



## 2<sup>nd</sup> International Conference on Laser, Plasma and Radiation - Science and Technology



June 16-21, 2024, Danube Delta, Crişan, Romania

### GENERAL INFORMATION

The **2nd International Conference on Laser, Plasma, and Radiation - Science and Technology (ICLPR-ST)** is designed to bring together leading experts, researchers, and students within the fields of lasers, plasma, and radiation physics in a unique platform for sharing and discussing the latest scientific and technological developments. The conference program will include a variety of scientific presentations, featuring **plenary and invited lectures, as well as oral and poster contribution**, fostering interdisciplinary discussions.

An integral element of the event is the **industrial workshop** where researchers and engineers will showcase success stories in technology transfer and product development. Discussions on intellectual property rights and the practical implementation of emerging solutions in companies will enrich the meeting.

A **Summer School on Laser, Plasma and Radiation Physics** planned prior to the conference is welcoming students and young researchers interested in photonics, diagnostics, and laser-plasma-matter interaction. Renowned scientists will guide participants in exploring these captivating research areas.

The chosen venue for this conference is the **Lebada Luxury Resort in Crişan, Romania**, a private island set against the magnificent backdrop of the Danube Delta. This scenic location enhances the overall experience, offering a blend of academic discussions, collaborative opportunities, and the chance to appreciate the natural beauty of the surroundings.

### KEY DATES

- **April 10<sup>th</sup>, 2024:** Notification of abstract acceptance
- **April 12<sup>th</sup>, 2024:** Registration open
- **May 15<sup>th</sup>, 2024:** Early bird fee payment deadline
- **June 3<sup>rd</sup>, 2024:** Final announcement and programme



## CO-CHAIRS

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Maria DINESCU

Ion N. MIHAILESCU  
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Carmen RISTOSCU  
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Dorina TICOS  
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Marian ZAMFIRESCU



### INVITED SPEAKERS (*alphabetically ordered*)

-  **Nadezhda BULGAKOVA**, Institute of Physics CAS, Prague, Czech Republic  
– *State-of-art of experiments versus theory in the interaction of high-intensity laser radiation with matter: novel aspects and new possibilities*
-  **Ya CHENG**, Shanghai Institute of Optics and Fine Mechanics, China  
– *Macro-scale microfabrication of 3D structures by nano-scale internal processing in glass*
-  **Douglas CHRISEY**, Tulane University, New Orleans, USA  
– *Mechanisms of photonic processing of nanostructured transition metal oxide films*
-  **Amael CAILLARD**, CNRS, GREMI, Université d'Orléans, France  
– *Catalytic nanoparticles by plasma sputtering onto liquid and in gas phase*
-  **Fabrizio CONSOLI**, ENEA – Frascati, Italy  
– *Multilayer active structures for ion discrimination in high power laser-matter experiments*
-  **Domenico DORIA**, ELI – NP, IFIN-HH, Magurele, Romania  
– *Laser-driven particle acceleration activities at ELI-NP*
-  **Michela GELFUSA**, University of Rome Tor Vergata, Italy  
– *A control-oriented approach to disruption prediction with a view on the reactor*
-  **Vasco GUERRA**, Technical University of Lisbon, Portugal  
– *Unified Monte Carlo formulation for nanosecond discharges*
-  **Mircea GUINA**, Tampere University, Optoelectronics Research Centre, Finland  
– *Photonic integration technology for mid-IR lasers*
-  **Achim Walter HASSEL**, Johannes Kepler University, Linz, Austria  
– *Combinatorial experimentation of fs-laser processing and electrochemical anodisation on bioimplants from titanium alloys to control fibroblast and osteoblast attachment*
-  **Jorg HERMANN**, University of Marseille, France  
– *Roadmap for calibration-free laser-induced breakdown spectroscopy*
-  **Jörg LINDNER**, Paderborn University, Germany  
– *Investigation of electric fields at sub-atomic resolution with the STEM*
-  **Tomoji KAWAI**, Osaka University, Japan  
– *Detection and characterization of single DNA, viruses and nanoparticles using smart nanopore*



