PLANT GENOMICS AND TRANSCRIPTOMICS

Moscow Institute of Physics and Technology (National Research University)

Degree or qualification is awarded: **PhD (Candidate of Science)**

Language of study: **English**
Mode of study: **full-time**
Duration: **4 years**
Availability of free education: **yes**
Price: **375 000 RUB**

Programme webpage at the university website: https://eng.mipt.ru/programs/plant-genomics-and-transcriptomics/

Programme curator: **Denis Ustyuzhaninov**
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Research supervisor:
Artem Kasianov
PhD

Supervisor's research interests:
De novo genome assembly of plant genomes. Functional annotation of plant genomes. Transcriptomics and regulation in plants.

Research highlights:
My main research interests are in the field of plant genomics and transcriptomics. Currently, the main objects of research are the genomes and transcriptomes of plants such as F. esculentum and C. bursa-pastoris. You will be able to De novo assemble genomes, annotate them, and understand how genes works in plant.

Supervisor's specific requirements:

- Ability to work in Unix like operating systems.
- Ability to program in scripting programming languages such as Python or Perl.
- Interest in Plant science.

Main publications:

- Klepikova AV, Kasianov AS, Gerasimov ES, Logacheva MD, Penin AA. A high resolution map of the Arabidopsis thaliana developmental transcriptome based on RNA-seq profiling. Plant J 2016;88:1058-70. https://doi.org/10.1111/tpj.13312
- Kasianov AS, Klepikova AV, Kulakovskiy IV, Gerasimov ES, Fedotova AV, Besedina EG, et al. Highquality genome assembly of Capsella bursa-pastoris reveals asymmetry of regulatory elements at early stages of polyploid genome evolution. The Plant Journal 2017;91:278-91. https://doi.org/10.1111/tpj.13563
- Klepikova AV, Kulakovskiy IV, Kasianov AS, Logacheva MD, Penin AA. An update to database TraVA: organ-specific cold stress response in Arabidopsis thaliana. BMC Plant Biology 2019;19:49. https://doi.org/10.1186/s12870-019-1636-y

Specializations within this programme