

Skolkovo Russia  
August 10, 2012

# Skolkovo Tech

## Skolkovo Institute of Science and Technology



Mats Nordlund  
Vice President of  
Research

Greetings from Skolkovo Tech!

The spring and summer have been a fantastic whirlwind of events.

All our activities culminated in a single week during July, when we held our first Board of Trustees meeting, the Second Proposers Conference, the Second CEI Workshop and a Stakeholder Reception. Immediately following these events, we flew to Dublin for another conference. It has been very exciting to see all the talented professionals from every part of the globe come to Russia to join the team of supporters who share our vision.

For me and Skolkovo Tech, however, the most inspiring aspect of the past two months has been our progress towards founding our first three Centers for Research, Education and Innovation (CREI).

The quality of the proposals we reviewed astounded me both for their content and the team members involved. Many included Nobel Laureates and other prominent research leaders. Skolkovo Tech is indeed very fortunate to have the opportunity to work with individuals of this caliber right from the start.

Our team has executed each step with the highest level of professionalism, integrity and ethics. All three of which I continually emphasize, since success can only be achieved if we earn the trust and respect of all our stakeholders.

We take great pride in the outcome of the first round of proposals and are committed to continuous improvement. Thus, we will strive to be even better during the second round and implement lessons learned.

Our outreach efforts have also been very productive. Several delegations have visited Skolkovo Tech and our team has traveled to many Russian and foreign locations. Recently, we hosted delegations from Brazil, Germany, India, Ireland and the USA. In addition, nearly 600 participants attended our Second Proposers Conference in Skolkovo. Our team has traveled to France, Germany, Ireland, Israel and Sweden in order to generate further interest and increase support for Skolkovo Tech. We are now developing plans for Asia, focusing on China, South Korea, Japan, Hong Kong, Singapore and India to ensure participation from these countries in our next call for proposals.

It is truly a pleasure for me to work with everyone at Skolkovo Tech, and I look forward to our continued journey aimed at successfully establishing this amazing university!

Mats Nordlund  
Vice President of Research

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## Research@SkTech



“The main goal of the program is not just to finance the best research projects, but to find the best scientists who will be a part of creating Skolkovo Tech.”

Edward Crawley  
Skolkovo Tech President

### Skolkovo Tech Combines the Best Talent From Russia and Abroad to Create New Research Centers

At Skolkovo, near Moscow, Russia, 594 scientists, government officials and industrial representatives from Russia and around the world took part in the Second Research Center Proposers Conference from July 9 to 10.

The event organized by Skolkovo Tech and MIT promoted partnerships between Russian and non-Russian researchers — a requirement for proposing a Skolkovo Tech Center for Research, Education and Innovation (CREI). In workshops based upon the five strategic themes — Biomedicine, Energy, IT, Nuclear, and Space — groups of scientists from around the world presented their ideas for research and discussed how they could enter into three-way research projects to impact Russia and Skolkovo Tech.

CREIs are international partnerships, bringing together groups of researchers at three or more universities and research institutes to address critical problems facing the needs of industry and society, particularly in a Russian context. Each center will consist of research teams from a Russian university or institute, a non-Russian university and Skolkovo Tech. The typical CREI will also receive \$6 million to \$12 million worth of funding, depending on the scope of each research program.

Commenting on Skolkovo Tech’s accomplishments over the past nine months, President Edward Crawley said: “Each of our three spheres — education, innovation and research — is ramping up in parallel, but the research centers are the key element of our strategy. Research with a consideration of use will be driven by the needs of industry, and will drive the graduate education that we will deliver.”

At the conference, Skolkovo Tech also presented its foresight and strategy called Skolkovo Tech Vision 2030 and in working groups gathered feedback from the conference’s participants on the future critical areas for research and education.

“In the creation of the Centers for Research, Education and Innovation, it is pivotal to closely align the interests of the academic community and industry;” Vice President of Research Mats Nordlund said. “By addressing these stakeholders, we will maximize our contribution to impact critical problems facing Russia and our world.”

