

12 - 15 September, 2023
Ashtarak, Armenia

2nd Call

International Conference Laser Physics 2023



The Conference is dedicated to the **100th anniversary** of the **founder** of the Institute for Physical Research, **Professor Mikael Ter-Mikaelyan**, a Member of National Academy of Sciences of Armenia

&

the 80th anniversary of the **foundation** of the **National Academy of Sciences of Armenia**

Website: <http://ipr.sci.am/lp/>

LP 2023
ORGANIZED BY
INSTITUTE FOR PHYSICAL RESEARCH,
NATIONAL ACADEMY OF SCIENCES OF ARMENIA



Dear colleagues,

It is our pleasure to invite scientists, young researchers, students and representatives of the business community from all over the world to attend the annual International Conference on Laser Physics, which will be held in Ashtarak, Armenia, at the Institute for Physical Research of National Academy of Sciences on September 12 - 15, 2023.

The goal of “Laser Physics 2023” is to bring together a multi-disciplinary group of scientists and engineers from different countries to present and exchange breakthrough ideas relating to Lasers, Optics and Photonics. The conference will generate a conducive environment for high-quality academic discussions, focusing on recent outstanding achievements in the fields of Lasers, Optics and Photonics, in both fundamental and applied research.

We are looking forward to an excellent conference “Laser Physics 2023” in Armenia.

Scientific/Program Committee

of “Laser Physics 2023”



The annual International Conference

Laser Physics 2023

organized by the [Institute for Physical Research \(IPR\) of NAS](http://www.ipr.sci.am/) of Armenia will be held on

12 - 15 September 2023, in Ashtarak, Armenia

As usual, **Laser Physics 2023** program will cover all aspects of laser physics with a focus on new and exciting developments and results in physics of coherent light sources, nonlinear and quantum optics, matter waves, laser spectroscopy of atoms and condensed matter, laser instrumentation, inorganic crystals growth and thin film preparation for quantum electronics and integral optics, photonics, optical properties of nanostructures and luminescent materials, as well as related fields.

TOPICS OF LP 2023

Topics of interest for submission of reports include but are not limited to:

- Lasers, New Laser Technologies and Applications
- Optical and Scintillating Materials, Characterization Methods and Techniques
- Light-Matter Interaction, Including Resonant Interaction with Atoms
- Laser-Assisted Surface Effects
- Nonlinear Optics and Novel Phenomena
- Spectroscopy for Characterization of Materials
- Laser Spectroscopy and Mathematical Modelling
- Physical Optics, Atomic Physics
- Optical Magnetometry
- Quantum Optics and Matter Waves
- Quantum Information
- Optical Properties of Structured Media, Micro and Nano-Optics
- Optoelectronics
- Photonics, Photonic Systems, Biophotonics
- Optical Sensors
- Graphene for Photonics
- Holography and Imaging

VENUE

The conference will be held at the Institute for Physical Research in Ashtarak, Armenia. Ashtarak is a small town situated twenty-six kilometers northwest of Yerevan. All guests will be transported from their Yerevan hotels to Ashtarak and back every day by the Conference bus.

REGISTRATION

Registration form can be filled and submitted via the link: <https://forms.office.com/r/2vRB9q7SyQ> before August 1, 2023.

ABOUT ARMENIA AND CONFERENCE VENUE

Armenia is an ancient country with a centuries-old history.

Yerevan, the capital of Armenia, is nestled in the shadow of the snowcapped heights of the majestic Mount Ararat, where the Biblical Noah's Ark first landed escaping the Great Flood. As you explore the many interesting sights in Yerevan, you will learn about the culture and history of one of the world's oldest nations. You can gain further insights into Armenian cultural achievements at museums, theaters and concert halls.

Ashtarak is a small town situated twenty-six kilometers northwest of Yerevan, at the foot of Aragats Mountain, and is known for its historical sites, especially for its ancient churches. One of the charms of Ashtarak is the glorious view of Mount Ararat which you can enjoy right from the windows of the conference hall.

To visit Armenia is to travel back in history and feel the spirit of more than 30 centuries. Rich with historical churches, monasteries, monuments, and magnificent masonry, this country that was the first to adopt Christianity and proclaim it as its state religion in 301 AD is a unique treasure for those interested in great events. Should your interests lie in nature, the beautiful Armenian Plateau with hidden lakes, including the mysterious Lake Sevan, waterfalls, torrents, rivers, springs, valleys, highlands and rich forests, clearly evidence the miracles of nature.

The beautiful land and numerous historical monuments of Armenia tell the history and present the culture of one of the oldest civilizations in the world.

