

Moscow International School of Physics

20–27 February, 2019

2nd bulletin

School Site and Date

The Moscow International School of Physics will be held from 20 till 27 February 2019 at the HSE Study Center “Voronovo” ~70 km to the south from Moscow.

GPS coordinates: 55°18'54.13"N (55.315035), 37°7'25.77"E (37.123825).

Organizers

School is organized by P.N. Lebedev Physical Institute of the Russian Academy of Sciences, National Research University Higher School of Economics, and Skolkovo Institute of Science and Technology. LLC MESOL is the authorized operator of the School.

Committees

Program Committee

- M. Danilov (LPI RAS) — chair
- S. Eidelman (LPI RAS & BINP)
- D. Gorbunov (INR RAS)
- D. Kazakov (JINR)
- V. Novikov (NRC «Kurchatov Institute» - ITEP & HSE)
- M. Voloshin (Minnesota Univ.)
- M. Vysotsky (NRC «Kurchatov Institute» - ITEP & HSE)

Organizing Committee

- I. Chernysheva (NRNU MEPhI & LPI RAS)
- M. Chuyashkin (HSE)
- S. Eidelman (LPI RAS & BINP)
- P. Pakhlov (LPI RAS) — chair
- F. Ratnikov (HSE)
- E. Solovieva (LPI RAS)
- T. Uglov (LPI RAS)
- V. Zhukova (LPI RAS)

School language

School language is English.

Scientific Programme

Scientific programme comprises a set of lectures, young scientists forum and a poster session. A tentative schedule is shown in the table

Table: Tentative School schedule

Time	20.02	21.02	22.02	23.02	24.02	25.02	26.02	27.02
8:00-9:00	Arrival	Breakfast						
9:00-10:00		Lectures			E x c u r s i o n	Lectures		
10:00-11:00		Lectures				Lectures		
11:00-13:30	Registr ation	Ski & outdoor				Ski & outdoor		Lunch
13:30-14:30	Lunch					Lunch		Departu re
15:00-16:00	Lectures					Lectures		
16:00-16:30	Coffee					Coffee		
16:30-17:30	Lectures					Lectures		
17:30-18:30	Lecture	YSF	Lectures		YSF			
19:00-20:00	Dinner							
20:00-...		Concert	Poster session	Bonfire		YSF		

List of lectures

- A. Belavin (Landau Institute, Chernogolovka) “Modern Trends in Theoretical Physics for Pedestrians”
- D. Kazakov (JINR, Dubna) “Standard Model and beyond”
- V. Rubakov (INR, Moscow) “Cosmology and Particle Physics”
- V. Vagnoni (INFN, Bologna & CERN, Geneva) “Flavor Physics”
- C. Giunti (INFN, Torino) “Neutrino Physics”
- J. Haba (KEK, Tsukuba) “Experimental Techniques in Particle Physics”
- A. De Roeck (CERN, Geneva) “LHC Results and Prospects”
- F. Ratnikov (HSE, Moscow) “Introduction to Machine Learning”

Young Scientists Forum

Special sessions will be devoted to the presentations of participants’ scientific results. The report should be in form of a brief talk (10+2 minutes).

Poster session

Participants’ scientific results could be presented as a poster (portrait A1 or landscape A0) at the dedicated poster session. During the session participant, presenting the poster, is required to be nearby.

Publication of the results

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.

Cross-country ski rent will be available for free. Please inform the organizers if you are going to rent a ski and the desired ski boots size (a special questionnaire is available at the School site <https://mosphys.ru/indico/event/2/registrations/4/edit>).

The School social program will also include a concert and an excursion and the bonfire. We offer two excursions: a tour to Moscow including visit to Kremlin and some other historical sites, and visit to Pafnutiev Friary near Borovsk (<http://www.pafnuty-abbey.ru/>) and ethnic village (<https://ethnomir.ru/>). Please choose the preferred excursion at your Indico registration page (<https://mosphys.ru/indico/event/2/registrations/4/edit>). Registration for the excursion will be closed on February, 18.

School Fee

The School fee is **37 000 Russian rubles (~490 Euro)**.

The School fee covers the participation in all the scientific sessions, the School kit, accommodation, meals, coffee breaks, participation in all social events, and transfer between Moscow and the School site.

Fee for the accompanying persons is 26 000 Russian rubles (~350 Euro).

Support from the Ministry of Science and High Education of Russia allows Organizing Committee to reduce the fee for participants from Russia and FSU countries to **4 500 Russian rubles**.

The payments are collected by the authorized official School operator MESOL LLC.

There are two preferred ways to pay the fee.

1. Pay with credit card at the School web-site. Please follow checkout procedure at your Indico registration form. Please do not change the remittance information. After the payment the electronic receipt will be sent to your e-mail address.

