Dyachenko Roman Romanovich

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EDUCATION

- **Skoltech, HSE** — September 2024 - Present time
  The masters in Math of Machine Learning, administered jointly by HSE University's Faculty of Computer Science and Skoltech

- **Lomonosov Moscow State University** — September 2020 - July 2024
  Faculty of Computational Mathematics and Cybernetics, 4th year of Bachelor's degree. GPA: 4.74/5.0
  Department of Computing Technologies and Modeling (INM RAS)

- **AESC MSU — Kolmogorov Boarding School** — September 2018 - June 2020
  The Advanced Educational Scientific Center (faculty) – Kolmogorov's boarding school of Moscow State University

WORK EXPERIENCE

- **Junior Researcher at the joined scientific laboratory Huawei - INM RAS** — September 2023 - Present time
  1. Channel estimation in OFDM systems (Tensors methods for approximation noisy data and algorithm acceleration)
  2. Compensation of Kerr nonlinearity effect in optical communication systems (Fast numerical methods for solving and approximating the inverse problem of the one-dimensional Schrodinger equation)

- Member of the Student scientific organization of MSU the main organizer of the international student scientific conference «AI Technologies in science and Education» — December 2023

- **Internship in Huawei Russian Research Institute** — July 2023 - September 2023
  Development of fast tensor algorithms for the DPD problem in 5G wireless communication networks

- **Effective implementation of conjugate gradients CG and Gram-Schmidt orthogonalization QR** — Winter 2023
  Using Python, Numba, mulipocessing, C++, BLAS, LAPACK, MPI, OpenMP

- **Tutor in mathematics and computer science PROFI** — September 2021 - June 2023

SCIENTIFIC EXPERIENCE

- **Publication in the Q1 journal Phys. Rev. E 108** — October 2023
  Finite-size effects in addition and chipping processes R. R. Dyachenko, S. A. Matveev and P. L. Krapivsky

- **Speaker at the conference on Matrix Methods in Mathematics and Applications MMMA-2023** — August 2023
  Fast Monte-Carlo method for Smoluchowski aggregation with sources

ACHIEVEMENTS

- Winner of the Quantaton as part of the team "Noise Traders" — 2024

- Huawei INM RAS Scholarship (for the best scientific reports) — 2023

- Winner of the first degree of the ITMO Olympiad in Informatics — 2020
  2nd absolute place of 3000 participants

- Prize-winner of the interregional Olympiad of schoolchildren named after I.Ya. Verchenko in mathematics and cryptography — 2020

AREA OF SCIENTIFIC INTERESTS

- Monte Carlo methods for modeling dynamic systems and acceleration of sampling algorithms

- Tensor methods of approximation and acceleration of calculations

- Modern methods of data analysis

TECHNICAL SKILLS

- **Languages:** Python, C/C++, Fortran, Bash
- **Libraries:** BLAS, LAPACK, MPI, OpenMP, numpy, pandas, matplotlib, SciPy, SPARSKIT, slkearn, STL
- **Favorite courses:** Numerical Linear Algebra, Probability theory
- **Other:** Latex, English - B2

EXTRACURRICULAR

- Finisher of the Moscow Half Marathon (21.1 km) — 2023, 2024

- I am actively engaged in organizational activities at my faculty: I hold events with students and teachers within the framework of my department and trade union organization