



Research Kaleidoscope

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#### 'As for the future, your task is not to foresee it, but to enable it' — Antoine de Saint-Exupery

HSE University is an institution dedicated to producing knowledge and exploring new ideas that ultimately aim to make the world a better place. In the latest issue of The HSE Look, we invite you to read about 11 international postdocs, who have been hired through the International Faculty Recruitment Initiative and kindly agreed to talk about their current projects at HSE University, which vary from neurobiology and applied mathematics to international affairs and engineering. We once again thank Rustam Asgarov, Vladimir Djurdjevic, Eriks Varpahovskis, Nivedita Kapoor, Abinash Das, Dongyu Liu, Louis Hanotel, Sanjay Dutta, Muhammad Shahid Iqbal Malik, Sedat Alatas, Léo Planche and Pietro Annanias Shakarian for their contributions.

#### Yulia Grinkevich, Director for Internationalisation

**Rustam Asgarov** worked as a Research Fellow at the International Laboratory of Social Neurobiology, Institute for Cognitive Neuroscience, in 2021-2023.

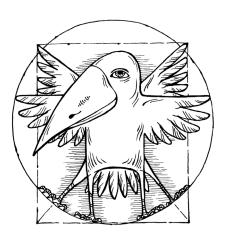
### Could you tell us about your educational and professional background and how that brought you to HSE University?

I completed my PhD degree at the Western Sydney University in Australia in 2021. During my PhD years, I studied and researched chronic neuroinflammatory mechanisms causing pathophysiological processes in the brain and leading to neurodegenerative conditions such as Alzheimer's, Parkinson's and understanding other diseases. In addition to precisely chronological the dynamics of brain histopathology and functional deterioration, I also investigated prevention of neurodegeneration by a natural compound with potent anti-inflammatory properties, as well as the discovery of proteomic biomarkers for early diagnosis and effective pharmacological preventionof these diseases. Prior to the doctoral degree, I completed my MSc studies under the Neurochemistry and Neurobiology programme at Stockholm University in Sweden, where I had an

opportunity to acquire broad theoretical knowledge in neurochemical and neurobiological bases of signal transduction mechanisms supporting various cognitive and executive functions, including learning, memory, vision, etc. As part of my Master's education, I completed a thesis project at the Gladstone Institute of Neurological Disease, UCSF, USA, where I performed experimental work investigating neuroprotective mechanisms by pleiotropic progranulin protein against neurotoxic protein aggregations in Alzheimer's disease and Frontotemporal Dementia. Earlier, during my BSc studies at the Istanbul Technical University in Turkey, I gained extensive theoretical knowledge and practice skills in various areas of molecular biology and genetics, as well as advanced math, chemistry, and physics.

# Why was HSE one of the institutions that you considered joining?

One of the primary reasons why I applied for a postdoctoral position at HSE University has been the convergence of my research interests and plans with neuroscience research projects and other pursuits led by faculty members at the HSE Institute for Cognitive Neuroscience. Another



major reason for my application to HSE University is the institution's vibrant, diverse, welcoming and greatly inspiring and supportive research, education and training environment, with its diverse profile of faculty and students of various national and international backgrounds. Of course, I am also very interested in living and working in Moscow, which is the capital of Russia, one of the largest metropolitan cities in Europe with a multicultural society and many wonderful historic and touristic sites.

# What are your research interests in general and what projects are you participating in right now?

I am currently working on a moral judgment project and, in particular, investigating the behavioural and neurocognitive bases of human moral judgment in a wide range of real-life socioemotional situations. I have finalized the first phase of the project and I am currently writing a manuscript for a subsequent journal submission. This project is being carried out jointly with our senior faculty members Vasily Klucharev, Iiro Jaaskelainen, Anna Shestakova, Vladimir Kosonogov, Ksenia Panidi and several other colleagues. My research interests also include the neural basis of human moral development and psychology, social conformity, executive functions such as planning, problem solving, reasoning, attention, cognitive decline and impairment in aging, neurodevelopmental and neurodegenerative diseases.

# Are you involved in anything else besides research?

Besides completion of my current research project and some collaborative work on other projects at the Institute for Cognitive Neuroscience, I have taken on a teaching role at HSE University for the Cognitive Sciences and Technologies: From Neuron to Cognition Master's Programme on a casual basis. I also have participated as a faculty board member for Master's Programme pre-defenses and defenses, as well as been appointed a referee for PhD pre-defense at the Institute for Cognitive Neuroscience.

# If you could give any advice to international fellows coming here in September, what would it be?

I'd advise prospective international fellows joining HSE University to learn and acquire some basic use of Russian language speaking and communication (if they don't have any skills yet), as this will potentially help establish important connections outside the University as well. Russian people are very friendly, thoughtful, social, welcoming, and straightforward in their day-to-day interactions, and some Russian speaking and listening skills can be very helpful in relations with them, for clinic and doctor appointments, theater and cinema visits, for Russian cultural and national events. Russia is a very big country with many wonderful cities, towns and touristic attractions. I'd also highly recommend travelling to other parts of Russia besides Moscow during holiday breaks and annual leaves.



**Vladimir Djurdjevic** was a Research Fellow at the Centre for Cognition & Decision Making, Institute for Cognitive Neuroscience, in 2020 -2023.

# What is your educational and professional background?

I was always fascinated with the brain, but I was not sure what was the best way to understand it. I got my MSc in Molecular Biology and Physiology, thinking that genetics and cellular approach would be the best way to do this. I have learned about synapses, neurotransmitters, neurotrophins and embryonic brain development, as well as a broad spectrum of pathologies that influence the brain's work and present the plague to modern society. However, all this knowledge just gave me was a static picture that could not capture the dynamics of the real-life situations our brain faces every day and manages to solve effortlessly. So, I decided to continue my journey with cognitive neuroscience, hoping that it would provide me with better answers. I started exploring vision in rats and did my PhD thesis titled "Accuracy of rats in discriminating visual objects is

explained by the complexity of their perceptual strategy" at the International School for Advanced Studies (SISSA) in Trieste (Italy). It was cool to work with animals, but in the end, you have to work with real stuff - an analysis of the human brain. Transcranial magnetic stimulation (TMS) is one of a very few ways of directly investigating the human brain. When you work with animals, you can do pretty much what you want (as long as it is within ethical standards), e.g., put electrodes directly in their brain. With humans though, the only thing you can do is to observe, e.g., through a functional MRI or EEG, but you cannot directly influence the brain except with some sort of stimulation (electrical or magnetic). The problem with electric stimulation is that our scalp is very thick, and electricity goes all over it, so you cannot precisely control what you are stimulating - when you stimulate one spot, you basically stimulate half of the brain. However, you can be quite precise with magnetic stimulation, and this is what I am doing now.

