EGOR IM

PhD Candidate in Theoretical Physics

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Zürich, Switzerland

neg0rim

in egor-im



EXPERIENCE

Scientific Assistant **ETH Zürich**

📋 Jun 2021 - Jun 2025

- Zürich, Switzerland
- conducting **research** in the field of mathematical physics;
- conducting **tutorials** for bachelor and master students in the course of 6 semesters:
 - preparing materials for weekly classes;
 - helping students with understanding complex mathematical and physical concepts and solving problems;
- assisting with the **supervision** of two master theses.

RESEARCH PROJECTS

Polylogarithm Functions on Higher-Genus Surfaces **ETH Zürich**

study of special functions on 2D surfaces:

- in **international collaboration** with 5 researchers;
- developed a C library (using openMP, GSL) to evaluate functions numerically with a Python package-wrapper;

Algebraic Structures in AdS/CFT Integrability ETH Zürich

individual supervised research project to study algebraic structures in the context of AdS₅/CFT₄ integrability

- applied mathematical framework to a physical problem;
- developed a Mathematica package for Hopf algebras.

EDUCATION

PhD in Theoretical Physics

ETH Zürich

☐ Jun 2021 – Ongoing ▼ Zürich, Switzerland

Advisor: Prof. Niklas Beisert (nbeisert@ethz.ch)

MSc in Physics

ETH Zürich

Sep 2019 - Apr 2021

Zürich, Switzerland

GPA: 5.8/6.0 with distinction

Major fields of study: theoretical physics

mathematics

BSc in Applied Mathematics and Physics St Petersburg University

☐ Sep 2015 - June 2019

St Petersburg, Russia

GPA: 5.0/5.0 with distinction

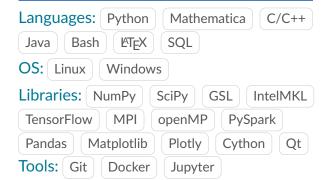
Major fields of study: computational physics | HPC

numerical algorithms | programming | statistical analysis

RELEVANT COMPETENCES

- Analytical mindset and problem-solving skills gained through research in theoretical physics.
- Deep knowledge of mathematical and computational methods for solving complex problems.
- **Programming** skills in Python, C/C++, and Java.
- Hands-on experience with parallel programming and numerical libraries.
- Data analysis and visualization skills.
- Solid software development experience.

TECH SKILLS



LANGUAGES

English (C1 level) German (B1 level) Russian (native)



OTHER ACTIVITIES

Organization of IGST 2023

☐ Jun 2023

▼ ETH Zürich

Organization of the conference "Integrability in Gauge and String Theories 2023".

developed a set of Bash scripts to automate the hybrid setup of the conference

Night of Physics 2022

📋 Jun 2022

■ ETH Zürich

Participated in the public scientific fair with a stand on the topic of curved spaces.

 developed the simulator (using C++ and openMP) to travel through curved 3D spaces hypray2

Article Management Tool

GitHub: egOrim/amt

Developer of a tool to manage articles and references for scientific writing.

• uses Python, PySide/PyQt, SQLite

CONFERENCES

Talks

- Workshop on Representation Theory and Mathematical Physics "New Perspectives on Yangians and Quantum Affine Algebras", Parma, Italy, 1-3 October 2024.
- The XXVIII International Conference on Integrable Systems and Quantum Symmetries (ISQS28), Prague, Czech Republic, 1-5 July 2024.

REFEREES

Prof. Niklas Beisert

ETH Zürich

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Dr. Johannes Brödel

ETH Zürich

@ jbroedel@ethz.ch

PUBLICATIONS

Journal Articles

- K. Baune, J. Broedel, **E. Im**, A. Lisitsyn, and Y. Moeckli, "Higher-genus Fay-like identities from meromorphic generating functions," Sep. 2024. arXiv: 2409.08208 [hep-th].
- K. Baune, J. Broedel, **E. Im**, A. Lisitsyn, and F. Zerbini, "Schottky-Kronecker forms and hyperelliptic polylogarithms," *J. Phys. A*, vol. 57, no. 44, p. 445 202, 2024. DOI: 10.1088/1751-8121/ad8197. arXiv: 2406.10051 [hep-th].
- N. Beisert and E. Im, "Affine Classical Lie Bialgebras for AdS/CFT Integrability," Jan. 2024. arXiv: 2401.10327 [hep-th].
- N. Beisert and **E. Im**, "Classical Lie bialgebras for AdS/CFT integrability by contraction and reduction," *SciPost Phys.*, vol. 14, no. 6, p. 157, 2023. DOI: 10.21468/SciPostPhys.14.6.157. arXiv: 2210.11150 [hep-th].