-  **Dhanajay KUMAR**, NCA&T, Greensboro, NC, USA  
– *Engineering ruthenium-based electrocatalysts for effective oxygen and hydrogen evolution reactions*
-  **Yongfeng LU**, University of Nebraska Lincoln, USA  
– *Laser-induced breakdown spectroscopy in combination with artificial intelligence for understanding and predicting corrosion in metals*
-  **Ester MAROTTA**, University of Padova, Italy  
– *Plasma application strategies for the degradation of perfluoroalkyl substances*
-  **Nevena PUAC**, Institute of Physics, Belgrade, Serbia  
– *Characterisation of atmospheric pressure plasma jets in contact with liquids, chemistry in liquids and applications in biomedicine and agriculture*
-  **Richard van de SANDEN**, Eindhoven University of Technology, The Netherlands  
– *New processes, trends and emerging applications in plasma physics*
-  **Eloisa SARDELLA**, CNR-Institute for Nanotechnology, Bari, Italy  
– *Plasma-treatment of clinically approved infusion liquids as a potential alternative approach to chemotherapy*
-  **Masaharu SHIRATANI**, Kyushu University, Japan  
– *Novel ways of tuning plasma CVD film properties*
-  **Emmanuel STRATAKIS**, Institute of Electronic Structure and Laser- FORTH, Heraklion, Greece  
– *Ultrashort pulsed laser engineering of biomimetic surfaces*
-  **Hendrik SWART**, Free State University, Bloemfontein, Republic of South Africa  
– *Laser-induced heating decimated luminescence nanothermometry using robust LaOF:Yb<sup>3+</sup>, Er<sup>3+</sup> upconversion nanophosphors*
-  **Daniel VIZMAN**, West University, Timișoara, Romania  
– *Growth and characterization of rare-earth doped fluorides crystals for UV applications*
-  **Klaus-Dieter WELTMAN**, Leib-niz In-sti-tu-te for Plas-ma Sci-ence and Tech-no-lo-gy, Germany  
– *Plasma research and technology development in response to selected societal challenges*
-  **Andrea ZILLE**, University of Minho, Guimaraes, Portugal  
– *Bacterial nanocellulose nano composites for medical applications*



## SUMMER SCHOOL PROFESSORS

-  **Peter BRUGGEMAN**, University of Minnesota, USA
-  **Razvan DABU**, ELI-NP, IFIN-HH, Magurele, Romania
-  **Anton NIKIFOROV**, Ghent University, Belgium
-  **Razvan STOIAN**, Université Jean Monnet, CNRS, Saint-Etienne, France
-  **Koji SUGIOKA**, RIKEN, Wakō, Japan
-  **Marian ZAMFIRESCU**, National Institute for Laser, Plasma and Radiation Physics, Magurele, Romania
-  **Thomas LIPPERT**, ETH - Paul Scherrer Institute, Villigen, Switzerland

## INDUSTRIAL WORKSHOP COMPANIES (provisional list, alphabetically ordered)

Accent Pro 2000	Business Future Solution
Digital Medical Systems	East Electric
Evo Design	INFOSEC
Inno Robotics	Irepa Laser
MicroNano Tech	

## CONFERENCE TOPICS

- **Fundamentals, diagnostics and modeling in laser, plasma and radiation physics**
- **Advances in optics, laser and photonics**
- **New trends in thin films and nanomaterials synthesis and processing**
- **Modern applications in environment, life sciences and energy**
- **Innovative technologies for sustainable future**

## ABSTRACT SUBMISSION

Abstracts (1 page, A4) can be submitted interactively by completing in electronic submission platform <https://iclpr-st.inflpr.ro/abstract/> until March 1<sup>st</sup>, 2024. All details regarding the template to be used are available online. The accepted abstracts will be included in a Book of Abstracts (ISSN 2821-7128) available online and distributed in electronic format to all conference participants.



## PROGRAMME

The Conference will include **plenary (40+5 min)** and **invited lectures (25+5 min)**, as well as **oral presentations (13+2 min)** and **poster sessions**. **Young scientist prizes** will be awarded. The preliminary programme is already available at the Conference site. The final Conference programme will be distributed together with the Final Announcement on June 3<sup>rd</sup>, 2024.



## REGISTRATION

Registration can be done by filling in the **Registration form** available on the conference website after notification of abstracts acceptance (<https://iclpr-st.inflpr.ro/registration/>). You will receive a confirmation e-mail of your registration.

The conference fee covers conference materials, coffee breaks, lunches, dinners, as well as the welcome party, gala dinner and the conference excursion. Transport by bus and boat from Bucharest to the Resort and back is also included.

