



Program

International Conference on
Laser Physics 2021

21-24 September, 2021, Ashtarak, Armenia
hybrid event



September 21, 2021

“MaNaCa meets to Laser Physics” session

Chairman: Aram Papoyan

10:00-11:00	Registration
11:00-11:10	Opening <i>Aram Papoyan, David Sarkisyan, Aram Manukyan</i>
11:00-11:30	Introduction to the EU H2020 MaNaCa project <i>Aram Manukyan</i>
11:30-12:00	Synthesis, Structure and Magnetic Properties of Carbon Encapsulated Fe/Fe ₃ C Nanoparticles as Magnetic Heating Mediators <i>Narek Sisakyan</i>
12:00-12:30	Determination of weak and strong magnetic fields using atomic spectroscopy <i>David Sarkisyan</i>
12:30-13:00	Development of nanoparticles for the combined localized therapy of cancer adjacent to proton therapy, and evaluation of their acute toxicity to mammals <i>Archil Chirakadze</i>
13:00-13:30	Coffee break
Chairmen: David Sargsyan	
13:30-14:00	Biophysics of cancerogenesis: new trends and perspectives <i>Naira Ayvazyan</i>

14:00-14:30	New therapeutic approaches of combinations of plant-derived and chemotherapeutic compounds in anti-cancer therapy <i>Nikolay Avtandilyan</i>
14:30-15:00	Comparative analysis of chemical and biogenic Fe ₃ O ₄ NPs biocompatibility and toxicity <i>Ashkhen Hovhannisyan</i>
15:00-15:30	Possible Role of Water in Carcinogenesis and Influence of Non-Ionizing and Non-Thermal Electromagnetic Radiation (Millimeter Waves) <i>Vitali Kalantaryan</i>
15:30-18:00	Welcome Party
18:00	Bus to Yerevan

22 September, 2021

Chairmen: Claude Leroy

10:00-10:30	Signature of optical Rabi oscillations in transmission signal of atomic vapor under continuous-wave laser excitation <i>Aram Papoyan</i>
10:30-11:00	Features of the non-stationary response of the medium of two-level atoms <i>Gayane Grigoryan</i>
11:00-11:30	Quantum tunneling of $V(x) = V/x^a$ singular potential <i>Atom Muradyan</i>
11:30-12:00	Radiation of surface polaritons in cylindrical waveguides <i>Aram Saharian</i>
12:00-13:00	Coffee break
Chairmen: Atom Muradyan	
13:00-13:30	Nanostructured zinc oxide photoluminescence under laser pulse excitation

	<i>Tigran Vartanyan</i>
13:30-14:00	A measurement of the vacuum magnetic birefringence: the project VMB@CERN <i>Emilio MARIOTTI</i>
14:00-14:30	Towards a Miniature Optical Frequency Standard: Current Status and New Approaches in Sub-Doppler Spectroscopy of Cs Vapors <i>Denis Brazhnikov</i>
14:30-15:00	High-Quality Level-Crossing Resonances in a Cesium Vapor Cell for Applications in Atomic Magnetometry and Magneto-Optical Switching <i>V.I. Vishnyakov</i>
15:00-15:30	Spiking and Intensity-Correlated Polychromatic Emission from Alkali Vapors <i>Alexander Akulshin</i>
17:00	Bus to Yerevan

23 September, 2021

Chairmen: Mushegh Rafayelyan

10:00-10:30	Calculations of magic and zero-magic wavelengths for Ca and Hg atoms and applications in quantum optics <i>Anahit Gogyan</i>
10:30-11:00	Sr optical atomic clock in a blue-detuned lattice <i>Ara Tonoyan</i>
11:00-11:30	Formation of Surface Metal Microstructures by Bessel Beam Controlled Atomic Deposition <i>Rafael Drampyan</i>
11:30-12:00	Magnetically induced transitions with highest probabilities of alkali metal atoms <i>Armen Sargsyan</i>
12:00-13:00	Coffee break

Chairmen: Rafael Drampyan

13:00-13:30	Applications of Magnetically Induced Transitions in the Electromagnetically Induced Transparency phenomena <i>David Sarkisyan</i>
13:30-14:00	Large-Scale Optical Simulator for Spin Glasses <i>Mushegh Rafayelyan</i>
14:00-14:30	Superconductivity and Superconductor-Insulator Transition in Single Crystal Sb ₂ Te ₃ Nanoplates <i>Sergey Harutyunyan</i>
14:30-15:00	Artificial periodic structures in crystals <i>Vladimir Arakelyan</i>
15:00-15:30	Magnetoresistance properties of Ag-doped ZnO films <i>Yevgenia Kafadaryan</i>
15:30-16:00	Influence of dislocations on electron transport in Sn-doped α -Ga ₂ O ₃ layers <i>Levon Hovakimian</i>
17:00	Bus to Yerevan

24 September, 2021

Students' session

Chairmen: Lusine Tsarukyan

10:00-10:15	"Dancing" optical bullet forming in a crystal with quadratic nonlinearity <i>Boris Bryantsev</i>
10:15-10:30	Exciton-Related Raman Scattering, Interband Absorption and Photoluminescence in Colloidal CdSe/CdS Core/Shell Quantum Dots Ensemble <i>Grigor Mantashyan</i>
10:30-10:45	Alkali atom transition cancellations under the magnetic field

	<i>Artur Aleksanyan</i>
10:45-11:00	Theoretical study of sodium D lines in a wide range of magnetic field with sub-Doppler resolution <i>Rodolphe Momier</i>
11:00-11:15	Acoustogalvanic Phenomena in Ordinary Water <i>Irina Grigoryan</i>
11:15-11:30	Optical scalable matrix-vector multiplication <i>Arman Tigranyan</i>
11:30-11:45	New Material for Optical Cooling: Tm-doped Lithium Niobate <i>Nune Mkhitaryan</i>
11:45-13:00	Coffee break
Chairmen: Armen Sargsyan	
13:00-13:30	Sensing of near-infrared weak radiation using thermoelectric single-photon detector <i>Armen Kuzanyan</i>
13:30-14:00	Preparation of Heterostructures Containing Anti-reflective Layer Used as a Detection Pixel of Single-Photon Thermoelectric Detector <i>Astghik Kuzanyan</i>
14:00-14:30	Amplified spontaneous emission-assisted remote magnetometry from sodium vapor cells <i>Emanuel Klinger</i>
14:30-15:00	The role of the geometric phase in cholesteric with a defect layer toward multimodal robust lasing <i>Tatevik Sarukhanyan</i>
15:00-15:30	Theoretical signals of a dual-axis optically pumped Cs atomic vapor magnetometer <i>Dace Osite</i>
15:30-16:00	Best Student Presentation Award Ceremony/ Closing

17:00

Bus to Yerevan

IMPORTANT INFORMATION

08:30 Precise! Bus departure every day from France Square station in Yerevan

