

PROGRAM
SPIE.FOCUS Armenia:
3rd International Symposium "Optics & its Applications"
1-5 October, 2015, Armenia

1 October LT-Pyrkal <i>21 Shopron Str., Yerevan, 0090, Armenia</i>	
12:45-13:25 Registration in the lobby of LT-Pyrkal	
Chair: Gagik Buniatyan	
13:30-14:10	Opening ceremony Welcome words by: Gagik Buniatyan, Aram Papoyan Presentation of SPIE: Katarina Svanberg Presentation of ICO, IYL-2015: Angela Guzman
14:10-14:55	Sune Svanberg (<i>Lund Uni., Sweden & SCNU, China</i>) <i>"Laser spectroscopy applied to environmental and ecological research"</i>
14:55-15:40	Public lecture: <i>"Light from the Baby Universe"</i> David Blaschke (<i>Wroclaw Uni., Poland & JINR, Russia</i>)
15:40-16:00 Coffee-break	
Chair: David Blaschke	
16:00-16:40	Ryszard Buczynski (<i>IEMT & Uni. of Warsaw, Poland</i>) <i>"Application of effective medium theory for development of nanostructured gradient index microoptical components"</i>
16:40-17:25	Katarina Svanberg (<i>Lund Uni., Sweden & SCNU, China</i>) <i>"Laser-based detection and treatment of malignant tumours"</i>
17:25-18:05	Claude Leroy (<i>Uni. Bourgogne, France</i>) <i>"Luminous Interaction between Armenia and France"</i>
18:05-18:35	Gayane Grigoryan (<i>IPR of NAS, Armenia</i>) <i>"Quantum information and double light storage in five level systems"</i>
18:00-19:00 Exhibition Chapter Presentations Poster Presentations	
19:00 Welcome party	

2 October

YSU

1 Alex Manoogian str., Yerevan, 0025, Armenia

Chair: Levon Mouradian

09:00-09:45	Lorenzo Pavesi (<i>University of Trento, Italy</i>) "Silicon photonics: a new technology platform to enable low cost and high performance photonics"
09:45-09:55	Helene Coudert-Alteirac (<i>Lund University, Sweden</i>) "The High-intensity HHG beamline at the Lund Laser Centre: towards XUV-pump XUV-probe experiments"
09:55-10:05	Tatevik Chalyan (<i>University of Trento, Italy</i>) "Si₃N₄ based Asymmetric Mach-Zehnder Interferometers for biosensing applications"
10:05-10:15	Vitali Ghogoberidze (<i>Ivane Javakhishvili Tbilisi State University, Georgia</i>) "Investigation of Nanograting Structures Using Method of Auxiliary Sources"
10:15-11:00	Lorenzo Pavesi (<i>University of Trento, Italy</i>) "Silicon microresonators: how to give a new twist to silicon photonics"

11:00-11:20

Coffee-break

Chair: Angela Guzman

11:20-12:05	Dmitry Firsov (<i>Peter the Great St. Petersburg Polytechnic Uni., Russia</i>) "Observation of surface plasmon polaritons in GaN layers via reflection and emission of terahertz radiation"
12:05-12:45	Agnieszka Popiolek-Masajada (<i>Wroclaw Uni. of Technology, Poland</i>) "Optical Vortices in Microscopy"
12:45-13:05	Michel Aillerie (<i>Université de Lorraine, LMOPS, Metz, France</i>) "Electro-optic and dielectric properties of doped congruent lithium niobate crystals"

13:05-14:00

Lunch

Chair: Gayane Grigoryan and Agnieszka Popiolek-Masajada	
14:00-14:30	Levon Aslanyan (<i>YSU, Armenia</i>) “ <i>Geometrical optics of inhomogeneous anisotropic medium with twisting</i> ”
14:30-14:40	Davit Khachatryan (<i>Russian-Armenian University, Armenia</i>) “ <i>Selective reflection of a resonant vapor in the cell with plane-parallel windows</i> ”
14:40-14:50	Irina Dolganova (<i>BMSTU, Russia</i>) “ <i>Light Scattering in Growing Ordered Structures. Computation of Scattering Phase-Function</i> ”
14:50-15:00	Hrach Toneyan (<i>YSU, Armenia</i>) “ <i>Designing the Femtosecond Optical Oscilloscope</i> ”
15:00-15:10	Pegah Asgari (<i>Uni. of Zanjan, Iran</i>) “ <i>Application of Fresnel diffraction from a 2D array of reflective disks in optical profilometry of a flat surface</i> ”
15:10-15:20	Mateusz Szatkowski (<i>Wroclaw Uni. of Technology, Poland</i>) “ <i>Optical vortex sensitivity due to introduced local phase disturbances</i> ”
15:20-15:30	Mariam Gevorgyan (<i>IPR of NAS, Armenia & Uni. Bourgogne, France</i>) “ <i>Adiabatic tracking for photoassociation of ultra-cold atoms with Kerr-type elastic scatterings</i> ”
15:30-15:40	Lukas Nadvornik (<i>Institute of Physics ASCR & Charles Uni., Czech Republic</i>) “ <i>Efficient conversion of light to charge and spin in Hall-bar microdevices</i> ”
15:40-15:50	Gleb Katyba (<i>BMSTU, Russia</i>) “ <i>Terahertz Photonic Crystalline Waveguide Based on Shaped Sapphire Crystal</i> ”
15:50-16:00	Vahideh Farzamrad (<i>Uni. of Zanjan, Iran</i>) “ <i>Digital holography microscopy of liquid-crystalline phase separation in multilamellae multicomponent lipid membranes</i> ”
16:00-16:10	David Baghdasaryan (<i>Russian-Armenian University, Armenia</i>) “ <i>Optical visualization of the Pythagorean triples in the quantum dashes</i> ”
16:10-16:20	Sadashiv Raj Bharadwaj (<i>University of Delhi at ANDC, India</i>) “ <i>Innovative Approach towards Understanding Optics</i> ”
16:20-16:30	Hadi Bakhshi (<i>Uni. of Zanjan, Iran</i>) “ <i>Using Hartmann wave front sensor data and deconvolution to taken aberration effects on extended bio-objects images</i> ”
16:30-16:40	Yousef Pourvais (<i>Uni. of Tehran, Iran</i>) “ <i>Calibration of Nano-positioner piezoelectric drivers using Fresnel diffraction from phase-step</i> ”
16:40-17:00 Coffee-break	
17:00-18:00 Optics zone	17:00-18:30 Hands-on Research Activity

