



World of MEPhi



September' 16



**SO THAT'S WHAT
YOU'RE LIKE, MEFHI!**



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On September, 1 MEPhI has held a festive matriculation ceremony of freshmen.

An intensive program was awaiting for new MEPhI students in the museum-reserve "Kolomenskoe". The weather perfectly matched the festive mood.

MEPhI rector M.N. Strikhanov congratulated freshmen on the Knowledge Day, saying that it is a great honor to be a MEPhI student. "You have successfully passed one of the most important exams in your life when you entered our university, which is one of the best in Russia. MEPhI is always in the top 5 of the best universities of our country, and in the past years – in the top 40 of the best universities of the world in physical sciences. You will be given good education; your student years will be full of hard work, sports competitions, participation in creative unities."

Then the floor was given to the honorary guests.

The official part was followed by the performance of the most famous creative group of the university – MEPhI Academic male choir. This year the choir

won the World Choir Games in Sochi.

Freshmen also had an opportunity to listen to songs of our rock laboratory, Quanto di Stella vocal studio and chamber choir of our university, watch the dancing of the Ballroom dance ensemble ESTA, have fun at a humorous performance, watch MEPhI sports and cultural unities' shows.

Traditionally new students were congratulated from the depths of the centuries by the Emperor Peter the Great, Generalissimo Alexander D. Menshikov, Kolomna boyars and mathematician Leonty Magnitsky. They admonished the freshmen, and Museum's falconers set a proud falcon free as a symbol of high-flying to the heights of science of the future bachelors.

It should be mentioned that this year festive events was organized not only for bachelors but also for Master's degree students and post-graduates.

MEPhI rector M.N. Strikhanov said that the university offers large opportunities for Master's degree students and post-graduates on getting scientific experience as a part of participation in the Program of competitiveness enhancement. This comprises participation in large international projects, internships in leading scientific educational centres, dual diplomas and theses defenses.

Vice-rector V.V. Uzhva spoke about peculiarities of organization of the educational process for them. The main difference is in the curricular: the higher the stage of education, the more time is paid to the independent research work.

We congratulate the freshmen and wish them good studying, bright student life and successful passing of the first exams!





Every year student family of MEPhI becomes more and more international. For example, over the past three years the number of foreign students has increased three times and now the university has about a thousand of citizens from 34 countries. So this year, on the first day of the academic year there are new faces, foreign freshmen become part of the friendly student group. Of course, it will not be easy because most of them don't speak Russian. At first the guys from other countries have to learn Russian language and only then they will begin to study in the chosen specialty.

Foreign students gladly shared first impressions with a correspondent of the newspaper "World of MEPhI" Anastasia Balakireva.

So that foreign first-year students will be able to quickly adapt, we asked Abeer Abu Dan from Palestine, which is already studying in MEPhI for two years, to give a few tips for beginners:

– The main thing is to attend all classes. Lecturers remember those, who always attend classes. He knows that you come, listen to lectures, homework is always done. So he will be able to help a student both if there is a problem and at the end of the semester, when you have to pass the exams.

So, attend classes, always do homework – this is the first!

Second, don't be ashamed of the poor knowledge of the language. My first semester was very difficult. I cried due to the fact that I wanted to speak Russian, but couldn't. I worried that people would have laughed if I had said something wrong. And then a friend supported me, she was very helpful. Now I can speak and answer in classes.

You should watch movies in Russian, it will also help to learn the language.



Vu Duc Dung, Quach Van Tien, Le Huynh Duc, Vietnam:

– **Why are you studying here, in Russia?**

– We are here upon the programme of interstate relations between Russia and Vietnam.

– **What do you think of Russia? What do you like?**

– It's cool in Russia. People are very kind and friendly.

– We are in Moscow for two weeks, there are many places for walking, but Moscow is an expensive city. We managed to see little, most of the time was spent on the registration.

– **What do you do except study?**

– I would like to play football.

– I only study.

– I run, but so far only around a dormitory.

– **How do you like the dormitory? Do you live together?**

– Yes, the three of us in one room. It's comfortable, the neighbors are pleasant, also Vietnamese.

– **Have you already make friends?**

– Yes, with students from Kyrgyzstan and Kazakhstan.

Koffi Abdoulaye, Togo:

– **Why did you choose Russia and why MEPhI? What are you going to study?**

– I have entered training program "Applied mathematics and physics". I think that Russia has advanced science, and it is better to learn it here so that to become a good scientist. I heard that in MEPhI there are professors who teach very well. So I entered MEPhI.