To aid in identifying the future research needs, industry leaders — Gazprom-Neft, IBS, National Composite Centre, Rosatom, SP Korolev Rocket & Space Corporation Energia and TNK-BP — also gave presentations to scientists. Later, in round tables, academics and industry collectively analyzed which areas of research would provide the

For more information about Skolkovo Tech’s Research Center program, please contact Ivan Sherstov, Director of Research, at [sherstov@skolkovotech.ru](mailto:sherstov@skolkovotech.ru) or contact [SkTech-rc-call@mit.edu](mailto:SkTech-rc-call@mit.edu).

Further information can be found at the SkTech/MIT Initiative website:



Almost 600 scientists from all over the world gathered for the Second Proposers Conference.

greatest potential to create technological breakthroughs. Russian scientists and society.

The events at Skolkovo Tech drew a major interest from the Russian press with 36 representatives from television stations, radio stations and the print media in attendance.

Director of Research, Ivan Sherstov utilized the opportunity to explain how the CREI would benefit

“It is of the utmost importance for us to place Russian scientists on equal terms with their colleagues around the world in designing cutting-edge technologies,” he told the press. “However, no one is willing to share their innovative ideas and technologies for free. By creating the collaborative research centers in Skolkovo, we are in essence gaining entrance to the world’s high-tech elite.”



Duane Boning, Faculty Lead of the SkTech/MIT Initiative answering questions at the Second Proposers Conference.



Researchers presenting their ideas for CREIs at the Second Proposers Conference in Skolkovo, Russia.

## Students@SkTech

### U.S. Amb. McFaul Welcomes Skolkovo Tech Students

On July 18, U.S. Ambassador to Russia Michael McFaul invited Skolkovo Tech students to an informal meeting at his residence at Spaso House to congratulate them and welcome them as they received their U.S. visas.

"I am confident that you will be a part of the history of Skolkovo Tech," Ambassador McFaul told radio station Voice of America. "You saw this chance and chose to be a part of this rare story! Steve Jobs and his generation literally changed the world in 20 years. I am certain that in 20 years you will do even more. I want to support you and also become a part of what you are doing."

Skolkovo Tech invited all of the 20 students participating in the first year of the Master's Fellowship Program in Information Science and Technology and Energy Science and Technology for this great opportunity, and 15 were able to take advantage of the occasion.

The Ambassador spoke candidly with them about his experiences in the Soviet Union, the importance of building ties between the two nations and expressed his support for the program.

They in turn asked him personal questions, gaining further insight into the Stanford professor's character and the educational system in the United States where 12 of them will study this coming year.

In August, the first group of students set off for MIT where they are participating in their first course on entrepreneurship and innovation. Skolkovo Tech purposefully chose this theme to orient all of the students' educational experience to focus on research with a consideration of use.

After the four-week course, they set off for one of four universities, Hong Kong University of Science and Technology, Imperial College London, MIT and Swiss Federal Institute of Technology (ETH) Zurich to study for a year before returning and finishing their program in Moscow. During the year abroad, Skolkovo Tech students will undertake a research project on the innovation ecosystems of their host universities. They will analyze each ecosystem's traits for integrating research, education, and entrepreneurship to implement them at Skolkovo Tech.

For more information about Skolkovo Tech students and admissions, please contact Bram Caplan, Director of Student Affairs at [caplan@skolkovotech.ru](mailto:caplan@skolkovotech.ru) or visit the student application website <http://apply.skolkovotech.ru>.



Students speak candidly with US Amb. Michael McFaul at his Spaso House residence.

## Partnerships@SkTech

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### Friends of SkTech met in Dublin.

A delegation from Skolkovo Tech met with members of the international science and education communities and launched Friends of SkTech on July 14 in Dublin, Ireland during the Euroscience Open Forum (ESOF).

Friends of SkTech is an international community of supporters who share the vision of Skolkovo Tech and offer their expertise, experience and networks to help develop the Institute.

During a round table discussion following Vice President of Research Mats Nordlund's presentation at the ESOF, an idea was raised to develop a panel of experienced advisors to guide Skolkovo Tech as it develops. Leveraging the interest shown at the presentation, Mr. Nordlund and Alexey Ponomarev, Vice President of Industrial Cooperation and Governmental Programs, gathered experienced educators and administrators from Ireland and abroad to discuss future cooperation.

