Tuesday: September 17

09:30 – 10:00 | Registration of the participants

Morning Session Chair: **Aram Papoyan**

10:00 – 10:10 | Conference opening: Welcome talks

10:10 – 11:00 | Dark Matter Search at Atomic Energies and New Detector Design
Emilio Mariotti
DSFTA UniSIena

09:30 – 10:20 | A novel approach to quantitative spectroscopy of atoms based on 50-400 nm thick column of atomic vapor: the second derivative method
David Sarkisyan
Institute for Physical Research NAS of Armenia

Coffee Break
11:30 – 12:10

Morning Session Chair: **Emilio Mariotti**

12:10 – 12:40 | On the Possibility to Couple Plasmons and Excitons in the Gold-Atomic Vapor and Zn-ZnO Systems
Tigran A. Vartanyan
ITMO University

12:40 – 13:10 | Few-cycle optical-terahertz bullet in a nonlinear waveguide
Irina Zakharova
Lomonosov Moscow State University

Lunch
13:00 – 14:30

Evening Session Chair: **Tigran A. Vartanyan**

14:30 – 15:00	Current progress on direct observation of backward degenerate mirrorless lasing in rubidium vapor **Aram Papoyan** *Institute for Physical Research, NAS of Republic of Armenia*
15:00 – 15:30	Selective reflection from Potassium ultrathin atomic layers **Armen Sargsyan** *Institute for Physical Research, NAS of Republic of Armenia*
15:30 – 16:00	Fluorescence of ^{85}Rb and ^{87}Rb vapor in a transient interaction regime **Artur Aleksanyan** *Institute for Physical Research, NAS of Armenia and Laboratoire Interdisciplinaire Carnot de Bourgogne, Université Bourgogne Franche-Comté, France*

Welcome party
16:20 – 19:30

Bus to Yerevan
19:30

Wednesday: September 18

Poster session
11:00 – 12:00

Please hang the posters from the first day of the conference.
For the list of posters please refer to the last part of the program

PhD Defense E. Klinger
Selective Reflection Spectroscopy of Alkali Vapors Confined in Nanocells and Emerging Sensing Applications
10:30 – 12:00

Lunch
12:00 – 13:00

PhD Defense A. Amiryan
Formation of narrow optical resonances in thin atomic vapor layers of Cs, Rb, K and applications
13:00 – 14:30

Sightseeing Tour
14:00

PhD Defense T. Ishkhanyan
Quantum two-state level-crossing models in terms of the Heun functions
15:00 – 16:30

Thursday : September 19

Morning Session Chair: **David Sarkisyan**

09:40 – 10:30	Ultrafast Laser Spectroscopy: Graphene, SURMOF, Organic Crystals **Gagik Gurzadyan** *Dalian university of technology*
10:30 – 11:00	Singlet Exciton Fission: What is it? **Wenjun Ni** *Dalian university of technology*
11:00 – 11:20	Singlet Fission for Solar Cells **Tongyu Zhao** *Dalian university of technology*

Coffee Break
11:20 – 12:00

Morning Session Chair: **Claude Leroy**

12:00 – 12:30	A proof of concept for a wide range optical magnetometer based on nanocells **Emmanuel Klinger** *Institute for Physical Research, NAS of Armenia and Laboratoire Interdisciplinaire Carnot de Bourgogne, Université Bourgogne Franche-Comté, France*
12:30 – 13:00	Influence of ZnGeP2 crystal absorption on CO laser down-conversion to THz range **Igor Kinyaevskiy** *P.N. Lebedev Physical Institute of the Russian Academy of Sciences*

Lunch
13:00 – 14:30

Evening Session Chair: **Edvard Kokanyan**

14:30 – 15:00	Exact solutions of the reduced sextic oscillator from the bi-confluent Heun equation **Artur Ishkhanyan** *Institute for Physical Research, NAS of Republic of Armenia*
15:00 – 15:30	Symmetry forbidden Raman lines activated by photorefractivity **Ninel Kokanyan** *CentraleSupélec (France)*
15:30 – 15:50	Polaron effects on the impurity-related linear and nonlinear optical properties in nanowire with magnetic field **Tigran Ghukasyan** *Yerevan State University*

