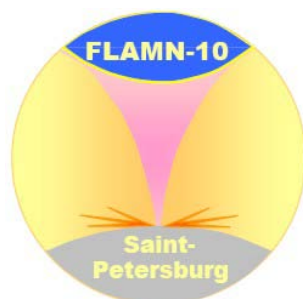


Second Announcement and Call for Papers
INTERNATIONAL CONFERENCE
FLAMN-10
Fundamentals of
Laser Assisted Micro- & Nanotechnologies



July 5-8, 2010
St. Petersburg – Pushkin, Russia

Dedicated to 50th anniversary of lasers and laser technology and
110 anniversary of National Research University
of Information Technologies, Mechanics and Optics



Important dates

March 20, 2010	Abstracts submission due date
April 5, 2010	Notification of paper acceptance
April 15, 2010	Hotel reservation and visa application deadline
May 30, 2010	Final program
July 5-8, 2010	Manuscript due date
July 5-8, 2010	Conference

NOTE:

The conference follows the 14th International Conference "Laser Optics 2010" that will be held in St. Petersburg, Russia from June 28 till July 02, 2010

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SPb SU ITMO, St. Petersburg,

Ivan A. Shcherbakov
GPI RAS, Moscow

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ITMO, St. Petersburg,

Vitaly I. Konov
GPI RAS, Moscow

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Tsuboi Y., Japan

Turichin G., Russia

Vartanyan T., Russia

Wintner E., Austria

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Local Organizing Committee

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S. Sarnakov, Russia

E. Perlin, Russia

S. Smirnov, Russia

T. Vartanyan, Russia

V. Smirnov, Russia

Introduction

This conference continues well-known symposia ILATA (Intensive Laser Actions and Technological Applications) consisted from LAMN (Laser-Assisted Microtechnologies) and LMI (Laser-Matter Interaction) conferences used to be organized in former Leningrad, USSR since the middle of the sixties of the past century.

Laser-assisted micro- and nanotechnologies are rapidly growing areas of research, development and production.

The Conference will be devoted to the broad spectrum of laser micro- and nano-processing from physical fundamentals of different processes and their experimental demonstration to the development and realization of industrial equipment.

FLAMN-10 will include two main sections:

Laser-Assisted Micro-and Nanotechnologies and **Laser-Matter Interaction**

and several special scientific events including:

Workshop “Photophysics of Nano-scale Systems”

Seminar “Computer Simulations of Laser Technologies”

Workshop “Laser Cleaning and Artworks Conservation”

Seminar “Industrial Applications of Fiber Lasers”

Workshop “Terahertz Radiation Interaction with a Matter”

School for young scientists and engineers.

Main Topics of the Conference

Laser-Assisted Micro- and Nanotechnologies

- physical fundamentals of laser-based microtechnologies, modelling and quantitative analysis
- precision laser microshaping: cutting, drilling, etc
- local laser modification of different materials composition and properties
- laser surface microstructuring
- laser melting, welding and soldering of microcomponents including plastics
- laser-based methods of photonics components fabrication
- laser cleaning of the surface
- laser forming
- laser processing of thin films
- laser nano-engineering
- pulsed laser deposition including local laser-plasma deposition of thin films
- laser trimming of electrical and optical components, mask saving
- laser technology for MEMs and fluidic devices
- physical, optical and computer feed-backs on laser microtechnologies
- ultrashort laser pulses based micro- and nanotechnologies
- in-situ measurements of laser processing properties
- laser and optical devices and laser systems for microtechnologies

Laser-Matter Interaction

- mechanisms of laser heating, structural and phase transitions in condensed matter
- nonlinear optical effects in matter under intensive laser irradiation
- physical mechanisms of laser damage of optical materials and elements
- laser-induced surface phenomena
- laser-matter interaction in the near-field optics
- mechanisms and regularities of laser ablation
- instabilities and self-organization processes under laser conditioning

- adsorption and orientation of organic molecules on surfaces
- interaction of ultra short laser pulses with a matter
- electronic and optical properties of nanostructures
- interaction of light with clusters and nanostructures
- laser-induced surface reactions
- laser interaction with biotissues
- plasma ignition in gases, liquids and solids

Workshops, seminars, schools

1. Workshop “Photophysics of Nano-scale Systems”

Co-chairmen: F. Hubenthal, F. Träger, T. Vartanyan

Main topics:

