

Milner Prizes Illuminate Paradox of Russian Physics

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Russian entrepreneur and venture capitalist Yury Milner **Denis Grishkin**

Although a third of this week's winners of billionaire Yury Milner's Fundamental Physics Prize began their careers in Russia, their victory sends a mixed message about the state of Russian science, since all of them currently live and work abroad.

Milner, one of the founders of Mail.ru Group and Digital Sky Technologies, awarded a \$3 million Fundamental Physics Prize to each of nine scientists — more than double the amount scientists receive for winning the Nobel Prize in physics.

"There are probably a lot of talented people in Russia, but at this moment science has been thrown backwards," prize winner Andrei Linde, who works on cosmic inflation theories at Stanford, said.

Another winner, Alexei Kitayev, works at the California Institute of Technology and received

his prize for research on quantum computers. Maxim Konstantinovich is from the Institute of Advanced Scientific Studies in France and has worked on mathematical theories to unravel string theory.

Milner picked the first recipients of the Fundamental Physics Prize himself, but a committee made up of past winners will select future recipients.

Linde emigrated from Russia on New Year's Eve in 1988, and he still remembers how scientists from his institute used to work three jobs just to make ends meet.

According to scientists who stayed behind in Russia, the situation has not improved much.

"Young, talented fundamental physicists regularly appear in Russia," Grigory Vereshkov, physics professor at the Southern Federal University in Rostov-on-Don, wrote in an e-mail. "However, the maximum time they live and work in Russia is until they get their Ph.D. I do not know of any talented physicist under 30 years old who stayed to work in Russia after defending his thesis."

Kitayev, who left Russia in 1998, hopes that the prize will increase interest in professional science in his home country.

"Right now it is not a trendy profession," he said. "The idea is to make it more trendy and attract the attention of the government. That would be fantastic."

Vereshkov said that Milner's prize probably won't have a significant effect on the development of fundamental physics in Russia, but he is confident that young people who are truly interested in science will continue to go into this field of work.

"For a talented fundamental physicist, fundamental physics is not a profession, but a way of life," he said. "They pick this lifestyle in spite of everything."

In contrast to the Nobel Prize, scientists qualify for Milner's prize even if their theories have not yet been verified through experiments.

"I was stunned by the vision and generosity of the prize," said prize winner Nima Arkani-Hamed, whose theories on the Higgs Boson subatomic particle have not been proven.

In addition to the main prizes, Milner's foundation will award a \$100,000 New Horizons in Physics Prize for promising young researchers.

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