### Why was HSE among the universities of your interest?

I had a few Russian friends at SISSA, and they told me about this place - that HSE recruits international research fellows, that there is international staff who speak English, and that it has very good equipment. So, I contacted HSE and here I am, working under the supervision of Prof. Matteo Feura. When you choose a job, you should be mindful about two things – who is going to be your boss (somebody who you think will understand what you want to do and be tolerant of the way in which you do it, thus giving you a high level of independence) and what kind of equipment you have at your disposal (even the best ideas are worthless if you don't have the means to test them). At HSE, I'm very satisfied with both my supervisor and the equipment available.

### What research projects are you working on right now?

After becoming proficient with TMS, I started thinking about the research that I could do and I stumbled upon an issue in the literature (while analyzing the differences between the male and female brains) that nobody paid attention to female's physiology (the phases of the menstrual cycle), and this is super important as it changes hormonal structure, the body, and especially the brain. When I was looking for relevant publications, I could not find even 10 papers on the subject. Thus, I suggested doing a project where we take women who have regular periods and women who take contraception pills, along with men, and compare brain activity. This can potentially reveal fundamental errors in current brain research since in the vast majority of cases no one takes this into account. By using TMS, we have the possibility to check the actual state of the brain by using something called 'excitation indexes'. My aim is to try and figure out if there is a fundamental difference in these indexes in the various phases of the menstrual cycle because, if there is, and, based on what we have right now it seems like it, you cannot just take female subjects for any kind

of cognitive neuroscience research without checking for their phase in this cycle. That does not mean that you cannot recruit women. It should absolutely happen, but it also means that you can only compare women who are in the same phase of the menstrual cycle, otherwise it will be like comparing apples and oranges, and the end results (since we average them across participants) would be fundamentally wrong. You cannot take a female subject in one phase of the cycle and bring her into research in decision-making, for example, because the decisions that she is going to make in that brain state will be different from those that she would have made in another phase of the cycle when her brain state is completely different.

# What are some of the problems that you face in your research?

The first problem is cultural, because Russia is a patriarchal society and women are not so open to even discuss this topic, let alone participate in research. Second, the current situation is also narrowing down the pool of my possible participants. I use STAI (State-Trait Anxiety Inventory) and BDI (Beck's Depression Inventory) questionnaires before every experiment. Right now, I have to turn down almost 80% of participants because of their anxiety levels. There are also bureaucratic problems like the time it takes to make the contract with laboratories who should do the hormonal analysis of the participants before they take part in the experiment. Nevertheless, you have to do your best with what you have.

#### Have you made any conclusions yet? What do you want to do next with the results?

The main conclusions so far are that estrogen works via glutamate receptors and, therefore, in the preovulatory phase, the brain is much more excited. Progesterone works through GABA receptors (GABA is the main inhibitory molecule in the brain), so the brain gets much more inhibited in the postovulatory state. What I really would like to see is how much difference there is between women who are on contraceptive pills and those who are not, and with men I do not expect to see any differences because, even though their bodies also have progesterone and estrogen, their concentration is much lower than in women and is quite stable.

As for how the results can be applied, one thing would be to see if the TMS itself can produce or actually equalize the state of the brain in different phases of the menstrual cycle and, thus, potentially have a therapeutic effect, especially for women with premenstrual syndrome/ premenstrual dysphoric disorder. I want to bring the hardware (brain) into some sort of 'normal state' with stimulation, and, if this is possible, it would very much reduce/eliminate the need for medications. TMS is already used for the treatment of depression and anxiety in the USA, and it shows very positive results when it comes to some other mental disorders, like bipolar disorder or addiction. This is because TMS can induce rewiring of neurons, fix the broken hardware, and actually cure the disorder instead of just managing it, like we do with medications. This is especially important for people who do not respond to medications (which is almost 70% of the population). For them, TMS can be a lifesaving alternative.

# Are you involved in anything else outside of research?

I'm involved in teaching. Our institute runs a Master's degree programme called "Cognitive Sciences and Technologies: From Neuron to Cognition". Together with my supervisor, Matteo, I've been teaching two courses "Cognitive Neuroscience" and "Advanced Neuroimaging" since 2020, and this year I also taught

the course "Advanced Behavioural Genetics" on my own. When I teach, I try to emphasize that the hardware is where everything comes from. If you have a broken device or a broken computer, it does not matter what kind of software is on it - it is not going to be working properly. The first thing you need to do is fix the hardware and only then can you do anything else.

### Is there anything you could recommend to those thinking of joining the Institute of Cognitive Science?

Currently, at least, 50% of the equipment is not being used because there are no people to work with it, and this is a great thing for people who might join us in the future because it gives them a great amount of freedom to decide on what they want to do. This is not something that you can find everywhere.



**Eriks Varpahovskis** has been at HSE University since 2020. He was a Research Fellow at the School of International Regional Studies, Faculty of World Economy and International Affairs for three years and is now continuing as an Assistant Professor.

# What is your educational and professional background?

I studied International Relations at the Peoples' Friendship University of Russia (where I focused on Latin America) for my Bachelor's degree and International Migration and Ethnic Relations for my Master's degree at Malmö University. I also hold an MSc degree in Sociology of Law from Lund University and a PhD in International Relations from Hankuk University of Foreign Studies. My professional experience includes working in online marketresearchinRussiaande-commerceande-marketing in the UK.

Thus, my research expertise is mainly public diplomacy in the widest sense (cultural, science and knowledge diplomacy), and my geographical focus is East Asia and Central Asia. At present, I am trying to expand to Southeast Asia as well.

# With such diverse experiences, what was your motivation behind joining HSE?

It was Dr. Anna Kuteleva who recommended HSE University as an Asia-focused institution and the place where I can carry out research which I am interested in. Also, the University offered me the best and most generous conditions. Moreover, as I already knew many people in Russia and its culture, so I was sure that adaptation would not be an issue for my family and I.

# What research projects are you working on right now?

I am quite lucky in terms of my collaborations. I collaborated with my colleagues from Korea on research on Wikipedia where we compared mainly Korean and Russian university students in terms of how they perceive it and whether it is considered a reliable source. Interestingly, Korea has its own Wikipedia that is more popular among locals. We submitted a paper on this research, which is under review at the moment. Another paper I am writing with my colleague is about entrepreneurial migrants in Korea - how they establish networks and whether they use personal connections and informal ties while conducting businesses.

