markers*";

8.   G. Dorcioman, S. Iosub, <u>D. Craciun</u>, M. Miroiu, P. Garoi, E. Axente, F. Sima, V. Craciun, "*Morphological and wettability studies of thin titanium oxide films grown by reactive-pulsed laser deposition*";

9.   <u>A. Dinache</u>, I. R. Andrei, T. Tozar, I. Iordache, A. Smarandache, M. Boni, A. Staicu, M. L. Pascu, "*Laser assisted generation of nano-emulsions*";

10.   C. L. Popa, E. M. Carstea, <u>S. I. Dontu</u>, "*Storage influence of the fluorescence of aquatic organic matter*";

11.   D. D. Cioboata, <u>A. Enache</u>, I. Surupaceanu, M. Selagea, M. Iacob, "*Laser cleaning of molds, laser advantages versus common methods*";

12.   F. Garoi, P. Prepelita, <u>I. Urzica</u>, B. Bojan, "*Fractal dimension of speckle images for roughness assessment of thin films*";

13.   <u>P. Gheorghe</u>, A. Petris, I. Rau, "*Laser-induced spatial phase modulation in films of dye-doped DNA*";

14.   <u>A. Ilie</u>, M. Scarisoreanu, E. Dutu, E. Tanasa, I. Mihailescu, I. Morjan, "*Laser pyrolysis synthesized TiO_2 nanoparticles characterization by PCA of Raman spectra: microstrained anatase & rutile phase*";

15.   P. C. Logofatu, T. Vasile, <u>I. Urzica</u>, "*Superresolution imaging via microscanning*";

16.   S. Miclos, D. Savastru, R. Savastru, I. Lancranjan, "*The Simulation and design of a LPGFS system for detection of Klebsiella in water*";

17.   <u>M. Mogildea</u>, G. Mogildea, "*Dissociation of the carbon dioxide using microwave plasma generator*";

18.   <u>V. Nastasa</u>, S. Balascuta, M. Risca, D. Doria, M. Cernaianu, K. Spohr, P. Ghenuche, "*Design of on-shot laser diagnostics for the 10PW laser beams at ELI-NP*";

19.   <u>I. Negut</u>, V. Grumezescu, A. Ficai, A. M. Grumezescu, A. M. Holban, R. C. Popescu, D. Savu, B. S. Vasile, G. Socol, "*Laser coatings based on Nigella sativa essential oil functionalized nanoparticles for antimicrobial applications*";

20.   <u>M. Oane</u>, I. N. Mihailescu, A. Buca, C. Ristoscu, C. M. Ticos, "*The Thermal Fields in Laser Cladding Processing: a "Fire Ball" Model*";

21.   <u>M. Oane</u>, A. Buca, B. Sava, R. V. Medianu, C. M. Ticos, "*Two Temperature Model for Attoseconds Laser Pulse Interaction with Matter*";

22.   <u>C. L. Popa</u>, S. I. Dontu, E.M. Carstea, D. Savastru, "*Evaluation of the self-purification processes in the Arges River Basin using laser induced fluorescence*";

23.   <u>I. Porosnicu</u>, I. Tiseanu, "*Multiscale Monte Carlo simulation of nanoparticles dose enhancement in kilovoltage radiation*";

24.   R. Radvan, L. Ratoiu, I. M. Cortea, A. I. Chelmus, <u>L. Angheluta</u>, D. Marinescu, "*Identification and Discrimination of Interventions on Nicolae Grigorescu Painting*";

25. L. Rusen, A. Zorila, A. Stratan, S. Brajnicov, P. Gheorghe, *"LIDT preliminary studies on different glasses using a nanosecond test station"*;

26. D. Savastru, S. Miclos, R. Savastru, I. Lancranjan, *"The Simulation and design of a LPGFS system for detection of Escherichia coli bacteria in milk"*;

27. L. Baschir, D. Savastru, I. C. Vasiliu, M. Elisa, I. Chilibon, C. Obreja, *"Spectroscopic ellipsometry studies of phosphorus oxide influence on graphene-ZnO sol-gel composite films optical properties"*;

28. M. Selagea, S. Savencu, R. Udrea, *"Optimization of laser color marking of art objects"*;

29. C. Ristoscu, E. Popovici, I.N. Mihailescu, N. Becherescu, M. Selagea, M. Iacob, M. Udrea, *"Design of a 2kW fiber laser based cladding equipment"*;

30. A. Smarandache, M. Boni, M. L. Pascu, *"Spectroscopic investigations on fast laser photoinduced molecular modifications in droplets containing new hydantoins"*;

31. M. Sopronyi, C. Nita, E. Axente, C. Matei Ghimbeu, F. Sima, I. N. Mihailescu, *"Mesoporous carbon thin films deposited via Matrix Assisted Pulsed Laser Evaporation"*;

32. A. Staicu, A. Smarandache, A. Pascu, M. L. Pascu, *"Photophysics of porphyrins containing nanocomplexes for targeted drug delivery"*;

33. O. S. Stoican, *"Plasma jet generator with hybrid electrical supply"*;

34. D. Ticos, C. M. Ticos, *"Plasma crystal rotation by electron beams"*;

35. I. Urzica, A. Simon, M. L. Pascu, *"Making fingerprint systems for polymeric materials by laser nano-processing"*;

36. M. Dumitru, A. Vlad, S. Brajnicov, A. Mihailescu, A. Groza, M. Filipescu, *"Metal oxides thin films deposited by laser techniques for sensing applications"*;

37. L. Boroica, B. A. Sava, M. Elisa, V. R. Medianu, M. Oane, O. Shikimaka, M. Popa, *"Vitreous thin films obtained by magnetron sputtering"*;

38. D. Craciun, I. Anghel, G. Cojocaru, G. Dorcioman, P. Garoi, E. Axente, O. Uteza, A. M. Rostas, V. Craciun, *"Pulsed Laser Deposition of Oxide Thin Films for fs-Laser Mirrors"*.

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