

Sergey Ozerov

Expert Software Engineer · C++ / HPC / SLAM

<https://0serg.dev> · Armenia (remote-friendly) · Russian Federation
Russian (native), English (C1), Armenian (A1)



CONTACTS

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SUMMARY

- Expert Software Engineer / C++ specialist with 20+ years of desktop development
- Focus: high-performance computing, math-heavy algorithms, 3D scanners, SLAM
- Master of Mathematics (Computational Mathematics), Moscow State University, 2006
- 24 patents (US and RU); articles for Habrahabr and Computerra
- Experience in a large distributed multinational R&D organization (Align Technology, S&P 500)

EXPERIENCE

Align Technology — Expert Software Engineer

2007 – present (Moscow R&D prior to 2022; Yerevan R&D since 2022)

- Desktop C++ development for CAD/CAM treatment planning (optimization-based automation)
- From ~2011: iTero intraoral 3D scanners across 4 product generations
 - iTero HDU / HD 2.9 — software developer
 - iTero Element / Element 5D — team leader; major codebase rewrite
 - iTero Lumina — architect / principal developer of C++ algorithmic core
- Lumina: SLAM core, actor-based multithreaded app engine, HW collaboration (incl. HW-related patents)
- Designed automatic SQA for recent scanner generations (3D surface quality, performance tests)
- Globally consistent multi-scan registration algorithm outperforming classic LUM (Lu & Milios)
- Mentored developers; occasional people-manager duties; Scrum; cross-region collaboration

Earlier

- ~2004–2006: part-time technical journalism (CeBIT, IDF, Computex; Computerra and related)
- Student years: computer vision / 3D stereo filming research project (MSU school contacts; Korea exchange)

EDUCATION

- Master of Mathematics, Computational Mathematics — Moscow State University (Lomonosov), 2006 (GPA 3.7 / 4.0)
- Kolmogorov boarding school for talented students (MSU), 1999-2001

SELECTED SKILLS

- C++17/20, multithreading (atomics, actors), SSE/AVX, profiling (VTune), x86 debugging
- Python (NumPy, SciPy, pandas) for prototyping and tests; Qt (widgets, QML)
- 3D graphics / 3D data processing, SLAM, Eigen, OpenCV, Boost
- Test-driven development, automatic SQA pipelines; Git, JIRA, Bitbucket, Conan, MSBuild
- LLMs as development aids (planning, search, review); some classical ML / NN exposure

SELECTED ACCOMPLISHMENTS

- Key contributor to four generations of commercially successful iTero scanners
- Principal algorithmic C++ core for iTero Lumina (PoC team lead → large multi-team product)
- Automatic quality-assurance system used on last two iTero generations
- Coauthor / contributor on patents covering AR dental tools, intraoral scanning HW/SW, and related topics

LOOKING FOR

- A remote job or a job in Yerevan
- Hard-working roles that need strong math and C++ / HPC / complex algorithms
- Open to expanding beyond 3D scanners while keeping depth in performance-critical systems
- Not open to relocation unless it is very well compensated