I have collaborated with Dr. Kuteleva and we've recently written two chapters that are about to be published one is on soft power and the other one is on the spread ofhumanrightseducationinCentralAsia.Wearecontinuing with research on transnational institutions of higher education (e.g., international branch campuses) and consider the motivations of local governments to host such campuses, as well as narratives that are conceived in this process. We've already looked at the case of Kazakhstan for one of the chapters and are currently expanding to other Central Asian countries too.

As for my independent research work - I've completed a chapter on knowledge diplomacy, which is an emerging topic on how you transfer knowledge, who benefits from it, and how to generate partnership opportunities for countries and people on different levels. As such, I looked at how South Korea applies knowledge diplomacy in relation to its ASEAN partners and I am currently waiting for comments from the reviewers.

### You mentioned research on Transnational Higher Education Institutions (THEI) in Central Asia. Was this derived from the projects you oversaw for the HSE Project Fair?

Initially, I was interested in finding out how many transnational higher institutions are located all around the world. The project included six students who were assigned different parts of the globe to figure out what was the situation with THEI there. The students collected data for me, and I compared it to data that I collected myself. So, they contributed to validation of my findings but also learned how to collect data, what to look into, and they also learned coding in terms of narratives. For the Kazakhstan-related phase of the project, I collaborated with Dr. Kuteleva, and the students analyzed media and governmental laws to figure out the logic as to why this or that government decided to open up a university. These results will be published in the summer.

### Are you involved in something else outside of your research?

In addition to my research, I taught six courses last semester - Introduction to Political Science, State and Society in East Asia, Communications in Digital Era, International Security and Research Methodologies for International Studies for BA students, and Global Agenda for MA students.

I also supervise Bachelor's and Master's term papers and, in fact, we are working on two exciting projects with my second-year students for their term papers. One is more Korea-specific - it is on a scholarship that hasn't been explored at all before (the Korea International Cooperation Agency - KOICA) and it is definitely a unique contribution to the field. Exchange students and soft power is the topic that received extensive attention from the Western perspective, but she will be looking at it from an Asian country perspective. Another student is comparing Chinese and Korean universities that offer English-taught programmes and whether they contribute to soft power or nation branding image improvement of the country because, on the one hand, those programmes bring foreigners to the country and they are supposed to be exposed to national culture but, on the other hand, they are taught in English. It is worth exploring, especially countries like China or Korea, which are popular among international students, but are not the most popular destinations.

### Could you recommend anything to new international staff?

Research-wise, I would suggest picking up two or three major topics that he or she would want to specialize in. One could be more or less an emerging one, and another one should be a more established one. With the mainstream topic you can publish more, and with the emerging topic one can become a recognized expert in several years, because s/he will be one of the key contributors to it. In regards to adaption in Russia, I suggest learning some Russian to navigate easily. Also, develop all possible networks with other colleagues - both international and local. Moreover, if possible, look for opportunities to teach because, that way, you will be involved in a network of people at your department and programme. If you only do research, you will be alone in your room and this would be less beneficial from all perspectives. People need people.



Nivedita Kapoor joined HSE University in 2021 as a Research Fellow at the International Laboratory on World Order Studies and the New Regionalism, Faculty of World Economy and International Affairs

### What is your professional and educational background and how did that bring you to HSE University in general and the Laboratory in particular?

I did my Bachelor's in Journalism and my Master's in International Relations. I did not want to go immediately into a PhD, so I decided to pursue journalism. Back home in India, I initially worked in my home city - I used to cover school education and health there. Then, I moved to New Delhi to the press agency the Press Trust of India. After spending almost three years in journalism, I decided that I wanted to go back to research and international relations and joined the Center for Russian and Central Asian Studies at the Jawaharlal Nehru University in New Delhi. There, I did my PhD in Russia Studies with the focus on Russian foreign policy in East Asia and how China affects that policy, as well as how that might impact Indian foreign policy and how Indian-Russian relations have developed.

After finishing my PhD, I moved to an Indian think tank to work in the Russia-Eurasia section. My focus was on interpreting and writing about Russian foreign policy and India-Russia relations. We used to hold a lot of events and talks with Russian experts here in Moscow, including seminars and conferences, discussion clubs and even public discussions with professors and experts from HSE University. That is how I came to realize that, if I was studying Russia, I should have at least some experience in the country to understand the place better, and the best opportunity was through the HSE postdoctoral programme. Thus, when HSE University advertised its positions, I realized that the work that I was doing - on the emerging world order, regionalism and how Russian foreign policy operate in Asia or Eurasia - fits exactly with the work that the Laboratory was focusing on. In fact, the works of my supervisor, Professor Alexander Lukin, on Russia-China relations used to be our course readings during my PhD. So, it is a great opportunity to work under his supervision now.

### Why were you interested in Russia in the first place?

Well, we have seen Russia going through a lot of changes - the Tsarist period, the Soviet period, the collapse of the Soviet Union, and I found those changes and how a country needs to adapt every time when these changes happen interesting. Although every country goes through various periods of change, with Russia, I felt like there was just so much happening at the same time during post-Soviet period (e.g., political regeneration, economic and geopolitical rebuilding).

# Is that what you are working on at the Laboratory at the moment?

My work is primarily focused on Russia's engagement with Asia and Eurasia, and there has been a rising interest in India-Russia relations in the past year. I collaborated with my Laboratory colleague and South Asia expert Aleksei Zakharov to write a commentary about the payment mechanisms that India and Russia are trying to figure out so that they can trade with each other (i.e., on what works and what doesn't work). Another article I am writing is on how the India-Russia relationship is being impacted by the Sino-Russian relationship. I am also trying to look at Russia's policy towards Northeast Asia and how it has evolved since 2014, after the Ukrainian crisis. It is interesting to see how those changes have impacted Russia's policy with Northeast Asia at the time when the region itself was changing dramatically because of China's rise and the US-China rivalry. These are the academic issues that I am focusing on at the moment.

Apart from that, this semester I have four Bachelor's students whose thesis works I am supervising. They are working on different topics like the Shanghai Cooperation Organization and its expansion, India-Uzbekistan relations, India-Russia relations, and Russia's policy in Southeast Asia through the lens of the arms trade with Vietnam.

Over the past year, I also participated in a few conferences, including HSE's XXII Yasin (April) International Academic Conference on Economic and Social Development and Fourth International Conference 'The world majority in the contemporary international realities: from fragmentation to new institutionalization.' I also presented a paper at the First St. Petersburg Congress on International Studies at the St. Petersburg State University and the British Association of Slavonic and East European Studies in the UK. I also talked about South Asia and the Arctic at the Eastern Economic Forum and discussed the new realities of economic relations and geopolitical equations in India-Russia relations at a Gorchakov Fund Roundtable.