1. Preparation and characterization of nanostructures
2. Linear and nonlinear optical properties of nanostructures
3. Near field phenomena
4. Single and collective electronic excitations in nanostructures
5. Ultra fast dynamics of plasmon excitations in nanostructures
6. Electrical and photoelectrical properties of nanostructures
7. Supramolecular aggregates
8. Metamaterials

2. Seminar “Computer Simulations of Laser Technologies”

Co-chairmen: V. Mazhukin, G. Turichin, E. Yakovlev

Main topics:

1. Special features of laser interaction with insulators computer simulations
2. Mathematical modeling of ultrashort laser pulses action on insulators and semiconductors
3. Peculiarities of computer simulations of laser melting
4. Peculiarities of computer simulations of ultrashort laser pulses ablation
5. Peculiarities of computer simulations of structural and phase transitions in condensed matter
6. Computer simulations of laser damage of optical materials
7. Computer simulations of laser microtechnologies

3. Workshop “Laser Cleaning and Artworks Conservation”

Co-chairmen: M. Piotrovsky, E. Shakhno, P.-Y. Thro

Main topics:

1. Physical conceptions of laser cleaning of solid surfaces
2. Laser equipment for cleaning of solids
3. Modified technologies for laser treatment, application of new methods and devices
4. Laser cleaning of optical surfaces
5. Applications of laser surface cleaning in microelectronics
6. Applications of laser cleaning in information systems
7. Laser surface cleaning of structural-sensitive materials
8. Laser decontamination
9. Applications of laser cleaning in mechanical engineering (cleaning pipes, removal of surface layers and coatings, cleaning cutting edges, etc.)
10. Laser cleaning applications in cultural heritage
11. Online monitoring and process optimization of laser cleaning

4. Seminar “Industrial Applications of Fiber Lasers”

Co-chairmen: V. Gapontsev, V. Serebryakov

Main topics:

1. Developments in high-power fiber lasers
2. High-power fiber lasers for laser amplifiers pumping

3. High-energy femtosecond fiber lasers
4. Widely tunable femtosecond fiber laser
5. Peak-power scaling in pulsed lasers
6. Power scaling of CW lasers
7. Ultimate potential of fiber lasers
8. Ultrafast high-power fiber lasers for industrial and biomedical applications
9. Ultrafast fiber lasers for bio-medical and industrial applications
10. Progress in active fibers for high-power and high-brightness laser applications
11. High-power fiber integrated supercontinuum sources – is there anything new?
12. The fiber laser as a photonic tool: basics, state of the art, perspectives
13. Industrial applications of a fiber-based picosecond laser
14. Medium-power fiber lasers. Microwelding of metals and plastics, microcutting and RP
15. High power fiber lasers for industrial applications. Comparison with other high-power lasers

5. Workshop “Terahertz Radiation Interaction with a Matter”

Co-chairmen: S. Garnov, S. Kozlov, A. Shkurinov

Main topics:

1. Laser driven THz Sources
2. Two wavelength lasers for THz differential generation
3. IR, THz, and MMW sources and novel generation schemes
4. Free electron lasers and synchrotron radiation
5. Mixing and multiplication in non-linear elements
6. Interaction of THz radiation with biological systems and tissues.
7. THz metamaterials.
8. THz plasmonics.
9. THz plasma diagnostics
10. THz instruments, devices and components
11. Ultrafast and high-power THz measurements
12. THz spectroscopy and material properties
13. Applications in biology and medicine
14. Applications in security and defense

6. School for young scientists and engineers.

Co-chairmen: E. Perlin, V. Gordienko

Note: Take into account that form of these events can be changed and will be finally chosen after collection of all submitted papers.

Organizers

- St. Petersburg State University of Information Technologies, Mechanics, and Optics (ITMO),
- General Physics Institute of Russian Academy of Sciences (GPI RAS), Moscow,

In cooperation with:

- Laser Association,
- D.S. Rozhdestvensky Russian Optical Society,
- and other organizations.

