



International Conference



**Electron, Positron, Neutron and X-ray
Scattering under External Influences
&
G. A. Askaryan International School**

**October 21 – 26, 2019
Yerevan – Meghri, Armenia**

Organized by

The Institute of Applied Problems of Physics, National Academy of Sciences of Armenia

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CONFERENCE TOPICS:

A. e^-/e^+ beams interaction in solids

- Gharibian (X-ray) and optical transition radiations, Cherenkov radiation, parametric X-ray radiation in media in presence of various origin external fields.
- Electron-positron pair creation in crystals in the presence the acoustic fields
- Diffraction radiation and Smith-Purcell effect under the external influences
- Bremsstrahlung, coherent bremsstrahlung and channeling radiation in periodic superlattice media
- Orientational effects in crystals

B. e^-/e^+ beams interaction in strong external electromagnetic fields

- Advanced accelerator and coherent radiation sources (FEL, XFEL, novel accelerator concepts)
- Quantum radiation under the external influences
- Interaction of particle beams with artificial structures (acoustic superlattices, metamaterials, etc.)
- Time-spatial control of working parameters of plasma by acoustic fields
- Ion implantation under the acoustic influences

C. X-ray and neutron scattering in crystals

- X-ray diffraction under the external influences
- Neutron and proton diffraction under the external influences
- X-ray and neutron small angle scattering

D. e^-/e^+ X-ray and neutron based applications

- X-ray crystal-based optics and diffractometry
- Development of new principles and methods of fundamental research
- Various applications based on the use of different radiations and charged particle beams
- Novel positron sources
- Creation of new scientific instrumentation and science-based industrial devices.

Venue: The Conference will be held in Yerevan & Meghri (Armenia). Yerevan is the capital of Armenia. History of Yerevan began in the eighth century BC when the fortress of Erebuni was founded in 782 BC by king Argishti I. Meghri is a city in southern Armenia, located in the Syunik province. The city's economy is based on the food industry, and contains a bread-baking factory, canneries and a winery. Meghri has a significantly milder climate than the rest of the cities in Armenia, and produces fruits not found in other parts of the country. An interesting social program and excursions are planned for participants and accompanying persons.

Abstracts: The deadline for the abstract submission is 15.08.2019. Details on abstract preparation will be provided later at Conference web site: <http://conference.iapp.am>

Important dates:

Abstract submission by 15.08.2019.

Abstract acceptance by 01.09.2019.

Registration: The conference registration fee will be 350 Euros and must be paid in cash at the registration desk. It includes costs for local transportation, welcome party, coffee – breaks, conference materials (documentation & conference programme) and conference dinner.

Participants are invited to check periodically the update of the conference deadlines visiting the official web site.

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