LP SCIENTIFIC/PROGRAMME COMMITTEE

- Rafael **Drampyan** (Institute for Physical Research) - Chairman
- David **Sarkisyan** (Institute for Physical Research)
- Pavel **Muzhikyan** (Institute for Physical Research)
- Gayane **Grigoryan** (Institute for Physical Research)
- Artur **Ishkhanyan** (Institute for Physical Research)
- Edvard **Kokanyan** (Institute for Physical Research)
- Radik **Kostanyan** (Institute for Physical Research)
- Armen **Melikyan** (Institute of Applied Problems of Physics)
- Atom **Muradyan** (Yerevan State University)
- Roman **Allahverdyan** (Yerevan State University)
- Aram **Papoyan** (Institute for Physical Research)
- Ashot **Petrosyan** (Institute for Physical Research)

LOCAL ORGANIZING COMMITTEE

- Astghik **Kuzanyan** (Institute for Physical Research) - conference scientific secretary
- Pavel **Muzhikyan** (Institute for Physical Research)
- Lusine **Tsarukyan** (Institute for Physical Research)
- Emil **Gazazyan** (Institute for Physical Research)
- Astghik **Ghazaryan** (Institute for Physical Research)
- Ariga **Arakelyan** (Institute for Physical Research)
- Mariam **Gevorgyan** (Institute for Physical Research)

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- Alexey **Kavokin** (Russian Quantum Center, RF)

CO-ORGANIZING STUDENT PROJECT

[IPR Armenia OPTICA Student Chapter](#)

ABSTRACT SUBMISSION

After registration, abstracts should be sent to laserphysics@sci4ever.org in the MS Word format (.doc or .docx file, not a .pdf file). The name of the file should be the last name of the presenting author. [Click here to download the abstract template.](#)

The acceptance of the abstracts for the presentations is dependent upon the novelty of the work and the clarity of the message it conveys, as well as its relevance to laser physics.

The safe receipt of abstracts will be confirmed by the Conference Secretary by e-mail. The acceptance of an abstract for presentation will be acknowledged as soon as the decision by the Program Committee is made.

PRESENTATION OF REPORTS

Abstracts of **Laser Physics 2023** accepted by the Program Committee provide the presentation of oral or poster reports at conference sessions. The presented results should be original and have not been published elsewhere. A few plenary reports with 40 minutes duration are foreseen. The duration of invited presentations together with follow-up questions is 30 minutes and a standard oral presentation together with follow-up questions is 20 minutes. The poster dimensions are 80 × 120 cm (A0, portrait). The official language of the Conference is English.

The registration and abstract submission deadline is **1 August 2023**.

KEYNOTE SPEAKERS

Meet our Plenary Speakers at Laser Physics 2023

Prof. Ara APKARIAN (*University of California at Irvine (UCI), USA*),
Atomically Confined Photons.

Prof. Kenji KATAYAMA (*Chuo University, Tokyo, Japan*),
Local Charge Carrier Dynamics of Photocatalytic Materials Using the Pattern-illumination Time-resolved Phase Microscopy.

Prof. Heidi OTTEVAERE (*Vrije Universiteit Brussel, Belgium*),
Biophotonics at Brussels Photonics and its Applications in Life Science and Medicine.

Prof. Christophe DUJARDIN (*Institut Lumière Matière, Université Claude Bernard Lyon 1, France*)
Nanoscintillators: Curiosity or Real Applications?

Prof. Marcis AUZINSH (*University of Latvia, Latvia*)
Application for 3D Magnetometry of the Dynamic ¹⁴N Nuclear Spin Polarization and Cross-relaxation in Nitrogen-vacancy Centers in Diamond.

GENERAL INFORMATION

REGISTRATION FEE

The registration fee for **Laser Physics 2023** is 250 EUR (equivalent to 270 USD, 21000 Russian Rubles or 110000 AMD). It covers the participant set with the abstract book, LP 2023 program, local transportation, coffee breaks and stand-up meal at lunch time. The payment can be made **only by the bank transfer** to the Institute for Physical Research, Armenia. The following data should be used for international transactions:

Transfers in EUR

Intermediary Bank: Commerzbank AG.
Frankfurt, SWIFT (BIC) code: COBADEFF
Beneficiary's Bank: Acc. No. 400886424101
Central Bank of the Republic of Armenia
SWIFT (BIC) code: CBRAAM22
Beneficiary: Acc. No. 900000905555
Ministry of Finance of RA, Institute for
Physical Research, NAS of Armenia, NCSO

Transfers in USD

Intermediary Bank: JP Morgan Chase bank,
NY, SWIFT (BIC) code: CHASUS33
Beneficiary's Bank: Acc. No. 001-1-010782
Central Bank of the Republic of Armenia
SWIFT (BIC) code: CBRAAM22
Beneficiary: Acc. No. 900000905548
Ministry of Finance of RA, Institute for
Physical Research, NAS of Armenia, NCSO

