

# Moscow International School of Physics 2022

(Dubna International Advanced School of Physics)

*24 July – 2 August 2022*

3<sup>rd</sup> bulletin

The Moscow International School of Physics (MISP) is aimed at advanced students, PhD students and young postdocs working in high-energy physics. The program covers not only experimental and theoretical HEP physics, but also related fields: cosmology, machine learning, and mathematical physics. It should be noted that some preliminary knowledge of the subjects is necessary in order to be able to fully profit from the lecture courses. In addition to lecture courses, time will be allocated for presentations by participants of their research (Young Scientist Forum). The School language is English.

## School Site and Date

The Moscow International School of Physics 2022 will be held from 24 July till 2 August 2022 at Dubna, Moscow region.

The School is organized by the P.N. Lebedev Physical Institute of the Russian Academy of Sciences (LPI RAS), Joint Institute of Nuclear Research (JINR), National Research University Higher School of Economics (HSE), and Skolkovo Institute of Science and Technology (Skoltech). LLC MESOL is the authorized operator of the School.

## Program Committee

- M. Danilov (LPI RAS) — co-chair
- D. Kazakov (JINR) — co-chair
- T. Aushev (HSE)
- D. Gorbunov (INR RAS)
- A. Marshakov (Skoltech)
- V. Novikov (LPI RAS)
- F. Ratnikov (HSE)
- M. Vysotsky (LPI RAS)

## Organizing Committee

- A. Arbuzov (JINR) — co-chair
- P. Pakhlov (LPI RAS, HSE) — co-chair
- I. Chernysheva (NRNU MEPhI, LPI RAS)
- M. Chuyashkin (HSE)
- G. Kabatiansky (Skoltech)
- I. Pirozhenko (JINR)
- S. Polikarpov (NRNU MEPhI, LPI RAS)
- F. Ratnikov (HSE)
- N. Skrobova (LPI RAS)
- E. Solovieva (LPI RAS)
- T. Uglov (LPI RAS)
- V. Zhukova (LPI RAS)

# Scientific Programme

Time	24.07		25.07		26.07		27.07		28.07		29.07		30.07		31.07		01.08		02.08		
	Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
08:00 – 09:00			Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast
09:00 – 10:00			Pakhlov	Shmatov	Shmatov	Shmatov	Shmatov	Shmatov	Shmatov	Shmatov	Shmatov	Shmatov	Shmatov	Shmatov	Rubakov	Rubakov	Boos	Boos	Boos	Boos	Boos
10:00 – 11:00			Marshakov	Marshakov	Babichev	Marshakov	Babichev	Marshakov	Marshakov	Marshakov	Marshakov	Marshakov	Marshakov	Marshakov	Boos	Boos	Burnaev	Burnaev	Burnaev	Burnaev	Burnaev
11:00 – 12:00			Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break
12:00 – 13:30		Arrival	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break	Break
		Registration																			
13:30 – 15:00		Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
15:00 – 16:00		Pakhlov	Naumov	Naumov	Naumov	Naumov	Rubakov	Rubakov	Babichev	Babichev	Babichev	Babichev	Babichev	Babichev	Burnaev	Burnaev	Logashenko	Logashenko	Logashenko	Logashenko	Logashenko
16:00 – 16:30		Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
16:30 – 17:30		Pakhlov	Pakhlov	Babichev	Babichev	Babichev	Babichev	Babichev	YSF	YSF	YSF	YSF	YSF	YSF	YSF	Rubakov (seminar)	Rubakov (seminar)	Logashenko	Logashenko	Logashenko	Logashenko
17:30 – 18:30		Naumov	Marshakov	Naumov (seminar)	Naumov (seminar)	Babichev (seminar)	Babichev (seminar)	Babichev (seminar)	YSF	YSF	YSF	YSF	YSF	YSF	YSF	Burnaev (seminar)	Burnaev (seminar)	YSF Award Ceremony	YSF Award Ceremony	YSF Award Ceremony	YSF Award Ceremony
18:30 – 19:00																					
19:00 – 20:00		Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner	Dinner
20:00 – 21:00										YSF											
21:00 – 22:00					Concert																

• E. Babichev (INR RAS) “Black Holes and Gravitational Waves” • E. Boos (MSU) “Physics beyond the Standard Model” • E. Burnaev (Skoltech) “Machine Learning for Physicists” • I. Logashenko (BINP) “Muon Anomalous Magnetic Moment” • A. Marshakov (Skoltech) “Trends in Modern Theoretical Physics for Pedestrians” • V. Naumov (JINR) “Neutrino Physics” • P. Pakhlov (LPI RAS, HSE) “Flavor Physics” • V. Rubakov (INR RAS) “Cosmology and Particle Physics” • S. Shmatov (JINR) “Physics at Energy Frontier” • Young Scientist Forum with Poster Session

## Young Scientist Forum

Special sessions will be devoted to the presentations of participants' scientific results. The report should be in the form of a brief talk (10+2 minutes) or a poster (portrait A1 or landscape A0). The Program Committee will select talks and posters from the submitted ones for presentation. The most interesting talks will be published in the peer-reviewed journal "Bulletin of the Lebedev Physics Institute" indexed by the Web of Science platform. Authors of the posters, most voted for by the School participants, will receive special prizes.

