Mokrov Kirill

━━━ Personal Information

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━━━ Education

2016 – 2020	**Moscow State University** Faculty of Computational Mathematics and Cybernetics Department of Supercomputers and Quantum Informatics GPA 4.75 / 5.0

━━━ Technical skills

General	Data structures, Algorithms, Object-oriented programming, Basic knowledge of the Linux/Unix operating system
Languages	C/C++, Python
Libraries	MPI, OpenMP, PAPI, POSIX Threads, FFTW, Numpy, OpenGL, CUDA
Technologies	Git, Travis-CI, Redis, RabbitMQ

━━━ Strengths

Hard-working, Communication, English(Intermediate)

Time Management, Critical Thinking

━━━ Projects

o **Finite fields and BCH codes**
  - Basic operations in F_2^q
  - Basic operations for working with polynomials in F_2^q
  - Systematic coding procedure for cyclic code defined by its generating polynomial
  - Procedure of decoding the BCH code using the PGZ method and method based on the extended Euclid algorithm.

o **Realization of quantum gates and algorithms**
  - Hadamard gate with noise, fidelity measurement
  - Hadamard, n-Hadamard, Phase-shift, NOT, CNOT, CPhase-shift gates
  - Quantum Fourier transform

o **Syntax analyzer**
  - Implemented by recursive descendant method
  - Defining types of all subexpressions
  - Detects lexical, syntactic and semantic errors

o **E-store**
  - Storing information in Redis data structure.
  - Messages are forwarded via RabbitMQ.
  (Client <—> RabbitMQ <—> Store logic <—> Redis)
  - The buyer can view the goods, add to the cart, see the statistics, in the end get the shopping done.

o **Numerical solution of the equations of change in the magnetic field**
  - Using an explicit schema in calculations
  - Calculating a multidimensional Fourier transform using the FFTW library
  - Implementation of div, rot, and derivate calculations

Interests and researches

Graduate qualification work

Development of the method for weak scalability predicting of supercomputer applications

Scientific interests

Parallel and High Performance Computing

Quantum computing

GPU computing