Transactions in Russian Rubles

Переводы в российских рублях

Банк посредник: Межгосударственный Банк,
Москва (Interstate Bank, SWIFT code:
INEARUMM), к/с 30101810800000000362 в
ГУ Банка России по ЦФО, БИК 044525362
Банк получателя: к/с 30111810400000000002
Центральный Банк Республики Армения
(SWIFT (BIC) code: CBRAAM22)
ИНН 9909106378, КПП 774487001
Получатель: Номер счета 900000905530
Министерство Финансов РА, Институт
физических исследований НАН РА ГНКО

Transfers in AMD

The last minute payment will be possible upon
arrival to Armenia via Armenian banks in
Armenian drams

Beneficiary: Acc. No. 900448000399
Ministry of Finance of RA, Institute for
Physical Research, NAS of Armenia

Բանկ – ՀՀ Ֆինանսների նախարարություն
Հաշվեհամար – 900448000399
Ստացող – ՀՀ ԳԱԱ Ֆիզիկական
Հետազոտությունների ինստիտուտ

No registration fee will be charged to the **students** (Undergraduate, Master and PhD)

No fee will be charged for **accompanying persons**.

For participants of the Conference from Armenian institutions, residents of Armenia, **no registration fee** will be charged.

The deadline for payment of the registration fee is **10 September 2023**.

AWARD

The Best Student Presentation Awards will be given to the best presentations presented by a participant who has registered under the student category. Undergraduates, Master's students, and Ph.D. students will be considered under this category.

This Award will be sponsored by the IPR Armenia OPTICA Student Chapter.

TRAVEL

Armenia's geographical location is very convenient for communication with all the countries in Europe, the Middle East, Asia and the CIS. Many international airlines land in Yerevan. You can take direct flights from Athens, Beirut, Brussels, Doha, Dubai, Istanbul, Moscow, Paris, Prague, Rome, Saint Petersburg, Tbilisi, Tehran, Vienna, Warsaw and other cities, as well as numerous connecting flights through these cities. The international airport Zvartnots is situated 7.2 km southwest of the capital Yerevan. Please inform the Organizing Committee of your flight number, date and time of arrival by e-mail not later than 7 working days before the arrival, so that we can welcome you at the Yerevan Zvartnots airport carrying an "LP-2023" sign.

VISA

Citizens of the European Union member states, the USA, CIS states and Iran do not need entry visas. Citizens of other countries are advised to contact the nearest Armenian Consulate or Embassy to inquire about visa regulations for your country. You should make your visa application well in advance. If needed, the Organizing Committee will be happy to send official letters of invitation to all participants. The Armenian Ministry of Foreign Affairs invites you to apply for a visa online at <http://evisa.mfa.am>.

WEATHER

Autumn is the best season in Armenia. In September, the weather is usually warm and pleasant, but can be variable; the average temperature is 20°–25°C.

HOTEL ACCOMMODATION

Since September is the highly touristic season in Armenia, it would be better if you make hotel reservations in advance. Single and double rooms are available in hotels of various categories, all located in downtown Yerevan, for example:

- [Yerevan Golden Tulip Hotel](#)
- [Tufenkian Historic Yerevan Hotel](#)
- [Ani Plaza Hotel](#)
- [Congress Hotel](#)
- [Aviatrans Hotel](#)
- [Europe Hotel](#)
- [Shirak Hotel](#)
- [Envoy Hostel](#)

SOCIAL PROGRAM

After Conference days, it is our pleasure to offer the Conference Guests the sightseeing tour on September 15. The details of Social Program are available below on page 8.

PUBLICATIONS

The accepted Abstracts of the scientific reports that are presented at the Conference will be published in the Laser Physics 2023 Book of Abstracts.

CONTACTS

All correspondence concerning the Conference should be addressed to the Scientific Secretary:

Dr. Astghik Kuzanyan

E-mail: laserphysics@sci4ever.org

Tour on September 15

City Ashtarak and Aragatsotn region: St. Mariane Church, St. Karmravor, St. Mesrop Mashtots Church, Voskevaz village and vine tasting.

With transport and English and Russian speaking guide.

Duration: 15:00 – 19:00. Tour starts at the Institute for Physical Research in Ashtarak with return to the center of Yerevan.

Price: 15000 Armenian drams.

The tour includes the visit to Armenian Apostolic churches **Saint Mariane Church** of Ashtarak, which was built in 1271, **St. Karmravor**, also known as the Church of Holy Mother of God, was built in 7th-century, and **Saint Mesrop Mashtots Church** of Oshakan, which is the church houses the tomb of Mesrop Mashtots, the inventor of the Armenian alphabet, making it a historically significant site to see. Additionally, the tour includes a visit to the **Armenian letters cross-stones**. Furthermore, the tour also includes a stop at the **Voskevaz winery** where you can enjoy a visit to the wine museum and wine tasting. This will provide you with a chance to taste some of the finest wines produced in the region and learn about the winemaking process.