# If you could offer any advice to international faculty coming in September, what would you tell them?

First, learn the Russian language and register for Russian classes because that will help you to become a part of the city. This will help you to experience a lot more things because, unless you speak the language, there will be a lot of things that you will miss out on, such as cultural events.

Another thing is the opportunity to travel outside of Moscow - this country is a lot more than just its capital city. Go to other cities and see a different Russia.



Abinash Das worked as a Research Fellow at the School of Electronic Engineering, HSE Tikhonov Moscow Institute of Electronics and Mathematics (MIEM HSE) in 2022-2023.

### Could you please tell about your educational and professional background and how that brought you to HSE University?

I completed my PhD at the Department of Physics, National Institute of Technology, Silchar, India. After my PhD, I joined IIT Delhi as a senior scientist and then worked as a postdoctoral fellow at IIT Madras for another year or so. I also wanted to get international experience, so I decided to apply for a postdoc position at HSE University.

# Why was HSE University one of the institutions that you considered joining?

Before applying to HSE University, I used to follow current research related to my topic, and I found out that MIEM is working on some of topics in this area. So, I decided to apply for a postdoc position here.

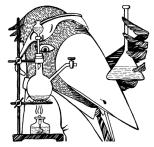
### What are your research interests and what projects are you participating in right now? Who do you generally work with?

During my research career, I have developed many interesting ZnO based nanostructures with the application of very cost-effective approaches; this is a well-known material for its optoelectronic properties. I have explored many of the structural aspects of ZnO for the purpose of enhancing performance as a photocatalyst and photoanode for various environmental and energy applications. As a result, all these materials have shown promise when used for photocatalysis, photoelectrochemical, and dyesensitized solar cell (DSSC) applications.

I am currently working with Professor Andrey Vasenko and his team on solar energy applications and, very recently, we have published one paper in The Journal of Physical Chemistry Letters, which is a prestigious journal in our field.

# If you could offer some advice to international fellows who will arrive in September, what would you tell them?

HSE University provides a thriving environment for research and living here. So, I don't have any particular advice for new international fellows at HSE University. Nevertheless, one should try to interact more with the people around them at the University and not be limited to labmates only.



**Dongyu Liu** is a Research Fellow at the School of Electronic Engineering, HSE Tikhonov Moscow Institute of Electronics and Mathematics (MIEM HSE). He has been at HSE University since 2021.

### Could you please tell us about your educational and professional background and how that brought you to HSE University?

I received my BSc and PhD degrees in Energy and Power Engineering from Xi'an Jiaotong University, China. Although I come from an engineering background, I'm quite interested in fundamental issues of solar energy conversion, which involves many physical and chemical problems. Therefore, I went to the Chemistry Department of Yale University as a visiting student for one year during my PhD studies to learn directly from chemists. When I was about to graduate, I heard from my advisor that HSE University had a postdoc position to study solar energy in conjunction with physicists. To extend my knowledge on these interesting fundamental issues, I decided to apply, and I was very fortunate to be admitted.

# Why was HSE University one of the institutions that you considered joining?

I am attracted by research activities and the professors here. Since I'm working in an interdisciplinary field involving several subjects like energy engineering, chemistry, and physics, it's not very popular at present. My current supervisor, Professor Vasenko, comes out of theoretical physics, and he has been analyzing solar energy materials in recent years. So, it's a very good opportunity to work with him and continue my previous work. Furthermore, there are many excellent professors at MIEM working on superconductivity. I could also learn a lot about physics from them.

### What are your general research interests and what projects are you participating in?

My research interests focus on an emerging energy technology called 'artificial photosynthesis', where we use artificial materials to mimic the photosynthesis process in nature. The final goal is to produce not only power, but also fuels and chemicals using solar energy, whereby we can get rid of the problems caused by fossil fuels. It sounds very promising, but there are many fundamental issues that need clarification and we also need to find solutions to various engineering problems. I am more interested in investigating the charge transfer and chemical reaction processes in this technology through quantum mechanics simulations. At present, we are studying the impact of defects in perovskite solar cell materials on their optoelectronic properties. In particular, we use several state-of-the-art machine-learning methods in our research, which can offer many new insights. We also are collaborating with a theoretical group from the USA in analysis of solar cell materials. We work together with some experimental groups from China on electrochemical problems. Moreover, I also work with a colleague at MIEM to theoretically investigate novel superconducting materials, which is different from my previous work.

### If you could offer some advice to international fellows who will be arriving in September, what would you tell them?

I would suggest that they attend more activities here instead of spending all the time on their own projects. Russia is quite unique in many fields like education and science (at least compared to China), which cannot be found anywhere else. I believe this experience can be just as useful as academic work for one's personal development.



Louis Hanotel has been a Research Fellow at the School of Applied Mathematics at HSE Tikhonov Moscow Institute of Electronics and Mathematics (MIEM) since 2022.

### What is your educational and professional background and how that brought you to MIEM?

I am primarily interested in quantum physics and how it can be used to create new computers. This is called quantum computation and, in a certain sense, it is the most promising proposal for future computer development. My general idea was to study environmental science and now, in quantum computation, I found a way to really do something for the planet. This is because, if we have super optimal computers, we can reduce energy and materials usage in the creation of computers. I finally found a way to combine my interest in theoretical quantum physics with my idea of doing something for the world. This was my main motivation to work in this field.

There has been much progress in theoretical and experimental fields, but there are also mathematical problems that had to be solved in order to have guantum computers. For this reason, while doing my Master's and PhD, I became more specialized in mathematical problems that are behind quantum computers, and my PhD was at the intersection of mathematics and physics. Here, at MIEM, I was attracted by the group headed by Professor Loubenets since they are keen at solving abstract mathematical problems that are necessary to progress in quantum computation. I am not an expert in quantum computation, it is a huge field. Nevertheless, my specialization is in geometrical methods, which can solve some mathematical problems related to quantum computation. At MIEM, the most interesting thing for me is approaching new problems with the same tools. I think this is very interesting. I also like the Institute's approach in that we have a lot of freedom and can propose what we want to investigate. I have time to think about my ideas and projects, while also pursuing collaborations with colleagues from China and Mexico.

