

MODELS OF INFLUENCE AND (MIS)INFORMATION PROCESSES IN SOCIAL NETWORKS

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 curator: **Denis Ustyuzhaninov**

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Entry requirements:

- Master's degree / equivalent in a related field
- B2 level of English
- Good track record of publications related to the topic of the intended research
- Strong research proposal 1,500 - 3,500 words

Research supervisor:

[Ivan Kozitsin](#)

PhD

Supervisor's research interests:

My interests include, but are not limited to:

- Opinion formation models.
- Models of complex networks.
- Models of (dis)information processes in online social networks.

Research highlights:

Our current project is focused on analysis of the opinion dynamics of Russian users of VKontakte (the most popular online social network in Russia) from the perspective of opinion formation models. Here, we actively use methods from different disciplines such as statistics, machine-learning, and agent-based modeling. There is also opportunity to perform other research on related topics.

Supervisor's specific requirements:

- Basic knowledge in calculus, linear algebra, ordinary differential equations, discrete mathematics, statistics, optimization theory, and ability to learn new topics in them.
- Some experience in game theory, machine learning, databases, and agent-based modeling.
- Ability of designing and conducting computer experiments (in Python, R).

Main Publications:

- Ivan Vladimirovich Kozitsin & Alexander Alexeyevich Belolipetskii (2019) Opinion convergence in the Krasnoshchekov model, The Journal of Mathematical Sociology, 43:2, 104-121, DOI: 10.1080/0022250X.2018.1531398
- Kozitsin, I.V., Chkhartishvili, A.G., Marchenko, A.M. et al. Modeling Political Preferences of Russian Users Exemplified by the Social Network Vkontakte. Math Models Comput Simul 12, 185-194 (2020). <https://doi.org/10.1134/S2070048220020088>

- Ivan V. Kozitsin (2020) Formal models of opinion formation and their application to real data: evidence from online social networks, The Journal of Mathematical Sociology, DOI: 10.1080/0022250X.2020.1835894

Specializations within this programme