Deutsches Wissenschafts- und Innovationshaus – Moskau

Deutschland
Land der Ideen

Skoltech
Skolkovo Institute of Science and Technology

Computational Biology and Biomedicine
The Seventh German-Russian Week of the Young Researcher

Skolkovo Institute of Science and Technology (Skoltech)
12.-14.09.2017

In September 2017, the Seventh German-Russian Week of the Young Researcher will be held by the German Academic Exchange Service (DAAD) and the German Research Foundation (DFG) under the umbrella of the German House for Research and Innovation (DWIH Moscow). The main goal of these weeks is to encourage wider networking and stronger partnerships among early career researchers. Doctoral and postdoctoral researchers as well as professors are invited to come together and present their research projects in the field of "Computational Biology" at Skolkovo Institute of Science and Technology. The Week is organized with the support of the Embassy of the Federal Republic of Germany in Moscow.

Due to the digital revolution, the life sciences finally had a chance to access the molecular world where "The Music of Life" is played as Denis Noble puts it. By now, almost every field in biology and medicine flourishes with the help of computational data analysis since the first attempt to apply algorithms for the interpretation of biological sequences such as proteins and genomes. Information and communication technologies enable the exploration of huge data spaces generated by various experimental –omics technologies. Computational biology has evolved as a discipline reaching beyond the investigation of individual parts of the cell using concepts borrowed from computer science such as networks and systems biology models. The idealized computational view to a human individual as an information source including all variables such as genome, proteome, metabolome, and cellular images seems to be out of sight. But how, with millions of cases and their data stored in the future, can we head for better health care of all? Using "big data" in biology and medicine allows researchers to approach research questions in a new and a more complex way, but at the same time requires a deep and systematic understanding of the data, e.g. representing human biology, far beyond simple statistics.

Together with experts and young scientists we will take an interdisciplinary approach and will discuss particular topics of interest such as: challenges of genotype/phenotype relations, impact of computational biology on health care systems and further applications, the challenges to educate researchers in using computational concepts and techniques to understand big data, and the impact of Big Data for future personalized health care.

German-Russian Weeks of the Young Researcher take place in Russia once a year in order to discuss current topics of mutual interest. After focusing on several topics such as "Energy" (2011), "Health" (2012), „Aviation and Space" (2013), „Global History" (2014), "Discrete Geometry" (2015) and "Urbanism" (2016), this year we discuss Life Sciences at Skoltech. The Skolkovo Institute of Science and Technology is an international graduate research university in Russia. Situated on the outskirts of Moscow, the school was founded in 2011 with the support of the Skolkovo Foundation and the Massachusetts Institute of Technology (MIT). The mission of Skoltech is based on a new educational concept in Russia and aims at educating students, advancing knowledge, and fostering innovation in order to address critical scientific, technological, and global challenges.

For more information feel free to contact us:

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