ARTEM VERGAZOV

Product Analyst

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SKILLS

C/C++/C# | Python | MATLAB

VS/VS Code | Code::Blocks | PyCharm

Intel VTune/Advisor

TensorFlow | Keras

PyTorch | Eigen

ML | DL | DS | Analytics

Numerical Methods

Math Modeling

Hydraulic Fracture Modeling

LANGUAGES

Russian: Native

English: Advanced / C1

EXPERIENCE

Intern | Schlumberger Moscow Research (SMR)

Feb 2020 – u.t.d. | Moscow, Russia

Project Involvements

- Development of competitive computational tools for hydraulic fracture simulation
- Hydraulic fracture closure on proppants for one of fracturing simulators in Kinetix
- Development of elastically open fracture model for Kinetix simulator
- Development of Boundary Integral Equation Solver for non-local elasticity
- Higher-Order Approximation Displacement Discontinuity Method for improved accuracy in fracture width computation
- Development of computationally effective numerical schemes and algorithms for geomechanics models in MATLAB, C++, and Python
- Unit & system tests in Visual Studio C++ projects
- Code profiling for speedup using Intel VTune/Advisor
- Advising other team members on the theory of numerical methods and consulting on C++ software development techniques

Achievements

- Development of the computationally effective method of high-resolution hydraulic fracture closure modeling
- Implementing highly accurate quadratic DDM
- Revision and speed up of existing model
- Presenting results of the work at 2 company internal workshops
- Mentioning in the acknowledgements in the paper in Engineering Fracture Mechanics Magazine for contribution to elastically open fracture model development: https://doi.org/10.1016/j.engfracmech.2020.107071

EDUCATION

MSc | Skoltech

2021 – 2023 | Moscow, Russia

- Program: Advanced Computational Science
- GPA: B (4.44/5.00)
- Field of Research: Machine Learning and Data-Intensive Modeling
- Thesis: not proposed yet
- Advisor: Vladimir Palyulin, Assistant Prof.

BSc | Lomonosov Moscow State University

2017 – 2021 | Moscow, Russia

- Faculty of Physics, Department of Applied Mathematics, Chair of Mathematics
- GPA: 4.94/5.00 (**diploma with honors**)

- Field of Research: Numerical Methods and Mathematical Modeling
- Thesis: Accuracy Control in Stiff System Integration
- Coursework: “Tools for constructing artificial neural networks for classification problems in particle astrophysics” (at the Chair of Nuclear Physics and Quantum Collision Theory)

Publications in Preprints of Keldysh Institute of Applied Mathematics

- Belov A.A., Vergazov A.S., Kalitkin N.N. Numerical solution error of stiff Cauchy problems on geometrically adaptive meshes // Preprints of Keldysh Institute of Applied Mathematics. 138 (2019), p. 23 DOI: 10.20948/prepr-2019-138
- Belov A.A., Vergazov A.S., Kalitkin N.N. Accuracy control in stiff system integration // Preprints of Keldysh Institute of Applied Mathematics. 2020. № 88, p. 27 DOI: 10.20948/prepr-2020-88

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- Russian Fund for Basic Research, project No. 18-01-00175
- the President grant MK-1780.2019.1

OTHER

Holder of Moscow government scholarship 65K/year

2017 – 2021 Moscow, Russia

for 100 score at Unified State Exams both in Physics and Mathematics