3 October
08:30 - 20:00 Excursion: Khor Virap, Areni, Noravank

4 October

YSU Guest House: 52 Mesrop Mashtots Ave., Yerevan, Armenia

Chair: Dmitry Firsov

09:00-09:30	Yevgenya Pashayan-Leroy (<i>Uni. Bourgogne, France</i>) “Fundamental Physics with nano-cells”
09:30-09:50	Kamo Aharonyan (<i>State Engineering Uni. of Armenia, Armenia</i>) “Plasmon-Phonon Coupling In Lead Salt Semiconductor Quantum Well Structures”
09:50-10:10	Tigran Vartanyan (<i>ITMO University, Russia</i>) “Metal Nanosphere at an Interface: revival of degeneracy of a dipole plasmon”
10:10-10:30	Artur Ishkhanyan (<i>IPR of NAS, Armenia</i>) “Asymmetric scattering of discrete Gaussian wave packets in the field of a standing wave”

11:00-15:30

DigiTec Expo: International High-Tech exhibition

3 Hakob Hakobyan St., Yerevan, Armenia

Chair: Claude Leroy

16:00-16:20	Anahit Gogyan (<i>IPR of NAS, Armenia</i>) “Influence of transverse and longitudinal magnetic fields on optical coherent effects”
16:20-16:40	Pavel Muzhikyan (<i>IPR of NAS, Armenia</i>) “Investigation of 1.5 μm luminescence properties in YAG:Er³⁺ crystals in presence of energy transfer processes”
16:40-17:25	Katarina Svanberg (<i>Lund Uni., Sweden & SCNU, China</i>) “Laser spectroscopy in the handling of antibiotic resistance”
17:25-17:55	Aigars Ekers (<i>KAUST, Saudi Arabia and Uni. of Latvia, Latvia</i>) “Nonlinear effects in optical pumping of a cold and slow atomic beam”
17:55-18:55	Professional development lecture: “How to write scientific article: a scientific approach” Aram Papoyan (<i>IPR of NAS, Armenia</i>)

5 October RAU <i>123 Hovsep Emin str., Yerevan, 0051, Armenia</i>	
Chair: Aigars Ekers	
09:00-09:30	Maryam Azizi (<i>PNF Nano Engineering & Manufacturing Co, Iran</i>) “Interband Coulomb coupling in narrow-gap semiconductor nanocrystals: $k \cdot p$ theory”
09:30-10:00	Suman Dudeja (<i>University of Delhi, India</i>) “Study of Beta-Carotene by Raman and Absorption Spectroscopy and its Importance as a Bio-Marker”
10:00-10:20	Dmitry Schitz (<i>Immanuel Kant Baltic Federal University, Russia</i>) “Excilamp with a long feedline”
10:20-10:40	Anna Kotanjyan (<i>YSU, Armenia</i>) “The study of undulator radiation of transversal oscillator”
10:40-11:00	Pezhman Sasanpour (<i>Shahid Beheshti Uni. of Medical Sciences, Iran</i>) “Effect of Size and Geometry of Gold Nanostructures in Performance of Laser Hyperthermia; A Multiscale-Multiphysics Modelling”
11:00-11:20 Coffee-break	
Chair: Katarina Svanberg	
11:20-12:05	Sune Svanberg (<i>Lund Uni., Sweden & SCNU, China</i>) “Multi-disciplinary applications of Gas in Scattering Media Absorption Spectroscopy (GASMAS)”
12:05-12:45	Tigran Shahbazyan (<i>Jackson State Uni., USA</i>) Exciton-plasmon interactions in hybrid graphene-semiconductor structures
12:45-14:30 Lunch	
Chair: Sune Svanberg	
14:30-15:15	Angela Guzman (<i>CREOL, USA</i>) “Presentation of OSA” “OAM waves and the measurement of their topological charge”
15:15-16:00	Public lecture: “The Light in Photography” Suren Manvelyan (<i>Armenia</i>)
16:00-17:00	Aigars Ekers (<i>KAUST, Saudi Arabia</i>) “Student Positions: Computer, Electrical and Mathematical Science and Engineering at KAUST”
17:00-17:15	Symposium Closing
17:15-18:00 Light Refreshments <i>(Supported by KAUST)</i>	