2. Pay with the bank transfer. The School coordinator Stanislav Stegalin (stas@mesol.ru) will prepare an invoice for you by your request.

During the School participant will receive documents, confirming the participation in the School and the payment. If you need extra documents prepared please contact the Organizing Committee in advance.

Transportation

HSE Study Center “Voronovo” is situated in remote place, about 70 km to the south from Moscow. The transportation by the public transport is complicated and time-consuming. There will be buses provided for transportation from Moscow to the School site and back at arrival and departure days. The buses will depart from the one of the Moscow metro stations

in the city center on the arrival day at 11:00 and will return to the same place by 15:00 on the departure day. The details will be announced later.

There are 3 airports in Moscow equally well connected to the center of Moscow by Aeroexpress trains. It is a cheap, but easy and comfortable way to get to Moscow. The high-speed trains run to one of railway station in the city center. Travel time is about 35 minutes (47 minutes from Vnukovo airport). The interval between trains departures is 30 minutes (1 hour from Vnukovo airport). Tickets cost 500 rubles (~€ 7) and can be purchased at ticket windows, ticket machines or at turnstiles. If you buy a ticket at the company's website (printed or saved at smartphone ticket with QR code is required) or with the mobile app, the cost is 450 rubles (~€ 6). The working hours are from 6 AM till midnight.

Tips and tricks

- You can pay using your credit card both for Aeroexpress and metro tickets, however at least small amount of Russian rubles in cash is desirable.
- Taxi and bus will require to pay in cash in Russian rubles.
- Foreign currency exchange offices at the airport have extortionate exchange rates compared to the offices in the city. It is better to get cash from ATMs (however you have to pay a commission, charged by your bank).
- We strongly recommend not to use the services of non-official taxi carriers. There are lots of drivers offering their services, please do realize that taking them you can end paying much more than expected.
- There are convenient online taxi-services Yandex and Gett. Please beware that usually taxi drivers do not speak English. The taxi fare cost from the airports to the center of Moscow should not exceed 1500 rubles.

Transportation in Moscow

The Metro is the easiest and the most reliable way get around Moscow. Its layout is quite simple. Radial lines, which cut across the city in most directions, are joined together by a circular line, which also joins together the city's largest railway stations. Transport system also includes monorail and Moscow Central Circle (MCC). Each radial line has its own name, number and color on the metro map, and you can get from practically any station to another one with a maximum of three transfers.

To pay for your ride, buy a smart-card ("Ediniy" or "Troika") from a cashier or ticket vending machines in the metro (MCC) station vestibule.

Recline the smart-card to a yellow circle on the automatic gates, when green light is on or displays the number of remaining trips – pass through the gate. No matter how long you ride is or how many transfers you make, you pay no extra fee.

To help you find your way, there are several multicoloured metro maps in every car, and a loud speaker that announces the name of the station at every stop. The doors open and close automatically. There is a first-aid station and police post at every station. For information you can turn to any metro employee – they wear blue uniforms and red hats.

Mobile communication (GSM) works at stations of the Moscow underground. Free Wi-Fi ("MT_Free") available in trains.

The Metro starts work at 06:00 AM, but stations open at 05:30–05:40 AM. At 01:00 AM the entrances close and passengers must complete their transfers. Last train leaves also at 01:03 AM.

Moscow Central Circle (MCC, Line 14) works from 05:45 AM to 00:30 AM every day. Transfer from metro to MCC (and back) is free for 90 minutes from the first enter.

Fares information (since January 2nd, 2019) could be found at metro site.

Accommodation

The majority of the School events will be held at the HSE Study Center “Voronovo”. The Center is set in scenic surroundings on the edge of an old forest and boasts spacious premises that are fully equipped for both educational and extracurricular events, and also for leisure activities ranging from sports to intellectual games.

The Study Center comprises of two connected but separate buildings — main and public. The main building offers hotel-style accommodation consisting of fully equipped standard rooms and suites, that have bathrooms, TV sets, and fridges. During the School participants will live in double rooms. Wi-Fi is available in the main building.

Climate

Moscow region climate is typically continental. Weather in the second half of February fits well for various winter sports. It is usually sunny. The average temperature is about -5 degrees Celsius though sudden drops of temperature could be expected, as well as thaws, so having proper warm clothes is advised. This winter the depth of the snow in February is estimated to be above 50 cm.

Currency and credit cards

Money exchange (preferably Euro or US dollars) is possible in various exchange offices in Moscow. There are also many ATMs (“Bankomat”) in Moscow which accept major credit cards. We recommend to have some cash since credit cards are not accepted in small shops sometimes.

HSE Study Center “Voronovo” is situated in remote place. There are no money exchange offices in the vicinity.

Contacts

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