



World of MEPhI

**THE WORLD
UNIVERSITY
RANKINGS**

MEPHI IS BEST RUSSIAN UNIVERSITY IN THE WORLD UNIVERSITY RANKINGS IN PHYSICAL SCIENCES

The Times Higher Education magazine has released a ranking of universities in Physical Sciences. Top 100 includes 3 Russian Universities. The participant of the project for enhancement of international competitiveness MEPhI has the best result, taking the 36th place, while Lomonosov Moscow State University takes the 59th place, and Novosibirsk State University – 86th.

“MEPhI has managed to become the strongest Russian University in the physics ranking and to improve its result by nearly 60 positions in comparison with the previous year – it is a significant achievement”, said the Deputy Minister of Education and Science Alexander Povalko. “It is noteworthy that the Moscow Nuclear University managed to leave strong competitors from Asia behind – Hong Kong University of Science and Technology, Hong Kong University, Tsinghua University”.

The Deputy Ministry also highlighted the fact that this year MEPhI was in the top 100 in Physical Sciences in QS ranking as well.

“The project to improve international competitiveness plays an important role in the development of the University. Thanks largely to it MEPhI has become a platform for many international scientific conferences, symposia, workshops, schools; academic mobility of teachers and students of the University has increased, as well as its effectiveness of research activity both in fundamental and applied science”, the rector of MEPhI Mikhail Strikhonov commented on the success of the University.

MEPHI UNITES FUTURE PROFESSIONALS IN ECONOMIC AND FINANCIAL SECURITY FROM BRICS COUNTRIES



In the framework of the International conference “Threats and risks for economies of BRICS countries” MEPhI has hosted the VII Student forum of BRICS countries. This large-scale youth event gathered students and postgraduates of higher educational institutions from Russia, India, China, South Africa, Ka-

zakhstan, and Kyrgyzstan. Young people took part in the discussion of one of the main issues, stated in the conference program – the role of BRICS in ensuring regional security in the conditions of international tension.

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SCIENCE BRINGS US TOGETHER

During parallel sessions participants presented projects where they offered their vision of this issue. The section "International economic and financial controller of the future" was attended by students of the Xavier Institute of Management and Entrepreneurship (India), School of Management and International Relations, University of Hindustan (India), Rostov State University of Economics, Sevastopol State University, Lobachevsky State University of Nizhni Novgorod, State University of Management, Ivanovo State University, Karaganda State University named after academician E.A. Buketov.

Students and graduates of Departments "Financial management" and "Financial monitoring" of the Institute of Financial and Economic Security MPhI took an active part in the event. They prepared 10 projects, which highlighted issues of financial policy of companies under the conditions of economic instability, and presented ways how to solve local problems – raiding, competitive intel-

ligence, etc.

On the same day representatives of BRICS universities discussed issues of financial-economic security as a guarantor of sustainable development of the state and business. Presentations were made by students of the North-West University (South Africa), Xavier Institute of Management and Entrepreneurship (India), the Business school of the Karunya University (India), National Research Nuclear University MPhI, Financial University under the Government of the Russian Federation, and Institute for African Studies of the Russian Academy of Sciences.

It should be noted that all presentations aroused a deep interest among the participants. Speakers were actively asked questions, and discussions often turned into lively debates. Students of MPhI, participated in the conference, expressed unanimous opinion on necessity to held such events on a regular basis. According to them it is interesting and useful to exchange experiences,



make new acquaintances, that in future conduct their research relying not only on knowledge of Russian experts but international experience as well.

Besides presentations participants were invited to take part in business games "Compliance: business case" and "Financial investigations", the purpose of which was to learn how to identify schemas associated with money laundering and the financing of terrorism.

Forum participants had a rich cul-

tural program. At the end of a busy day all students were invited to the Evening of Friendship where each of them was able to show their talents. Students from India, China, South Africa, Kyrgyzstan and Russia danced folk dances in national costumes, sang songs, and the Eighth Creative Association of MPhI showed a number of funny skits in English.

Perhaps one of the most interesting items of the programme was sports competitions held in the Sport center of MPhI.



FRIENDSHIP WINS!

For the first time student teams from BRICS countries – Brazil, Russia, India, China and South Africa – have taken part in sport competitions, organized in the context of the VII student forum of BRICS countries in MPhI.

The opening ceremony was attended by distinguished guest – famous Soviet and Russian athletes. Students were welcomed by two-time Olympic champion within the USSR hockey team Vyacheslav Starshinov, four-time Olympic swimming champion Alexander Popov, as well as a prominent Soviet biathlete, four times gold Olympic winner Alexander Tikhonov.