Poster Session

1. *SPIE Yerevan State Univ. Chapter, Armenia*
Hakob Hakobyan
2. *SPIE Charles Univ. in Prague Chapter, Czech Republic*
Lukas Nadvornik
3. *SPIE Univ. of Delhi at Acharya Narendra Dev College Chapter, India*
Sadashiv Raj Bharadwaj
4. *SPIE Wroclaw Univ. of Technology Chapter, Poland*
Mateusz Szatkowski
5. *SPIE & OSA Bauman Moscow State Technical Univ. Chapters, Russian Federation*
Irina Dolganova
6. *SPIE & OSA Lund Univ. Chapters, Sweden*
Helene Coudert-Alteirac
7. *SPIE Taras Shevchenko National Univ. of Kyiv Chapter, Ukraine*
Danylo Babich
8. **Danylo Babich** (*Taras Shevchenko National Uni. of Kyiv, Ukraine*)
“*Temperature-Dependent Fluorescent Dyes Application for Measuring the Millimeter Wave Absorption in Polar Liquids*”
9. **Faezeh Abbasi** (*Uni. of Zanjan, Iran*)
“*Study and measurements the effects of the deconvolution's parameters on quality of image reconstruction*”
10. **Astghik Kuzanyan** (*IPR of NAS, Armenia*)
“*Ultrafast TSPD on The Basis of CeB6 Sensor*”
11. **Sergey Amirkhanyan** (*RAU, Armenia*)
“*The electrostatic multipoles, created by electron, localizes in narrow-band cylindrical nanolayer*”
12. **Arevik Amiryanyan** (*IPR of NAS, Armenia & Uni. Bourgogne, France*)
“*Peculiarities of Rb atomic transition behavior in strong transverse magnetic fields*”
13. **Anna Asatryan** (*YSU, Armenia*)
“*Impurity-bound polaronic states under an external electric field in quantum dots: Image charge effect*”
14. **Artak Gevorgyan** (*RAU, Armenia*)
“*Intersubband transitions in quantum well with consideration of the interaction with impurities and phonons*”
15. **Hayk Ghaltaghchyan** (*RAU, Armenia*)
“*Few-body magneto-absorption in prolate ellipsoidal quantum dot*”
16. **Hermine Gharagulyan** (*YSU, Armenia*)
“*Experimental and Theoretical Investigation of Polarization Plane Rotation of Light in Nanoparticle-Enriched Chiral Liquid-Crystalline Photonic Structures with an Anisotropic Defect Layer*”
17. **Hrant Khondkaryan** (*YSU, Armenia*)
“*UV Photodetector on the base of silicon nanowire FET*”
18. **Anush Movsesyan** (*IPR of NAS & ASPU, Armenia*)
“*Electro-optic and dielectric properties of Holmium-doped congruent lithium–niobate crystals*”
19. **Arshak Vartanian** (*YSU, Armenia*)
“*Dilatational and flexural acoustic phonon-mediated spin relaxation in a two-dimensional quantum dot in the presence of perpendicular magnetic field*”
20. **Irina Dolganova** (*BMSTU, Russia*)
“*Monte Carlo simulation of optical coherence tomography signal of the skin nevus*”
21. **Mikhail Tarabrin** (*BMSTU, Russia*)
“*Diode array-pumped mid-infrared cw Cr²⁺:CdSe laser*”
22. **Lyudvig Petrosyan** (*YSMU, Armenia & RAU, Armenia*)
“*Coherent transport in a system of periodic linear chain of quantum dots situated between two parallel quantum wires*”
23. **Tomasz Koltunowicz** (*Lublin Uni. of Technology, Poland*)
“*Raman spectra of graphene films synthesized by chemical vapor deposition on copper foil using decane as precursor*”
24. **Marek Opielak** (*Lublin Uni. of Technology, Poland*)
“*Origin of visible photoluminescence of Si-rich and N-rich silicon nitride films*”
25. **Pawel Zukowski** (*Lublin Uni. of Technology, Poland*)
“*Raman G-peak temperature shift of bilayer graphene on copper substrate*”

26. **Dmitry Schitz** (*Immanuel Kant Baltic Federal University, Russia*)
"Excimer lamp for skin treatment"
27. **David Blaschke** (*Uni. of Wroclaw, Poland & JINR, Russia*)
"Nonequilibrium particle production in time-dependent strong fields"
28. **David Edvin Alvarez Castillo** (*Uni. Autonoma de San Luis Potosi, Mexico & JINR, Russia*)
"Bayesian analysis of mass and radius constraints from pulsar waveform analyses"