### What research problems are you working on right now?

The topics are very much related to last year's Nobel Prize in Physics - nonlocality. According to this idea, microscopic systems feature certain physical properties that can be used in information transmission. For example, suppose that some colleagues in China and Mexico, as well as here in Moscow, who work with the atomic system, and when here in the Moscow lab, we influence this system - it can be detected immediately in China and Mexico. It is crazy how one can apparently carry out these actions over distance. It might seem contradictory, but there are other rules in quantum physics, and this microscopic world features new laws that are very useful for transmitting information. An essential rule here is that we share something in common at the beginning and that's the trick with quantum transmission of information - we have a collection of atoms that were created in the same place and, even if they are dispersed all over the world, they are connected to information with other atoms. Moreover, it seems that this could be more efficient than traditional transmission information processes. There are many debates about the consistency of these discoveries in light of Einstein's relativity theory, but the consensus is that there is no contradiction (at least for this reason).

#### How can this be applied in real life situation?

The most interesting application of these quantum computation proposals is, in my opinion, in information security, in that the first party to have a quantum computer could 'destroy' the security of all networks throughout the world. That is why there is a paranoid drive to be the first to create a quantum computer. There are a few quantum computers, which are small, in the sense that they can only be operated with a few qubits, and they are not very useful. There are also researchers who study viruses and protection of these computers, even though they do not even exist, because all security protocols must be devised at least on paper before we finally get these computers, as we will need to prevent attacks.

Another useful application is that if you have a superefficient computer, like a quantum computer, then much less energy will be used for calculations. For example, for any operation with bitcoin – if I want to send money from one account to another - I send information to five thousand users, and every click can connect to a pulse of electricity. If you translate this into carbon – this means a lot of carbon dioxide going into the atmosphere. Also, electricity consumption is truly out of control with so many new things appearing. NFT, for example, has become very popular and trendy. It is urgent to do something. Therefore, if we have a machine that can consume less resources, we can help to reduce the impact on the environment. Also, you reduce the operational time and thus reduce how much time is used while on a computer along with electricity consumption. The goal is to achieve at least something hybrid with quantum features, and I am progressing in this direction. For example, I am participating in a project with a group from Belgium and Mexico on how to create quantum computer operation, which could be immune to the noise generated by magnetic fields.

#### What are your personal research interests?

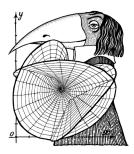
They are much related to the project that I have with the Mexican and Belgian groups - the geometry of quantum physics. Quantum theory is mainly used to study microscopic systems and, in its most common formulations, it is very algebraic, i.e., you have equations but there is no intuition. In a certain sense, quantum physics, from an algebraic point of view, behaves like a black box. In other words, you provide some information and get some results, but we have no idea of how this black box works. In a sense, all microscopic systems have some aspects that are completely uncontrollable and unpredictable. Furthermore, for around 50-60 years, there has been an interest in understanding what is happening in this black box, i.e., how quantum mechanics really works. We know how to use it as a tool, but we do not understand what is physically happening. One of the approaches to understanding what is going on is to translate all the equations and mathematical structures into geometrical terms. It is interesting that all quantum mathematics and quantum processes can be understood as geometric processes. This geometric perspective indicates that we can learn and understand more about quantum phenomena. For example, there is an association between some specific quantum systems and certain abstract geometric figures like polyhedra, and many times the calculations of some quantum problems are essentially problems of geometry. There is a clear connection between geometry and quantum physics, but also a lot of things that are not well understood. So, I am working on this – understanding quantum mechanics from a geometric point of view. It started out of curiosity with me trying to comprehend mechanics, but now the geometric interpretations of quantum physics can actually be even applied in practical computations.

# What made you apply for another year of postdoctoral fellowship at HSE University?

In addition to continuing ongoing projects, next year I would like to explore how some measures that quantify the quantum information are related to the nonlocality properties of quantum systems.

### If you could offer any advice to those international fellows who are arriving in September, what would it be?

Enjoy the rich academic space of which you are part now. HSE offers many opportunities to start new projects and collaborations. This freedom to create projects and ways to develop them is one of the most valuable things at HSE. So, do not be afraid to communicate with other researchers, students, and people from different areas. Apart from the academic side, of course, there is another one: enjoy beautiful Moscow (and the experience will be even more fantastic if you learn some basic Russian)!



**Sanjay Dutta** was a Research Fellow at the International Centre of Decision Choice and Analysis in 2021-2023

# What is your professional and educational background?

I hold a PhD in Mathematics from the Kalinga Institute of Industrial Technology, India, and have extensive teaching experience. As such, I used to teach mathematics and physics at schools of higher education, as well as economics, mathematics and statistics to BSc and MSc students at DRK College of Engineering and Technology, St. Joseph's College and Assam Don Bosco University in India.

### Why did you decide to join HSE University?

My research interests cover mathematics, engineering, and management, which leaves me with less options if it was just pure engineering. An online search brought me to HSE University and the Laboratory headed by Professor Fuad Aleskerov, and I applied for an advertised postdoc position.

# Can you tell us more about the research you do at the Centre?

My research area is referred to as Decision Making under Uncertainty. This area deals with the real-life problems, which can be mathematically modelled, such as portfolio selection problems, cropping patterns to produce good yields with less water replenishment methods, transportation issues, etc. The problem with this kind of mathematical modeling is the information about the parameters involved. For example, if we take a situation where we have to find a solution to a problem and the information about the parameters are not there or have very imprecise information. Then, we would need to apply fuzzy-mathematics. Or, if we have previous information about the given parameters, we can use a stochastic method, such as probability distribution. By combining these two kinds of uncertainty under a single roof, one can formulate Multi-objective Fuzzy Stochastic Programming problems. Beyond these kinds of mathematical models, we have another level of uncertainty where decision-makers or stakeholders do not know, or cannot agree on how different future scenarios will unfold; such problem falls into the category Decision-Making under Deep Uncertainty. When solving such problems, one needs to generate different scenarios and each scenario should provide a possible situation. Analyzing all scenarios, the most probable solution or decision can be made based on current conditions.

At present, I work with deep uncertainty – when stakeholders and others cannot reach a common solution. These are situations that might have over 1,000 scenarios owing to a lack of information. Until analysts find a situation, one cannot say which scenario needs to be undertaken.

### Do you work on specific cases?

Under the supervision of Professor Fuad Aleskerov, we are presently working on the global food network to explore a wide range of possible futures and impacts. For example, how would a natural disaster in any country impact on the global export and import of food. For example, there was the flood in Pakistan in 2022 and all of the crops were damaged. Here, a country, which used to export wheat to other countries, could no longer do so due to the flood and, in fact, it had to import from other countries to meet its own local demand. Thus, this situation changed the country from a wheat exporter to an importer. We do this kind of sensitive analysis and try to find out which countries are more vulnerable. For example, African and Asian countries are more vulnerable in terms of food security mainly due to water problems (e.g., droughts, floods, etc.), earthquakes, and armed conflicts. Thus, one by one, we consider what can happen in each situation and what can be done - we search globally by using network theory.