More than 80 people competed in five sports: streetball, arm-wrestling, kettlebell lifting, table tennis and darts. The Department of Physical Education and Sport MPhI held a master class in sambo for all comers.

There was no undisputed leader – representatives of every country won in some kind of sport. According to the results the first place in streetball was taken by China. India was number one in kettlebell lifting, arm wrestling and table tennis. The first place in darts among young men was awarded to Russia. And among girls the best was students from China.



Sergey KIRIYENKO: CONTRACT FOR NUCLEAR POWER PLANT TO LINK RUSSIA AND EGYPT FOR HUNDRED YEARS



A signed agreement between Russia and Egypt has set the parameters of the NPP and forthcoming development of nuclear infrastructure in the Arab country. On Thursday the Rosatom Department of Communications reported that according to the agreement 4 nuclear power units will be built in Egypt. On November 19, 2015 in Cairo the document was signed by the General Director of the State Corporation Sergey Kiriyenko and the Minister of Electricity and Renewable Energy of Egypt Mohamed Shaker.

This intergovernmental agreement is about the construction and operation of nuclear power plant with four power units with capacity of 1200 MW in the region of Dabaa. According to the head of "Rosatom" these documents spelled

out issues of ensuring the future nuclear power plant with fuel, obligations for operation, maintenance and repair of power units.

"The first nuclear power plant will make Egypt a regional technology leader and the only country in the region with nuclear power plants of the generation 3+", noted Sergey Kiriyenko. According to him, the parties proceed from the fact that the project will be implemented in 12 years. "It's a contract that binds our two countries for 100 years", said the head of "Rosatom".

Russians professionals are already in Dabaa. In the beginning of December equipment is going to arrive to the site, and builders will begin survey work. In 2016 the first students from Egypt will start their training at the National Research Nuclear University "MEPhI".



MEPHI REPRESENTATIVES RECEIVE FUNDAMENTAL BREAKTHROUGH PRIZE



V.A. Matveev



Yu.G. Kudenko



Yu.V. Efremenko

On November 8, 2015 representatives of five different neutrino experiments, including Nobel prize laureates 2015 Takaaki Kajita and Arthur B. McDonald, have received the joint award "Breakthrough Prize in Fundamental Physics 2016".

Breakthrough prize, which the Guardian calls "Science Oscar", was established in 2012. This year the prize in the amount of \$ 3 million in the section of fundamental physics will be divided among five teams: the Daya Bay Reactor Neutrino Experiment in

China, KamLAND collaboration in Japan, the K2K and T2K experiments on neutrino oscillations on a long base in Japan, Sudbury Neutrino Observatory (SNO) in Canada and Super-Kamiokande collaboration in Japan. These experiments investigated the nature of the "ghost particle" – the most common massive particle in the Universe and the variations of its three states in motion.

Among 1,300 nominees for the prestigious award there is the head of the Department №

11 "Experimental methods of nuclear physics", RAS academician V.A. Matveev, Professor of the Department № 11 Yu.G. Kudenko, the Scientific Head of the MEPhI Interdepartmental Laboratory of Experimental Nuclear Physics Yu.V. Efremenko.

In the award nomination stated that prize was given "for fundamental discovery and exploration of neutrino oscillations, revealing a new frontier beyond, and possibly far beyond, the standard model of particle physics".

MEPHI SCIENTISTS ADOPTED IN INTERNATIONAL COLLABORATION HADES

By unanimous decision the Steering Committee of the international collaboration HADES (High Acceptance Di-Electron Spectrometer) has approved proposal MEPhI to join the collaboration at the meeting, held in Estoril (Portugal) on October 10, 2015.

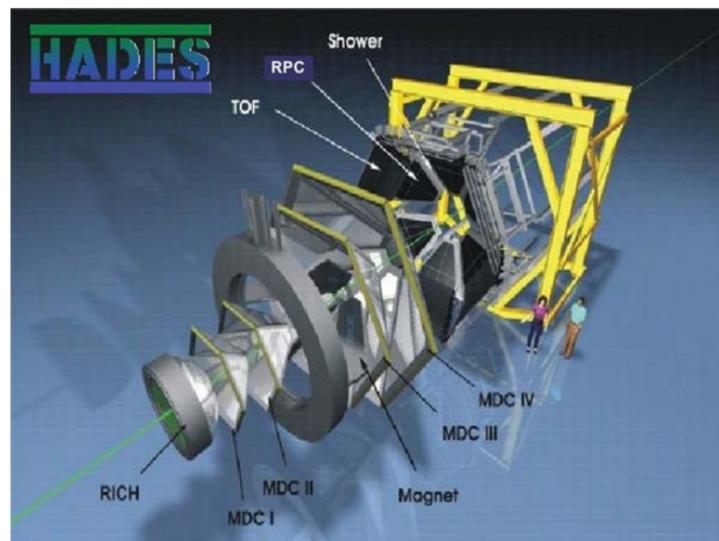
It is to be recalled that the HADES spectrometer (<https://www-hades.gsi.de>) was created in 2000 at GSI (Darmstadt, Germany) by major European collaboration for systematic study of

properties of hadrons in hot and dense matter at the accelerator SIS-18. The installation has unique options – great acceptance and high mass resolution.