Registration Fees for participations are as follows:

	Early bird fee payment before May 15th, 2024	Late fee payment after May 15th, 2024
Regular	600 EUR	700 EUR
Student*	450 EUR	550 EUR
Accompanying person**	450 EUR	550 EUR

*\*Students have to provide evidence for the university affiliation. Their participation in the Summer School is also included in the fee.*

*\*\* The registration fee for the accompanying persons includes transport from Bucharest to the resort, coffee breaks, lunches, dinners, as well as the welcome party, gala dinner and the conference excursion. Additional Social Program may be arranged at the Resort reception.*

In a few days after receiving your registration form, a corresponding invoice will be sent to you. For the Romanian participants, the invoice will be issued at the currency rate of the registration day. Please note that the registration fee should be paid **before** your arrival to the conference, as due to regulatory issues we cannot accept cash payments onsite.



The coordinates for bank transfer are as follows:

Account holder: National Institute for Laser, Plasma and Radiation Physics

- Address: Atomistilor No. 409, Magurele, Ilfov, 077125, Romania
- CUI/VAT Number: 9052135
- Bank: BCR, Branch Office Unirea
- Bank address: Unirii Boulevard, 43-45, Bucharest, Romania
- IBAN EURO: RO69RNCB0082044172650002
- IBAN RON: RO96RNCB0082044172650001
- SWIFT: RNCBROBU

Please, mention on the payment orders the full name(s) of the registered participant(s). All the banking fees must be paid by the participants. The bank charges paid by the conference organizers will be asked for reimbursement at the conference venue.

### **Cancellation and refund**

Participants who have paid the registration fee but cancel their participation will be reimbursed as follows:

- 100% of the paid fee if the cancellation is announced before May 15<sup>th</sup>, 2024
- 75% of the paid fee if the cancellation is announced before June 3<sup>rd</sup>, 2024
- No refund is possible after June 3<sup>rd</sup>, 2024 or in case of no show. Nevertheless, the registered persons encountering such a situation will receive all the conference documents upon request.

### **ACCOMODATION**

The organizers pre-reserved standard double rooms at the **Lebăda Luxury Resort & SPA** for the conference participants at a rate of 150 EUR per night for single/double occupancy. You should indicate the occupancy preference and provide the name of your chosen roommate if opting for double occupancy during the registration process, in order to prepare the corresponding invoice. Please inform us on due time regarding any special requirements with respect to the accommodation.

### **TRANSPORTATION**

Transport by bus from Bucharest (Constitution Square) to Murighiol and respectively by boat from Murighiol to the Resort was arranged for Sunday, June 16<sup>th</sup> for the Summer School and Workshop participants, and respectively on Monday, June 17<sup>th</sup> for the conference participants. Transportation back to Bucharest at the end of the conference is also arranged. Special requests will be managed according to the organizing committee possibilities. More details will be available on the conference website in due time.

The exact schedule of the buses & boats will be detailed in the Final announcement.



## SOCIAL PROGRAMME

The Welcome reception will be organized on Monday, June 17<sup>th</sup> at Lebada Resort.



The Wednesday afternoon, June 19<sup>th</sup> is devoted to an excursion in Danube Delta, on your choice either to the fabulous and lush Letea Forest, which is the northernmost subtropical forest in Europe, or to the oldest branch of the Danube, Sfântu Gheorghe, where the Danube flows into the Black Sea creating waves from several directions in an exceptional visual spectacle.



The Gala dinner will take place on Thursday evening, June 20<sup>th</sup> at Lebada Resort.

## PASSPORT AND VISA

Citizens having passports from certain countries may need a visa to enter Romania (please check on <http://www.mae.ro/en>). Upon request, an official invitation letter can be provided by the LOC ([iclprst@inflpr.ro](mailto:iclprst@inflpr.ro)).

## SPONSORSHIP

Sponsoring the 2nd ICLPR-ST offers an excellent chance to enhance your company's visibility, connect with potential clients and vendors, and gain insights into cutting-edge research across diverse fields, including laser, plasma, and radiation applications in industry, biology, medicine, environment, space science, and more. This exposure can prove invaluable for your company's growth and development.

There are several sponsorship opportunities available, ranging from event sponsorships to targeted promotional materials such as banners, receptions, lanyards, badge inserts, etc. Please contact the organizers at [iclpr-st@inflpr.ro](mailto:iclpr-st@inflpr.ro) for details on sponsorship options.

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More detailed information will be provided in the final announcement and programme. In addition, updates will be regularly posted on the conference web site: <http://iclpr-st.inflpr.ro/>.