Lab Tour
15:50 – 16:50

Bus to Yerevan
17:00

Friday: September 20

Morning Session Chair: **Artur Ishkhanyan**

09:40 – 10:10	Superfluorescence in Erbium-doped YLF crystals **Alen Khanbekyan** *Department of Physics and Earth Sciences, University of Ferrara, Italy*
10:10 – 10:40	Optical properties of excitonic complexes in ellipsoidal quantum dots **David Hayrapetyan** *Russian-Armenian University*
10:40 – 11:00	Features of Faraday rotation and its modification from a nano-cell **Arevik Amiryan** *Institute for Physical Research, NAS of Armenia and Laboratoire Interdisciplinaire Carnot de Bourgogne, Université Bourgogne Franche-Comté, France*

Coffee Break
11:00 – 12:00

Morning Session Chair: **Rafayel Drampyan**

12:00 – 12:30	Optical monitoring of arbitrary distributed substances via radially-quadratic apodizing filter **Pavel Muzhikyan** *Institute for Physical Research, NAS of Republic of Armenia*
12:30 – 13:00	A Lambert-W Exactly Solvable Level-Crossing Confluent Hypergeometric Two-State Model **Tigran Ishkhanyan** *Institute for Physical Research, NAS of Armenia and Laboratoire Interdisciplinaire Carnot de Bourgogne, Université Bourgogne Franche-Comté, France*

Lunch
13:00 – 14:30

Evening Session Chair: **Armen Sargsyan**

14:30 – 15:00	Radiation of a charged particle moving near curved metals/mixture materials **Anna Kotanjyan** *Yerevan State University*
15:00 – 15:30	Quadratic Heun potentials for a Stationary Relativistic Wave Equation for a Spinless Particle. **Hrayr Azizbekyan** *Institute for Physical Research, NAS of Armenia*
15:30 – 16:00	Attosecond Pulse Generation using A-Si:H and GaAlAs/GaAs Waveguides **Abdolkarim Afroozeh** *University of Larestan*

Concluding Remarks

15:40 – 17:00

Closing

Bus to Yerevan
17:00

POSTER PRESENTATIONS

1. **M.L. Sargsyan**, Direct laser writing of buried phase structures in BK7 glass
2. **S. T. Pashayan**, Studies on Nano-Sized Copper Oxide Thin Films Prepared by Pulsed Laser Deposition Technique
3. **L. B. Hovakimian**, On optoelectronic properties of twin lamellae in homoepitaxial b - Ga2O3 layers
4. **V. I. Vishnyakov**,Development of compact alkali-metal vapour cells with buffer gas for coherent-population-trapping atomic clocks
5. **I.O. Kinyaevskiy**, Influence of ZnGeP2 crystal absorption on CO laser down-conversion to THz range
6. **A.S. Kuzanyan**, Characteristics of LaB6 and CeB6 Thin Films and Detection Pixel Based on Them
7. **A.A. Kuzanyan**,Ultrafast and High-Efficient Single Photon Detector on the Bases of CeB6 Thermoelectric Sensor: 0.8-4 eV Photon Detection
8. **K. Hovhanessyan**, Effects of non-isovalent impurities on optical and radiative properties of Ce-doped garnet single crystals
9. **N.R. Aghamalyan**, Thermophysical and Optical Properties of Semitransparent Obsidian from Arteni Deposit (Armenia)
10. **T.A. Sargsian**, Theoretical Investigation of Impurity States and Light Absorption in Quantum Well with Modified Pöschl-Teller Potential
11. **M. Derdzyan**, Influence of air-annealing on optical absorption in Pr-doped garnet single crystals
12. **Nune Mkhitaryan**,LiNbO3:Tm3+ crystal: Material for optical cooling
13. **M.A. Mkrtchyan**, Interband light absorption in cylindrical quantum dot with modified Pöschl - Teller potential in the presence of electrical field
14. **I.M. Danglyan**, The band gap variation of Boron Nitride nanotube
15. **G. Ohanyan**, Effect of Hydrostatic Pressure and Temperature on the Impurity States and Diamagnetic Susceptibility in Strongly Oblate Ellipsoidal Quantum Dot
16. **I. Guenther**, Frequency Conversion in Nanocomposite Materials
17. **Y.Y. Bleyan**,Presentation Title. Investigation of binding and recombination energies of heavy hole- and light hole- trion states in ellipsoidal quantum dot
18. **Artur Aleksanyan**, Full Population Transfer in Five Level System Using Stark-Chirp Method by Two Laser Fields