– **What do you do besides study?**

– Play football with friends – foreigners and Russians.



Bagganim Zeinadilova, Kazakhstan:

– **Why did you decide to study in Russia?**

– I just came to the Admissions office of MEPhI and decided to try my hand, see the tasks. And I passed with flying colors. At first I had thought about the Moscow State University, I applied to several universities but in the end I'm here. Parents are happy that I've been enrolled in this University because they wanted it too.

– **What field of study did you choose?**

– Nuclear physics and technology, undergraduate study.

– **How long have you been in Moscow? Do you like it?**

– I arrived on August, 25, so it's almost two weeks. It's nice here, lots of buildings. In Almaty we have mountains, you can get into nature, arrange a hike. But in Moscow there are museums, galleries, historical heritage – all this is very interesting.



STUDENT OF MASSACHUSETTS INSTITUTE OF TECHNOLOGY: NEW KNOWLEDGE AND NEW EXPERIENCE

In the framework of the MIT-Russia program students of the Massachusetts Institute of Technology (MIT) are trained in various educational and commercial organizations of Russia, including MEPhI.

A 3rd year student of the faculty "Electrical Engineering & Computer Science" MIT Leah Goggin is undergoing an internship at the Laboratory of Laser Diagnostics, Institute for Laser and Plasma Technologies (LAPLAS).

Under the guidance of the LAPLAS head Professor A.P. Kuznetsov and Candidate of Physical and Mathematical Sciences K.L. Gubskiy she develops software for the analysis of experimental results in studies of powerful shock waves generated by the laser pulse.

Leah agreed to answer several our questions:

– **Could you speak more specifically about what you are doing here?**

– I'm working in the Laser Physics lab, but I'm actually computer science major and what I'm doing there is connected with software.

– **Are there some specific results at the moment?**

– Well, right now there are sort of 2 parts of what I'm doing. First,

I'm writing a code, that's analyzing these images that the interferometer produces. I'm hoping that what I'm doing now, would help others, not like I was only just looking at my screen [smiling]. And the second, I'm building a GUE – graphical user interface, around the more mathematical part. That's been very fun, I've never done that before. That part's working reasonably well. Unfortunately, the results are not final now, but there is still time.

– **What do you hope to achieve by the end of your program?**

– It would be great to make a working program. It's not total nonsense; it works sometimes, just only sometimes. It's such a shame to have 2000 lines of code, that are not totally useless, but are not reliable enough to really serve their purpose, so I'm working on it.

– **How did you learn about the program?**

– I'm here at an MIT program, which is a general study-abroad. I'm at MEPhI specifically because MIT's sent there students before. Some Professors at MIT know people in MEPhI. There actually were students from our Nuclear science Department, which would make more sense for them to be here. I was a Nuclear science major for like

one semester, so I knew our Nuclear science Professors.

– **Was it your choice to go to Russia?**

– Well, Russia because I've studied Russian since January. It's not very good but I can order a coffee in Russian or have a short conversation. I'm interested in nuclear fusion, things like that, so that's what brought me in this lab.

– **What's your impression of Russia in general and MEPhI?**

– I had a tour to the neutrino detector facility, that was really cool, very hardcore, very impressive-looking. As for the academic life, I think over the summer there are not many students around. At first I had 6 weeks of Russian lessons and I was introduced to your Professors and some Turkish students. I don't think I've got to know many Russian students very well, cause, I guess, my Russian is not very good.

Russia in general... It's hard to say. I keep feeling like I understand what's going on, but then I think I don't. The bread is very good in Russia, I'm enjoying that. The public transit is very good, the metro stations are so beautiful. It just keeps striking me – like in Boston if you're coming down the stairs and the train is leaving, it's heart-breaking, because the next



will come in 15 minutes, whereas here, if you miss it, the next one will be there in 30 seconds. People there dress a lot more nicely. That's pretty much what I wear every day [pointing at T-shirt], so I feel there a bit underdressed.

– **If it's possible, could you make the comparison of MIT and MEPhI?**

– I feel like I don't know MEPhI very well. I know just from what I've heard, that curriculum here seems to be a lot more structured. Like to get a degree in MIT there is a checklist but there is a lot more flexibility like

out of 3 classes you have to take one, but you can take them whenever you want whereas there, as I understand there is like "this semester you take this, and the other semester you take this".