### How can mathematics be used in this type of research?

At present, a mathematical model for most of these problems and also the available software to solve such mathematical models. Apart from fuzzy stochastic methods, another kind of mathematical model, where I am interested and working is Multi-Choice Programming problems. Here, many choices are provided and the decision makers have to choose one from the given choices in order to optimize the objective functions. The objective function can be a cost function which needs to be minimized or the profit function to maximize. Depending on the problem, the objective functions vary. Once the model is solved, one choice out of hundreds will be selected automatically (because the solution has to be unique otherwise it won't be helpful to decisionmakers in making a decision). So, right now, we know how to develop a model, figure out how to implement it and how to run it on supercomputers, and obtain solutions from it. Our future goal is to develop software for various industries.

# Could you offer advice to prospective research fellows who will be arriving at HSE University next year?

Working at HSE is a great choice. Since this was my first trip abroad and I did not have much idea of how it would be, but HSE made things very easy for me. It was very lovely to have Professor Aleskerov as my supervisor because he took care of me just like a father, I would say. Moreover, whenever we meet with international faculty at events, the professors are very easy-going. In addition, there is no communication barrier as most know English quite well.

International applicants should definitely consider coming to HSE because there is a wide range of research labs and professors working in various fields. Everyone can get something out of HSE – it can help in advancing anyone's career by enhancing your knowledge and offering experience in working with an international organization.



Muhammad Shahid Iqbal Malik is a Research Fellow at the Laboratory for Models and Methods of Computational Pragmatics, Faculty of Computer Science. He joined HSE University in 2022

# What is your educational and professional background?

I hold a PhD in Computer Science with a specialization in Data Mining from International Islamic University, Islamabad, Pakistan. Before joining HSE, I worked as an Assistant Professor at Capital University of Science and Technology for over three years and as a Lecturer at Comsats University for four years, where I taught undergrads, Master's, and PhD students, while also being involved in various research activities. Besides academia, I have more than 12 years of experience in designing embedded systems for the HVAC industry in Pakistan.

### What made you switch to academia?

There are very interesting opportunities in the HVAC industry, but it is limited in terms research and, at some levels, learning just stops. As the manager of a department, I did what the scope of embedded systems for HVAC products required – managed, designed, developed and re-engineered but the pace of R&D activities was not fast. By switching to academia, I knew I would utilize my skills and acquired knowledge to instruct students, while also continuing my learning through research.

### How did you find out about HSE University and what made you apply to the Laboratory where you are now working?

I was exploring opportunities in my field, so that I could join a good team to learn/explore new methodologies in Data Mining, especially in Natural Language Processing and Text Mining. When I applied to HSE and was offered an opportunity, I was still a little bit hesitant but decided to join. After my appointment at the University, I observed the environment and met the Laboratory's head Dr. Dmitry Ignatov and other colleagues, and I felt it was a right decision to join HSE. The academic environment here is very impressive and enticing. Furthermore, the staff is professional and cooperative, while the students are very hardworking and have aspirations to learn and grow.

# What research activities are you involved in at HSE University now?

Since my area is Natural Language Processing and Text Mining and I was supervising students in Pakistan on the use of abusive language and detection of instances of violence incitement in social media, I proposed, and was also appreciated by the Lab Head, to continue this field of research by designing multilingual frameworks in English, Urdu, and Russian. At present, I also formed a group at the Lab who are working on hope speech and hate speech detection in social media, both in English, as well as Russian. We have undergrads and Master's students working on this. We are also designing several frameworks by utilizing state-of-the-art contextual word embedding and language models to determine actual context so that the automated system is effective and robust enough to detect either hope speech or hate speech. At the same time, I am working on the detection of threatening language and violence incitement in English and Urdu, by supervising students from Pakistan. A research funding proposal on abusive language detection in low-resource languages is in progress. Lots of work is available in English and other high-resource languages, but there is very limited work in Urdu, Russian, and other low-resource languages. Thus, I am interested in developing a system, which can be used by law enforcement to take precautionary and security measures to support social peace by identifying people who harass others, since peace is the main thing that should not be compromised, and freedom of speech should not hurt other humans (or their opinions and beliefs).

In addition to research, I am working on several publications – two of my articles have been accepted in Q2 journals, and five articles are under review, of which three are for Q1 journals and two are for Q2 journals.

# Can you tell us more about the multilingual frameworks that you are working on? What contribution is made by students in this?

Right now, automated detection systems are being developed for social media platforms. We've already designed seed words dictionaries with my students. This is so we can see what keywords are used to threaten or offend someone, or incite violence. They use these dictionaries to crawl through data from social media (e.g., Facebook, Twitter, YouTube, etc.). After collecting data (tweets, posts or comments), we give it to annotators, together with guidelines on how to annotate (i.e., what can be considered offensive - not only words, but also how a person may use language or a certain context to threaten, offend or incite violence). With the annotations, we compile the data and apply feature engineering techniques to explore specific text characteristics, which can help us to design an automated system. For feature extraction, we apply state-of-the-art techniques to generate features. After that, we utilize machine learning or/and deep learning algorithms to train our model on the labelled data. After training the model, we analyze its performance using standard metrics - if it is acceptable, we can use it for unseen data; if it is not promising, we will retrain the model with a different type of characteristics from the textual data (until the performance is acceptable). There are usually two outcomes of this type of research - a research paper and an automated system, or application, which would classify the data based on the context of terms regarding hatred or violence identified therein. For those projects, where the Russian language is involved, HSE University's students can assist me.

### Do you have any advice for those who plan to arrive in September?

If someone has plans to stay for a long time, learning basic Russian is at least mandatory (though the young generation can speak English). Other than that, Moscow is a very beautiful city; the weather is pleasant, especially in spring and summer. Everyone I met so far is welleducated and well-mannered. I have the impression that people here know how to respect and accommodate others.



**Sedat Alatas** was a Research Fellow at the Laboratory for Economics of Climate Change and a visiting lecturer at the Faculty of World Economy and International Affairs in 2022-2023.