## Social Program

Midday hours before lunch will be dedicated to sports and other kinds of activity. Beach volleyball, tennis (with your own equipment), table tennis. There is a beach at the bank of the Volga River. Bicycle rent is available.

The School social program will also include a concert and an excursion. A boat trip along the Volga River is planned on 29 July, free of charge for School participants. After the excursion there will be a BBQ at the bank of the river near the beach. Swimming and beach volleyball will also be possible.

A concert for the School participants will be organized on 27 July at the JINR House of Scientists. Address: Joliot Curie, 6 (GPS coordinates: 56.746214N, 37.189461E).

The concert will feature laureates of international competitions, soloists of the Pratum Integrum orchestra: Nikolai Martynov (piano) and Sergei Tischenko (viola). The program will include:

- J. S. Bach "Sonata for viola da gamba and harpsichord BWV 1027" (transcription for viola and piano);
- H. I. F. von Biber "Passacaglia for violino solo" (transcription for viola);
- F. Schubert "Arpeggione sonata D.821" (for viola and piano);
- C. Debussy "Arabesque" (for piano);
- R. Di Marino "Chronos" (for viola and piano).

The musicians will talk about their instruments and answer questions from the audience.

## Important Dates

10 May 2022 — start of the registration and abstract submission

20 June 2022 — deadline for the registration and abstract submission

27 June 2022 — Program Committee decision, acceptance notifications

10 July 2022 — deadline for the School fee payments

24 July – 2 August 2022 — the School

## School Fee

The School fee is **2 000 Russian rubles**. Please proceed to the checkout to get detailed payment instructions.

The deadline for the payments for the invited candidates is 10 July 2022. The payment serves as the confirmation of participation and is not refundable. Foreign participants should pay the fee in cash upon arrival.

## Visa Information

We kindly ask all participants who need a visa to contact Ms. Olga Korotchik by e-mail korotchik@jinr.ru before 5 July 2022. We strongly recommend applying as early as possible. Please note that the passport must be valid for 6 months after the visa expiration date.

## Accommodation

The School lectures will be held at the House of International Conferences in Dubna. Address: Stroiteley, 2 (GPS coordinates: 56.747667N, 37.185987E).

The School participants will be accommodated in double or triple rooms at the Hotel Dubna. Address: Vekslera, 8 (GPS coordinates: 56.750654N, 37.192106E).

Meals will be served at the Hotel Dubna. Wi-Fi is available at the hotel and at the lecture hall.

## Transportation

No transportation is planned for participants. Dubna has a convenient train connection with Moscow. It is highly recommended to take train departing from Savelovsky railway station at 9:26 (please follow the link to see the full timetable). The train arrives at 12:18. It is 15 minutes walk from the Dubna railway station to the Hotel Dubna. Return train timetable is available here.

There is also a bus from the Altufyevo metro station to Dubna. Please note that in this case your destination station is “Dubna railway station” instead of the end of the line. It is possible to buy tickets online.

Registration will take place at the Hotel Dubna from 12:30 till 13:30, followed by lunch from 13:30 till 14:30. The School lectures will start at 15:00 at the House of International Conferences.

## Climate

Moscow region climate is typically continental. Weather at the end of July fits well for various outdoor activities. The maximum/minimum temperature during day/night is about +24/+14°C. It is usually sunny, probability of precipitation is about 30%. Bringing mosquito repellent is highly recommended.

# Currency and Credit Cards

Most foreign credit cards do not work in Russia nowadays. We recommend to have some cash always with you.

Money exchange (preferably Euro or US dollars) is possible in banks.

## Contacts

WWW: <https://mosphys.ru>

E-mail: [mosphys@gmail.com](mailto:mosphys@gmail.com)

Phone: +7(910)412-79-94 (Irina Chernysheva, LPI)

Visa support: [korotchik@jinr.ru](mailto:korotchik@jinr.ru) (Olga Korotchik, JINR)