Its main task is registration of electron-positron pairs produced in nucleus-nucleus collisions. Big penetrating ability of these dileptons, formed at different stages of the nuclear collision, could elucidate underlying properties of matter such as mass source of dilepton, modifica-

tion of particle properties in nuclear environment, restoration of chiral symmetry, as well as to explore new possible states of matter, such as mixed quark-hadron phase and quark-gluon plasma.

From 2001 HADES project performs experimental program with beams of nuclei, protons and deuterons. It has already collected about seven billion events, which are processed in different centers of the collaboration, including JINR in Dubna.



HADES is an installation of the first phase, which will work in experiments at the new accelerator complex FAIR, which will be built by 2018-19 year. The collabora-

tion has already obtained a European grant to modernize the system of registration of particles' time-of-flight and instruments for data collection of the spectrometer.

SPORT NOT HINDRANCE FOR STUDIES



MEPhI has organized the students' sports club "Reactor", which operates since September. Its tasks include organization of sport teams, formation of the information environment, carrying out sports events with participation of MEPhI students. It has already held Championships of MEPhI in volleyball, football, table tennis, chess and other sports.

Sports teams of MEPhI:

Hockey

Ice hockey team was founded in 2011 and plays in Moscow Student Hockey League. The team became the champion of the Small Cup of Moscow studentship, and team players have numerous personal awards.

Rugby

The section exists since 1965. At the moment the University is represented by female and male teams. MEPhI rugby players win prizes at the Moscow and Russian competitions. Teams go to the training camp in winter, spring and summer.

Sambo

MEPhI Sambo Section is the oldest sports club of the University, organized in 1950-ies. Over the long history its graduates became repeated World and Russia Champions, won various international tournaments. Since 1975 MEPhI has held the annual international sambo tournament for the prizes of the space conquerors.

Volleyball

Volleyball team exists in MEPhI since University's foundation. Over the past years, the team successfully plays in the Student Premier League of Moscow, is a multiple winner of the Universiade in the Moscow southern district. The University has women's and men's teams in volleyball.

Basketball

Basketball team of the University has existed for over 50 years, became the champion of Moscow and currently competes in championships of the Association of student basketball, Moscow student sports games and Moscow Basketball

League. Every August the team goes to the sport camp.

Football and mini-football

It's one of the oldest sections of the University. MEPhI regularly holds intra-university tournaments. Teams on football and mini-football present MEPhI at the Championships in Moscow.

Sports tourism

Sports tourism was revived in MEPhI in 2005. During the year members of the MEPhI team participate in competitions in sport tourism at hiking, skiing and mountain distances. MEPhI sports tourists are members of regional teams and regularly and successfully participate in Championships and Cups of Russia.

Also there are University sports teams in the following sections:

Aerobics, Baseball, Weight lifting, Arm wrestling, Chess, Tennis, Rowing, Badminton, Shaping, Sport orienteering, Rock climbing, Athletics, Sailing.



CHAMPION TITLE OF MULTI TOURNAMENT IN POWER SPORTS IN TTI MEPhI

Students from Trekhgorny Technological Institute MEPhI have taken part and showed very good results in the largest multi tournament in Europe and Russia "Golden Tiger – IX". The sport event took place within the framework of the festival of power sports, dedicated to the Russian day of strength sportsmen, in the city of Yekaterinburg. It was attended by national and international champions, record-holders, masters of sports of international class from 14 countries (including USA, France, Israel).

Athletes from TTI MEPhI Kirill

Puzynya and Vladislav Fakhretdinov achieved high results in raw bench pressing. Kirill Puzynya won the first place in the individual event and the title of master of sport in weight category up to 90 kg, in the age group of 18-19 years, with the result of 162.5 kg. Vladislav Fakhretdinov acted in the category up to 75 kg in the age group of 18-19 years and took the third place in individual event with the result 125 kg.

In all the competition was attended by over 4 500 athletes and about 10,000 spectators.