### Can you tell us about your educational and professional background and how that brought you to HSE?

I hold a Bachelor's degree in Economics from Anadolu University and MA and PhD degrees in Economics from Adnan Menderes University, Turkey. During my doctoral studies, I was awarded a scholarship to participate in the 10-month Advanced Studies Programme organized by the Kiel Institute for the World Economy (IfW) in Germany, where I had the opportunity to improve my theoretical and empirical knowledge in economics by taking courses from leading researchers and discover new areas where I could use my skills. One of the areas that I explored in Kiel was climate change economics and that is how I found myself in the field and started to work on projects on carbon emissions, climate mitigation, factor substitution of energy input, sectoral energy consumption, etc. This was a breaking point for me to some extent - going from an economic development and growth that I focused on during my Master's and PhD studies to environmental economics after graduation. I am still interested in economic development and growth topics mainly because the empirical skills that I use in research projects on climate change economics are heavily built upon growth empirics. Yet, my research topics are more concerned with climate and environmental economics. I have been interested in climate change economics for almost five years now and my current research mainly focuses on energy and environmental economics, material economics, climate change, resource efficiency, economic growth, and sustainable development.

After returning from Germany to Turkey and getting my PhD in 2019, I was absolutely sure that my experience abroad is quite important in academia. So, after some solo and joint research papers on climate change economics, while also deepening my theoretical and empirical knowledge in this area, I decided to go abroad for a postdoctoral fellowship. Indeed, the number of postdoc positions in that field is quite large compared to other fields in economics, as many scholars work on this topic. Yet, climate change is also a multidisciplinary topic. Therefore, the most important thing is not to find just any place, but to find the correct place that perfectly matches the topics that you are working on.

# Why was HSE University one of the institutions that you considered joining?

The first reason why I considered joining the Laboratory for Economics of Climate Change is that the topics I work on are compatible with its current projects. Therefore, I was quite sure that I can improve my skills there and contribute as well. The second reason is, of course, HSE University itself. It is consistently ranked as one of Russia's top universities, the leader in Russian education, and one of the preeminent economics and social sciences universities in Eastern Europe and Eurasia. I am very proud to be employed by such an esteemed institution. The third reason is more personal - I have been to European countries several times as an exchange student, as an intern, as a tourist, or as a conference participant, and I am quite familiar with European culture. Therefore, for my postdoctoral studies, I was looking at other countries where I have never been so that I can experience new things. In my opinion, this is as important as my academic pursuits.

### What are your research interests in general and what projects are you working on right now? Who do you work with?

I am broadly interested in climate change economics and, more specifically, in energy and environmental economics, material and resource efficiency, sustainable development, input substitution, and convergence topics. Most of my studies are based on empirical investigations and I generally apply various panel data econometric techniques to country- and industrylevel datasets in my work. My current research is focused on two important topics: the emerging role of material demand and material efficiency strategies as a mitigation policy and the identification of discrepancies between production-based and consumption-based emissions for international climate change regime and national climate policy-making. I am working on the first topic with my colleagues from Turkey, including Etem Karakaya, Burcu Hiçyılmaz, Elif Erkara, Tuğba Akdoğan, and Betül Mert. Broadly speaking, the focus is on materials and their effect on climate. Furthermore, we are analyzing material demand, material efficiency, and its main driving force; testing the rebound effect of material efficiency and its comparison with energy efficiency; analyzing the relationship between energy and material efficiency from the perspective of sustainability.

The second topic is being explored with my supervisor at HSE University, Professor Igor Makarov. We are investigating the main determinants of different emissions measurements and identifying discrepancies between them. By doing so, we hope to offer a new perspective on sharing responsibility for emissions and demonstrate the need for international climate cooperation, reveal the necessity for dialogue and coordination between major producers and consumers of carbon-intensive goods, and identify uses for a wider range of decarbonization tools.

### Are you involved in anything else besides research (teaching, thesis supervision, etc.)?

During the second module, I taught the "Data Analysis and Econometrics: Applications to Environmental Economics" course for students from the Environmental Economics and Sustainable Development Master's programme. I also participated in the 10th Annual Conference on the Global Economy organized by the School of World Economy and presented the paper 'Materials for the Green Transition'. I also took part in a research seminar organized by the Laboratory with a paper entitled 'Material Demand and Material Efficiency: A Stochastic Frontier Analysis'.



**Léo Planche** worked as a Research Fellow at the International Laboratory of Statistical and Computational Genomics in 2021-2023.

# What is your educational and professional background and how did that bring you to HSE University?

Well, I chose the easiest path, I was good at it, but not so much in French or biology. I first studied it for a two-year undergraduate intensive course (along with physics), then was accepted to the Superior National School of Applied Mathematics and Computer Science, France, to study Mathematical Modeling, Images, Simulation for my Bachelor's, and then to the University Joseph Fourier to study Operational Research and Combinatorial Optimization for my Master's. In 2018, I obtained a doctorate in Mathematics and Computer Science from the University of Paris Descartes, France.

# Why was HSE University among universities of your interest?

I saw on a mailing list an offer for a postdoc in some other field of mathematics; the position was at HSE - St. Petersburg. I then browsed through the HSE website and saw multiple labs, which conducted research relevant to my field. They all seemed to be open to international cooperation and one was of particular interest to me. So, I decided to apply!

# What are you doing at HSE University right now?

I supervise projects. I also do research in genomics. I work mainly with my supervisor and a colleague from China. We use statistics and probabilities mainly, along with computer science to study the origins of genomes (whether they are from Neanderthals or from Africa or Asia). There were different species of humans, and we also know that part of our genome comes from a Neanderthal because we mixed at some point in the past. The species were not completely separated and sometimes they met and had children. The aim is to study and determine which part of DNA comes from Neanderthals. We want to understand this more precisely, by building a mathematical model that would be more precise and answer various other questions. For example, we have DNA that comes from Neanderthals, but we want to know from what place or places and time it comes from. For instance, does this Neanderthal ancestry come from only one place and one time or from different parts of the world? A Canadian colleague I am working with is looking at people in South America and trying to determine which part of our DNA comes from Neanderthals from Europe and which part comes from the Neanderthal men from Asia (because people in South America share European, Asian and African ancestry). We are trying to determine which part of our DNA comes from where - European Neanderthal or European Homo sapiens, and to understand migration flows better. As soon as you determine which part comes from where, you can also use mathematics to approximate the time when we met with the Neanderthals to understand the history of human migration.

### What project are you carrying out with students?

This concerns genomics and bioinformatics for the purpose of detecting tracks. What they do - there are different mathematical methods to determine which part of one's DNA comes from Neanderthals, which part is, or which part comes from Asia or Europe so as to determine the ancestry of DNA; they need to compare those methods with statistics, and figure out which method is more efficient in different cases, because often you have many methods that are variable but they are compared very well. Researchers use different methods, but it is not always clear why they may use this or that method. Our objective is to make these methods work and then compare them to know which method can be used in which situation - because when we study genomics, we do not always have certain data. We can have a lot of DNA from currently living Africans or Europeans that, but only one or two genomes of DNA from Neanderthals. The method that we use in one case might now might also work in another. As such, we have to compare them.