– **Do you live in the dormitory?**

– Yes, that's this nice building where foreign students are usually put. My dormitory here is definitely more modern. The one that I live in MIT was built in 1929, and having my own kitchen and bathroom is great. In MIT there is one hall for 30-40 people, one kitchen, few bathrooms, you fight for the stove [smiling].

FIRST INTERNATIONAL SUMMER SCHOOL ON ENGINEERING COMPUTER MODELLING OPENED IN MEPhI

For two weeks 13 students from Belarus, the Czech Republic, Italy, Russia, Slovakia, Ukraine and Vietnam will be attending specialized lectures and conducting practical tasks on mathematical modelling of physical processes with the usage of Russian program codes. The participants will work out the question of simultaneous modelling of different physical phenomena (multiphysics). The first half of the school will be dedicated to theoretical tasks on MCU, FlowVision and Fidesys programs, which will be followed by the second part where participants will be solving multiphysical individual tasks.

The first program, with which the participants got acquainted, was MCU, created in the Kurchatov Institute. For this purpose one of program developers Denis Shkarovskiy came to the First International Summer School on Engineering Computer Modelling.

It should be mentioned that for some participants the School will be the end of their 2-month internship in MEPhI, conducted on the basis of the INPT Laboratory of Engineering Computer Modelling. During their stay in the university they were working out test tasks for verification of programs of physical processes' modelling in active zones of nuclear reactors. Three PhD students – Alessandro Tassone from Italy, Filip Osuský from Slovakia and Adrian Filip from Romania – have told why they came to Russia and shared impressions about MEPhI.

Alessandro Tassone, Italy:

I was offered to go to Russia by my university (Sapienza University, Rome), which is a member of the ENEN (European Nuclear Education Network) consortium CIRTEN, and I decided to apply. And I would like to say thanks to both universities because I always wanted to visit Russia.

My research is dedicated to the development of benchmarks for the fourth generation Fast Reactor for coupled neutronics and thermal-hydraulics calculations, so this internship is helpful for me.

I received good life experience, although sometimes things get hard. You have a very difficult alphabet, and I practically did not know it before I came here. So it wasn't that easy, especially at first, even in the supermarket. But I think I'll come again to Russia.



It's the seventh week (out of 9) of my internship, and I feel that it's been a nice opportunity to expand my knowledge, and great personal experience. As for the university, there has recently been a discussion with representatives of Thermal Physics Department, and they were positive about future cooperation between our two universities, even though of signing an agreement.

Filip Osuský, Slovakia: It is not my first time in Russia. Last year I was in Obninsk, where possibilities of the internship were discussed. One of my supervisors was among the participants of the discussion so he proposed me to take part in it.

I think Russia is pretty much like Slovakia, our mentality is similar. But for me it is hard to judge because my mother is Russian.

My overall impression of MEPhI is quite good. You have a reactor which is not in operation, but you can do some physical experiments on it. It is a good opportunity for people involved in industry. My work is connected with neutronic analysis of gas fast reactor during the transient states, so I have a lot of things for my research there.

I think I've been pushed forward

in my knowledge here; it is a great life experience. Besides, I've managed to meet my distant relatives like my half cousin. With these guys (pointing at Alessandro and Adrian) we've been on the Red Square, in Kremlin, VDNKH, Park Pobedy, Astronaut Museum, the Bolshoi Theatre. We mainly go together there, when we have time on the weekend.

Adrian Filip, Romania: It all started when my Professor from Bucharest who needed to find students for the internship program asked me if I wanted to go to Russia, and I agreed.

In MEPhI I got pretty much information about the reactor which I need for my PhD study on ALFRED thermo-hydraulics. In MEPhI my research is more about benchmark for ALFRED reactor. I can say that educational systems of our countries are similar but at my university only 20 students study nuclear physics. We have no experiment facilities, and in that way your university provides many more opportunities to study.

Before I went to Russia the only thing I had learnt about this country was information from the Internet, and there it was not always good [smiling]. It turned out to be a fun place, although it rains a lot. When we came here it rained pretty much every day.

The only thing I do not like is that signs are not in English. The names of the streets, the map of the city, the museums – here everything is in Russian! Also we went to Yuriy Gagarin's museum, but we can't go sightseeing every weekend because we do not have enough time.

I'd like to come back here, but as a tourist, with a guide. I'd recommend foreign researchers coming to Russia to be open-minded and have a dictionary with them. They should also learn Russian, at least alphabet.