Expected Sponsors

- * Russian Federation Ministry of Education and Science,
 - * Russian Foundation for Basic Research (RFBR),
 - * St. Petersburg State University of Information Technologies, Mechanics and Optics (ITMO),
 - * General Physics Institute of Russian Academy of Sciences (GPI RAS), Moscow,
 - * Leading Scientific School of Russian Federation “Photophysics of nanoscale systems”
- and others

Preliminary list of invited speakers of FLAMN-10:

Altshuler Gregory	USA	Perlin Evgueny	Russia
Anisimov Sergey	Russia	Pfleging Wilhelm	Germany
Asscher Micha	Israel	Poprawe Reinhart	Germany
Balykin Viktor	Russia	Rethfeld Baerbel	Germany
Boneberg Johannes	Germany	Rode Andrei	Australia
Bousquet Bruno	France	Sakakura Masaaki	Japan
Caricato Anna	Italy	Sarychev Andrey	Russia
Farafonov Viktor	Russia	Serra Pere	Spain
Fotakis Costas	Greece	Shkurinov Alexander	Russia
Fritzsche Wolfgang	Germany	Shiganov Igor	Russia
Gaponenko Sergey	Belarus	Sobol Emil	Russia
Garvov Sergey	Russia	Soileau M.J.	USA
Grazia de Cesare	Italy	Stockman Mark	USA
Guizard Stephane	France	Stoian Razvan	France
Gurov Igor	Russia	Sugioka Koji	Japan
Hubenthal Frank	Germany	Vartanyan Tigran	Russia
Inogamov Nail	Russia	Veiko Vadim	Russia
Klimov Vasily	Russia	Xinbing Liu	USA
Kolobov Alex	Japan	Zayats Anatoly	UK
Kovalev Oleg	Russia	Zergioti Ioanna	Greece
Okada Tatsuo	Japan	Zheludev Nicolay	UK

Official language: English

It will be allowed 30 minutes for invited presentations including discussions and 20 minutes for oral presentations. Also posters sessions will be held.

Abstract submission

Authors are invited to submit electronically 1-page abstracts of 250-300 words (in MS WORD).

Your abstract should be prepared in English and include the following:

1. ABSTRACT TITLE
2. AUTHOR LISTING
Full names and affiliations. Principal author first.
3. CORRESPONDENCE FOR EACH AUTHOR
Mailing address, telephone, fax, and E-mail address.
4. SUBMIT TO: (title from the list of topics)
5. ABSTRACT TEXT
250 to 300 words.
6. KEY WORDS
Four to six topics.
7. BRIEF BIOGRAPHY (principal author only)
50 to 70 words.

You must also fill the preliminary abstract submission form that you can find at our site:

<http://www.lastech.ifmo.ru/FLAMN10> .

Abstracts Submission Deadline — March 20, 2010

Send your abstracts to: flamn10@gmail.com

The selected papers of the Symposium will be published in Russian scientific journals: "Laser Physics" (in English), "Opticheski Zhurnal" (translated into English as Journal of Optical Technology) and "Izvestiya VUZov".

FLAMN-10 will be held on July 5-8, 2010, St. Petersburg, Pushkin ("Kochubey Mansion")

Registration:

The registration fees for the Conference are:

Regular	- 450 €
SNG - States	- 100
Students	- 100 €

Accompanying person - 150 € including visa support, hotel reservation, airport transfer and welcome reception

Please kindly be aware that there is no financial support provided for our invitees. All participants are required to register for the conference.

Method of payment:

- Banking wireless : banking details will be published at the Conference site,
-
- by cash during the registration at the Conference.

Registration of participants will take place in the "Kochubey Mansion" Hotel, (4, Radischeva str., Pushkin).

Registration for participants will be open :

4 July 2010, 15:00 – 19:00, 5 July 2010, 8:00 – 19:00;

During the days of registration the members of the Organizing Committee will meet the guests of the Conference at airport "Pulkovo-2" and at railway stations.

If you are going to take part at our Conference, please fill in and send us the **Registration form** (see below) till April 15, 2010 to: flamn10org@gmail.com.

Accommodation

Some information is given below to help you in estimation of your average accommodation costs during conference.

All participants will have an opportunity of residing and having meals directly at hotel "Kochubey Mansion" in St. Petersburg suburb town Pushkin where the conference will take place. For this case we estimate the overall costs for living and three-times meal as approximately \$150-200 USA per day per person.

Please, fill in this form at our web site or send it by e-mail to flamn10org@gmail.com to book room(s) before April 15, 2010.