**Pietro Annanias Shakarian** has been at HSE University since 2022. He is a Research Fellow at the Centre for Historical Research at the HSE Campus in St. Petersburg

# What is your academic and professional background and how has that brought you to HSE University?

It all began with my family history. I am a dual citizen of Armenia and the US, but I was born in America. My father is an Armenian immigrant who came to Cleveland, Ohio, from Queens, New York, after arriving in America with his family. My mother, whom he met while commuting to college, is of Hungarian and Slovak origin. In this context, as you can imagine, I heard all sorts of interesting stories while growing up. For example, I learned that my uncle was a college roommate with Vazgen I, the future patriarch of the Armenian Apostolic Church, at the University of Bucharest. It was this history, along with my own study of the Russian Revolution and the Soviet experience, that led me to study Russian history at the university level. In the end, I earned a BA from John Carroll University, an MLIS from Kent State University, an MA from the University of Michigan, and a PhD from Ohio State University. During these years, I traveled to Armenia several times, and during my time at Ohio State, I came to Russia through a Title VIII American Councils Fellowship to work on my dissertation on Anastas Mikoyan and nationality policy reform in the post-Stalin USSR. Although I completed most of my

archival research on my fellowship in Moscow, there were still several additional materials that I did not have a chance to check due to the fact that I had to leave Russia early in light of the COVID pandemic. After completing my PhD, I joined the history faculty of the American University of Armenia in Yerevan for one year. There, I worked as a lecturer, teaching the history of Armenia from ancient times to the present day, or basically from Urartu to post-Soviet Armenia. While in Yerevan, I was able to continue my research on the Stalinist repressions and rehabilitation of former political prisoners in the Armenian archives. I found some incredible materials, but I had no time to really expand my work into a book due to my ongoing teaching obligations. Moreover, I always wanted to complete my unfinished research in the Russian archives. It was for these reasons that I decided to apply for a postdoctoral fellowship at HSE University in St. Petersburg, which has an especially strong reputation for examining Russian and Soviet history from multi-ethnic and nationality perspectives. In the end, I received the fellowship, and this year, I was given the opportunity to focus on turning my work into a proper monograph.

### Can you tell us more about the book that you have been working on?

Basically, the book is about the role of Anastas Mikoyan in nationality policy reform and de-Stalinization during the Khrushchev era of Soviet history. So, we're talking about the post-war, post-Stalin years – the Thaw era, from approximately 1953 to 1964. Mikoyan was, of course, a great Soviet statesman and an Old Bolshevik of Armenian origin who began his career as a revolutionary in the Baku Commune under Stepan Shahumyan. Russians know him best for his role in the Soviet food industry and international diplomacy as well as being a great political survivor, who weathered every Soviet leader 'from Il'ich to Il'ich, without heart attack and paralysis,' as our favorite saying goes.

However, less well-known were his major contributions to domestic reform under Khrushchev, most notably nationality policy reform and de-Stalinization. The aim was to dismantle the Stalinist system and, as Mikoyan and Khrushchev even stated, to 'democratize' the Soviet Union. Mikoyan's contributions to nationality policy during the Thaw comprise the main focus of the book, and I argue that his initiatives represented a major departure from the state violence and centralization that characterized Stalin's approach to nationalities. However, I also delve into Mikoyan's role in de-Stalinization, as these reforms were very much interconnected, especially if we look at his speech in Yerevan on March 11, 1954. It was in that address that he called not only for a more flexible policy toward nationalities, but also for the rehabilitation of the poet Yeghishe Charents, who was a victim of Stalin's repressions. In many ways, this speech played a key role in the early process of de-Stalinization. We're talking two years before Khrushchev's denunciation of Stalin at the 20th Party Congress.

The book will significantly add to our understanding of Soviet history during the Thaw years. For instance, it explores Mikoyan's leadership of the subcommittee tasked with reforming the union state during the constitutional reforms of the 1960s. In this capacity, he and his fellow reformers envisioned a much more representative and devolved union, with much greater self-governance granted to the republics and autonomous units. Consequently, this work will contribute to very relevant discussions within Russia and the post-Soviet space today about the legacy of the Soviet nationality policy and the union of republics. De-Stalinization has also recently become a topic of great interest in the Russian and post-Soviet world, especially the roles of Gulag survivors in this process, notably Aleksei Snegov and Olga Shatunovskaya, both of whom were Old Bolsheviks and close allies of Mikoyan. Once my book is published in English, I plan to pursue Russian and Armenian translations. I already have some potential Russian publishers in mind.

### What are the sources that you used for your book?

The sources that I used for the book vary and it was through them that I was able to meticulously reconstruct this little-known history. Among them are several documents and materials that I collected from major Russian Federal Archives in Moscow (RGANI, RGASPI, GARF, and RGALI), as well as the Armenian National Archives in Yerevan. I also received copies of rare documents from the Russian Presidential Archive and the FSB Central Archive from scholars at the Memorial society. In addition to archival sources, I also used several newspapers and numerous memoirs in both the Russian and Armenian languages. I also conducted research at several libraries in the post-Soviet space, most prominently the Russian National Library here in St. Petersburg, but also the Russian State Library and State Public Historical Library in Moscow, and the National Library of Armenia and the Fundamental Scientific Library of the Armenian Academy of Sciences in Yerevan.

### How did you become interested in Russian and Soviet history?

My interest in Russia began when I was a first-year high school student back in Cleveland. It was my initial interest in Armenian history that provided an 'opening' (if you will) to Russia, given that it was part of both the Russian Empire and the USSR. In fact, this factor was really quite significant - there is a big difference between (1) those states that were a direct part of the USSR as Soviet republics, from day one, and (2) those states that were members of the Warsaw Pact and basically satellites under Soviet influence. So, in a very direct way, my own national background was connected to this larger experience of the history of Russia and the Soviet Union. Furthermore, as a high school student, it was the history of the Russian Revolution that I found to be especially interesting, something that was encouraged by books like Jack Reed's Ten Days That Shook the World.

### What advice would you give to newcomers arriving at HSE University or in St. Petersburg?

Come with an open mind, expect the unexpected, and enjoy your time here. St. Petersburg is a great city with great culture, and it is a wonderful place to live, work, create, and be inspired!

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