19. **R.N. Balasanyan**,Nuclear processes in a high voltage discharge with a water surface

20. **T.M. Sarukhanyan**, Lasing in three-layer cholesteric-dye-doped polymer-cholesteric sandwich cell

21. **David Zargaryan** , Spectroscopic Properties of Yb3+ in Y3(Sc0.3Al0.7)5O12 (YSAG) and in Y3Al5O12 (YAG) Laser Ceramics

22. **E. Gazazyan**,Radiative Decays of Many Close Lying Feshbach Resonances at the Collision of Two Atoms in Laser Radiation Field

23. **A. Mozers**,Observation of angular-momentum alignment-to-orientation conversion in the ground-stateof rubidium

IMPORTANT INFORMATION

- **08:30** Precise! Bus departure every day from *France Square station* in Yerevan
- **08:45** Precise! Minibus departure every day from *National Academy of Science of Armenia* in Yerevan

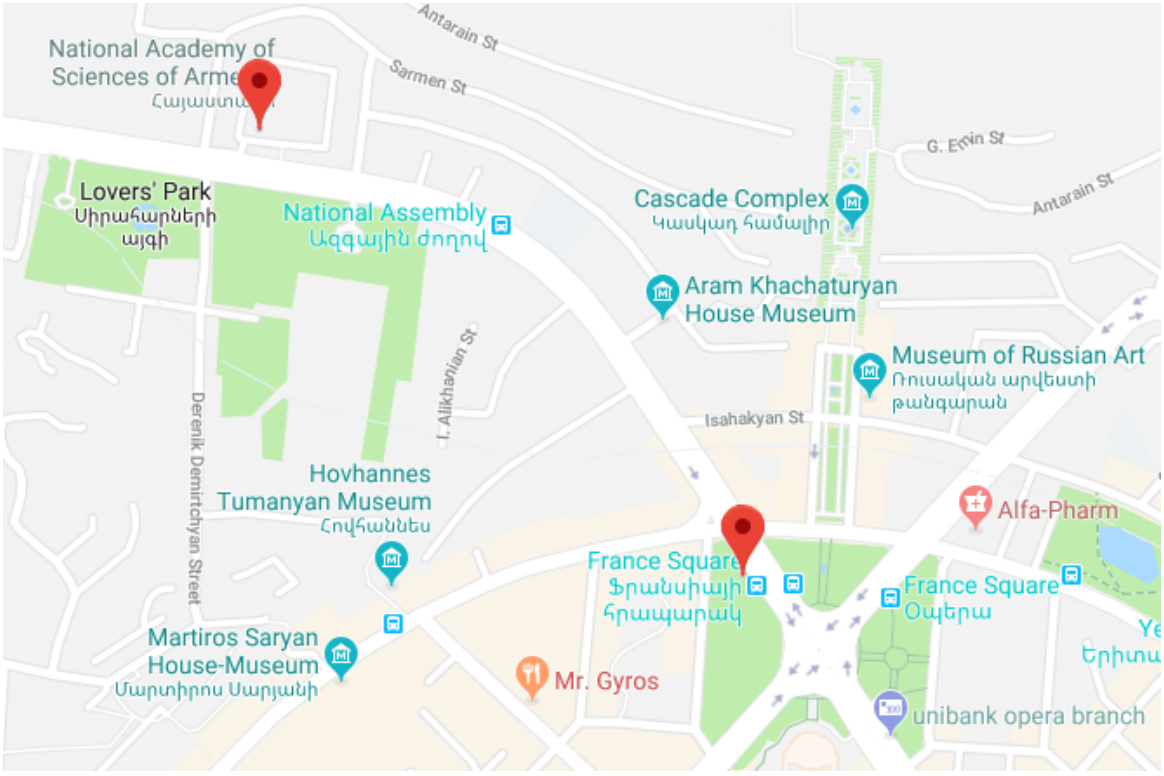

Figure 1: Bus and mini bus departure places