Visa support

A valid passport and visa are required to enter Russia. In most of countries such a visa can be obtained from Russian Consulates in return to corresponding formal invitation issued by Russian Ministry for Foreign Affairs. In the case of necessity, the Organizing Committees of FLAMN-10 will help to receive such invitation. To get it, the person to be invited has to send a copy of the first page of his/her passport to the conference organizers by fax +7(812)2333406. This message has to be accompanied by the fax, or e-mail message, containing the following personal information: first name, last name, sex, date of birth, passport number, date of passport expiration, nationality, employer, work address, phone, fax, position, place of visa application (country and city, where is situated the Russian Consulate), supposed dates of country entering and leaving. The same information is required for all the accompanying persons.

Issuing such invitations and delivery of original copies require a lot of time (at least 1.5 month). The interested persons are encouraged to deliver the enumerated information before April 15, 2010.

Please, fill in this form at our web site or send it by e-mail to flamn10org@gmail.com.

Besides it is necessary to send us by fax or e-mail the basic page of your passport.

Contact Information for FLAMN-10

Program & Organizing Committee

**St. Petersburg State University of Information Technologies, Mechanics and Optics
49 Kronverksky pr., St. Petersburg, 197101, Russia**

Phone/FAX: +7 (812) 233 3406.

E-mail: flamn10@gmail.com

Web site: <http://www.lastech.ifmo.ru/FLAMN10>

The current information about our Conference (Including alternate methods of fee payment, news about hotel accommodation, program of the Conference, etc.) will be available at our web site.

St. Petersburg

St. Petersburg has earned the reputation of being one of the most beautiful cities in the world thanks not only to its unique palaces and churches but also to its inimitable architectural ensembles of streets, canals and squares. St. Petersburg is a city of splendid palaces and beautiful buildings, its most common architectural styles being baroque and classical, which reached their peak here on Russian soil.

There are more than 90 museums in the city and its surroundings, including the Hermitage - one of the world's leading treasures stores of art. St. Petersburg is the home of the famous Russian classical ballet school and numerous ballet and opera theaters will be available during conference time.

Symposium time is a time of world known White Nights, when many cultural events (musical, theatrical and art show) take place here.

Pushkin/Tsarskoye Selo

Pushkin (former Tsarskoye Selo) is one of the most wonderful suburbs of St. Petersburg. The palace and park complex of Tsarskoye Selo is located twenty-five kilometers south of St. Petersburg. In the seventeenth century there was a Finnish farm here at Dudorovsky eminence called "Saari mois" in Finnish language. In 1708 it became a possession of the Russian Tsar, and the Finnish toponymy word "Saari mois" was transformed into "Tsarskaya Mysa" that sounded more Russian. In 1708 - 1724 Tsarskaya Mysa was the residence of Peter the Great's wife, the Empress Catherine I. From 1741 Tsarskoye Selo became the residence of the Empress Elizabeth. In 1750 the architects M. Zemtsov and S. Chevakinsky constructed a stone palace with a church and erected the buildings that closed the Parade Yard. In 1752 - 56, during the reign of the Empress Elizabeth, the architect Rastrelli created a magnificent Emperor Palace, a brilliant masterpiece of Russian baroque. At the same time the Hermitage and Grotto Pavilions were built, regular Upper and Lower Gardens were laid out, and the Lower Garden was decorated with sculptures. During the reign of Catherine II (1760 -1790) the ensemble of Tsarskoye Selo was supplemented by the creations of A. Rinaldi, Y. Felten, C. Cameron, and D. Qvarengi. The Cold Bath-House, the Agate Pavilion, the Hanging Gardens with a sloping platform, and the Cameron Gallery which represent the prominent masterpieces of the classical architecture were erected to the drawings of C. Cameron.

Registration Form

Title

Last name

First name

Affiliation

Address

Phone

Fax

E-mail

- I plan to attend FLAMN-10 conference.
- I plan to submit a paper.
- I plan to bring an accompanying person who will not attend the sessions but will participate in the social program.

Accommodation form

Name :

Company / Institute :

Address :

City :

Postal Code :

Country :

Telephone :

Fax :

e-mail :

Date of arrival to St. Petersburg :

Date of departure from St. Petersburg :

Preferred room:

Remarks :

Visa support form

Name :

Data of birth

Citizenship

Number of the passport

Date of distribution of the passport

Place where the passport was issued

Company / Institute :

Address :

City :

Postal Code :

Country :

Telephone :

Fax :

e-mail :

Position

City, where the visa will be received

Date of arrival to St. Petersburg :

Date of departure from St. Petersburg :

Please, send these forms to the FLAMN-10 Secretariat till April 15, 2010 by e-mail to flamn10org@gmail.com