

Demyan Yarmoshik



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Education

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| Sep 2021 – Ongoing | Moscow Institute of Physics and Technology
<i>PhD in Optimization</i> |
| Sep 2019 – Jul 2021 | Moscow Institute of Physics and Technology
<i>MS in Renewable Energy Systems, thesis on distributed microgrid control systems</i> |
| Sep 2015 – Jul 2019 | Moscow Institute of Physics and Technology
<i>BS in Applied Mathematics, thesis on 0-1 laws in random graphs</i> |

Work Experience

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| Aug 2021 - Ongoing | MIPT
<i>Researcher (Applied Mathematics)</i> <ul style="list-style-type: none">• Research activities in distributed convex optimization field as a member of Alexander Gasnikov's scientific group• Development of an application for searching equilibria in traffic networks (RUT MIIT – MIPT research project, core member)• Seminars on Numerical Methods in Optimization for 3d-year students at DCAM and masters students at HSE FCS |
| Oct 2021 - Feb 2022 | Huawei, Moscow Research Center, RTT Lab
<i>RnD Software Engineer</i> <ul style="list-style-type: none">• Applying global optimization techniques in search of optimal error-correction codes under PAC framework |
| Mar 2020 - Ongoing | Scientific and Technical Center of Autonomous Energy of MIPT
<i>Engineer-Programmer, part-time from Aug 2021</i> <ul style="list-style-type: none">• Mathematical analysis and program development of high-level (economic dispatch / optimal power flow) multi-agent control system for the microgrids with renewable energy sources• Solving optimal sizing problem• Launching of autonomous energy supply system with wind generation and energy storage located at the Yamal Peninsula |
| Oct 2018 - Mar 2020 | Rutoken
<i>Intern/Junior Developer (Java, C++)</i> <ul style="list-style-type: none">• Support of C++ cryptography (PKCS11) library• Development of Android app (Java) that demonstrates usage of this library. |

Skills

- English B2
- Programming: Python, C/C++, Linux, Git
- Maths: Optimization, Control Systems, Algorithms and Data Structures, Machine Learning, Probability and Statistics, Calculus and Linear Algebra



Publications

- 2022 | 1. Rogozin, A., **Yarmoshik, D.**, Kopylova, K. & Gasnikov, A. Decentralized Strongly-Convex Optimization with Affine Constraints: Primal and Dual Approaches. *arXiv preprint arXiv:2207.04555* (2022).
2. **Yarmoshik, D.**, Rogozin, A., Khamisov, O. O., Dvurechensky, P. & Gasnikov, A. *Decentralized Convex Optimization Under Affine Constraints for Power Systems Control in Mathematical Optimization Theory and Operations Research* (eds Pardalos, P., Khachay, M. & Mazalov, V.) (Springer International Publishing, Cham, 2022), 62–75.
- 2021 | 3. Kotliarova, E. V., Gasnikov, A. V., Gasnikova, E. V. & **Yarmoshik, D.** Finding equilibrium in two-stage traffic assignment model. Russian. *Computer Research and Modeling* **13**, 365–379 (2021).