At the meeting, Mr. Nordlund and Mr. Ponomarev gave a more in-depth presentation on Skolkovo Tech and its role in Russia's strategic efforts in science and education. Afterward, the group openly shared their experiences and advice on how to develop a university.

They also identified future risks that may have to be mitigated and advised on how to become established and accepted in the local area.

Before the end of the session, President Edward Crawley challenged them to serve on a more permanent basis. As a result, Provost of Trinity College Dublin John Hegarty and Bill Harris, President of the Science Foundation Arizona, took up the call to assist in steering the Friends of SkTech as an international panel offering their expertise, experience and networks to help develop the Institute.

### CEI Convenes Commercialization Experts to Mark 2012 Mid-Year Achievements

Seasoned commercialization experts from MIT, venture capitalists, government officials and experienced entrepreneurs gathered in Moscow from July 10 to 12 to support Skolkovo Tech's Center for Entrepreneurship and Innovation.

At the 2nd CEI Workshop, the participants affirmed the launch of the CEI's programs and pledged assistance for the new initiatives which will form an ecosystem for innovation and entrepreneurship within Skolkovo Tech.

Two of the highlights were Russian Venture Company CEO Igor Agamirzian and Alexey Komissarov, the Director of Moscow's Department for Science, Industrial Policy and Entrepreneurship, who shared their experiences as entrepreneurs and presented the current state of entrepreneurship in Russia.

The participants also listened to Dr. Luis Perez-Breva of the MIT School of Engineering as he gave an overview of the foundation Skolkovo Tech engineering students will receive in innovation during a month-long workshop at MIT.

The workshop continued as Executive Director of the MIT Venture Mentoring Service, Sherwin Greenblatt, presented a blueprint for the launch of a vital mentoring program at Skolkovo to advise emerging ventures from the university.

"The 2nd CEI Workshop was a great opportunity for us to reflect on the progress we have made over the first half of 2012. Through the programs at Skolkovo Tech, an innovative community at Skolkovo will link world-leading researchers in Russia with best practices in commercialization," said Ilia Dubinsky, Director of CEI. "We are excited about the work that still needs to be done, and our workshop established several additional opportunities for the CEI to consider adapting as we grow the activities of the Center."

## Leadership@SkTech



Kristina Edström  
Director of Educational  
Development

Education:  
Master's Sc. Eng.; Chalmers,  
Gothenburg

Career:  
1997 – KTH Royal Institute of  
Technology; Stockholm, Sweden  
2001 – Founding member of the  
CDIO Initiative

2010 – Elected to the  
Administrative Council of the  
European Society for Engineering  
Education

Favorite place:  
Swimming Pool

### Skolkovo Tech continues search for innovative leaders

Skolkovo Tech is actively seeking interested, committed and qualified applicants for faculty and staff positions.

Descriptions of staff positions can be found on [www.skolkovotech.ru](http://www.skolkovotech.ru).

### Beyond the Fundamentals

Skolkovo Tech is excited to announce the recent selection of Kristina Edström as the Director of Education Development. Within that role, she will support, educate and challenge Skolkovo Tech faculty and staff in implementing the Institute's vision in education.

In an interview, Kristina shares her thoughts on the vision and hopes for Skolkovo Tech's future graduates.

### What is your vision for the educational experience at Skolkovo Tech?

We will integrate fundamental knowledge with the skills for innovation in engineering and research. As I like to call it: we are integrating the discipline-led and problem-led approaches in the curriculum.

I am really serious about education for innovation. Our graduates need an extensive working knowledge in science and technology fundamentals; skills and habits for working effectively together within and across organizations and nations; and an understanding of the global marketplace and society. That is what our students will learn, and we are now in the process of formulating these learning outcomes and discussing them with our stakeholders.

### Why are real-life problems so important in education?

Just learning theory is not enough; you must be able to create solutions that really work for a particular problem. But remember that we aim at the integration of discipline-led and problem-led learning. By practicing what you learn, by connecting it with other knowledge and applying it to real-world problems, your disciplinary knowledge becomes truly meaningful and you understand it more deeply. If not, it just sits inert in your brain on a separate shelf that you can only bring out when a problem looks like exam questions.

