

Fundamental and Applied Problems of Microworld Physics

Moscow Institute of Physics and Technology (National Research University)

Degree or qualification is awarded: **Master's Diploma in 03.03.01 Applied mathematics and physics**

Language of study: **Russian, English**

Mode of study: **full-time**

Duration: **2 years**

Availability of free education: **yes**

Price: **in Russian — 285 000 rubles, in English — 350 000 rubles**

Programme curator: **MIPT International Department**

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Description of the program:

The Chair of Fundamental and Applied Problems of Microworld Physics is the base of the Landau School of Physics and Research at the Moscow Institute of Physics and Technology and is part of the Education and Research Centre at the Joint Institute for Nuclear Research. It is located in the town of Dubna, Moscow Region, on the banks of the great Russian river Volga.

The Chair's aim is to train highly qualified specialists in the fields of:

- Experimental nuclear and elementary particle physics
- Relativistic nuclear physics and physics of heavy ions.
- Theoretical physics
- Neutron physics and neutron methods of material research
- Condensed matter physics
- Radiation biology and medicine
- Development of radiation detectors, high speed electronics and systems - ---- automated data collection
- Grid technologies and distributed computing systems

for subsequent work at JINR, according to the basic provisions of the Phystech system. In addition, graduates are in demand at the enterprises of the JINR "innovation belt" in the Special Economic Zone of "Dubna".

Scientific research is carried out both at JINR basic facilities (Nuclotron, Phasotron, IBR-2M pulsed reactor and IREN neutron source, heavy ion accelerators, etc.) and within international cooperation at CERN, DESY, GSI, Fermilab and other world leading accelerators. Students of the department can take part in experiments at the LHC as well as in international FAIR and XFEL projects. An important place in the Institute's scientific programme is taken by experiments on the study of properties of nuclear matter at the NICA collider which is under construction at the JINR Laboratory of High Energy Physics. The experiments on synthesis of superheavy elements at the V.I. Veksler and A.M.₁

Baldin Laboratory of Nuclear Reactions, and the experiments on synthesis of superheavy elements in the G.N. Flerov Laboratory of Nuclear Reactions. The research was also carried out at the IBR-2M pulsed reactor at the Franklin Laboratory for Neutron Physics, and in the field of condensed matter physics at the I.M. Franklin Laboratory for Neutron Physics. I.M. Frank.

Who teaches:

Doctor of Physical and Mathematical Sciences, Professor, Corresponding Member of the Russian Academy of Sciences
Dmitriy KAZAKOV

Director of the N.N. Bogolyubov Laboratory of Theoretical Physics.

What qualifications are awarded: Master.

Successful graduates may go on to postgraduate studies and find employment at the Joint Institute for Nuclear Research

When to apply:

General competition: depending on the timetable of the Admissions Board (mid-June to end of July).

Quota: according to the deadlines set by Rossotrudnichestvo (you can follow on the Rossotrudnichestvo website of your country)

What exams you need to take:

For admission under the general competition: mathematics and physics.

For admission under the Russian government quota: interview in the speciality.

What documents you need to present:

- passport
- diploma + transcript with grades
- all achievements and diplomas, scientific articles and publications (if any)
- CV or a motivation letter in the form of an essay

If necessary, an interview can be arranged through the PhysTech School administration with a member of the base chair.

Specializations within this programme