I want them to choose real-life problems they care about. This is highly motivating for students – in fact for everybody – to work on problems that really matter to one's self. Then there is no limit to one's perseverance and will to learn.

Our students must already be developing these competences at university to be able to look at the world around them, identify interesting and important problems, use their disciplinary fundamentals to create solutions, and implement them in context.

### Why is it important to implement them in context?

Knowledge in the fundamentals is necessary, but not sufficient when creating solutions to practical problems nor ensuring wise decisions in our society. Engineering solutions come with tradeoffs which can lead to technical, social or economic benefits. You must understand your own role and be able to contribute in that very complex world. So much of that you can only learn through practice and reflection.

### What other skills will set Skolkovo Tech graduates apart?

We are not going to be just "more of the same." I believe it is our job to create a different kind of graduate. As I see it, our graduates will become agents of change, bringing Russia into the global market, and the global market into Russia. In addition to cutting-edge knowledge in science and technology, they will have great communication and collaboration skills and be ready for careers in the global workforce. This means in both Russia and abroad. They will be the change. They will contribute to increasing economic, social and environmental sustainability, in Russia and globally.

### What challenges do you foresee in achieving these goals?

The challenge is to create a shared understanding about the Skolkovo Tech vision, the understanding that we mean it, that we will actually align our actions to this vision. Many of us come from universities with all the right buzzwords on the website and in speeches, but the inside is dominated by business-as-usual. Therefore, we are not used to experiencing the coupling between a vision and how things work in reality – but creating that coupling is precisely our task here. If we just apply our old way of thinking and our old values, our university will become "more of the same." In that case we fail. We need to be on a constant lookout for the old thinking habits. I promise not to be shy about this. Part of my job description is to support, educate and challenge faculty and staff, so expect equal parts!

## Board of Trustees@SkTech

### Skolkovo Tech — A University for the 21st Century

The first Board of Trustees meeting for the Skolkovo Institute of Science and Technology took place in Moscow on July 9, 2012.

During the meeting, the Board of Trustees elected 10 new members from all over the world to their ranks. The new membership now pulls from experience in the government, business and higher education on three continents.

“I do not doubt that Skolkovo Tech will be the university for the 21st century.”

Vladislav Surkov  
Deputy Prime Minister  
Russian Federation

After the Board of Trustees meeting, Viktor Vekselberg, President of the Skolkovo Foundation, said: “We discussed the main question in creating Skolkovo Tech at the meeting. That is, how exactly the new university will fit into the existing higher-education and research system within Russia.”

“I do not doubt that Skolkovo Tech will be the university for the 21st century,” stated Deputy Prime Minister of the Russian Federation Vladislav Surkov, as he welcomed the newly selected members of the Board. “The government will support you and your faith in this bold project.”

The following members will join the ranks of the Board of Trustees alongside Edward Crawley, Vladislav Surkov, and Viktor Vekselberg:

- Alexander Abramov — Chairman of the Board of Directors for Evraz Group
- Noubar Afeyan — Founder, Managing Partner and CEO of Flagship Ventures
- Arden L. Bement — Director for the Global Policy Research Institute at Perdue University
- John Mark Deutch — Professor at the Massachusetts Institute of Technology (MIT) and Director for Citigroup, Cummins and Raytheon
- Herman Gref — President and CEO of Sberbank
- Nikolay Kudryavtsev — Rector at the Moscow Institute of Physics and Technology
- Alexander Kuleshov — Director of the Institute for Information Transmission Problems (Kharkevich Institute)
- Yunhe Pan — President of Zhejiang University and Vice President of the Chinese Academy of Engineering
- Jan-Eric Sundgren — Senior Vice President Volvo Group, professor
- Ernst-Ludwig Winnacker — Secretary General of the Human Frontier Science Program Organization



Clockwise: Viktor Vekselberg, Vladislav Surkov, Jan-Eric Sundgren, and Edward Crawley hard at work during the first Board of Trustees meeting.



# Join Skolkovo Tech

Skolkovo Tech launches its 2012-2013  
admissions cycle on September 1!  
To find out more and submit your application:

<http://apply.skolkovotech.ru/>

For all press related inquiries and  
to learn more about Skolkovo Tech,  
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