CEMWORKS

300-136 Market Ave.
Winnipeg, MB R3B 0P4

C++ Software Developer at CEMWorks Inc.

We seek a new member of the Research & Development team to facilitate work on current and future projects with the focus on software development for computational physics. The ideal candidate is interested in efficient C++ implementations of challenging algorithms, as well as the best practices for the design of modular, testable, and extendible software architecture.

At CEMWorks, we strive to enable accurate electromagnetic simulations for the upcoming smart cities, autonomous self-driving cars, 5G networks, and new generations of computer chip interconnects. This ambitious goal requires us to build a team of the most talented professionals who enjoy the opportunity to work in the challenging and very rewarding environment of large-scale numerical simulations.

Writing C++ code to test novel and well-established concepts for fast and accurate solution of electromagnetics challenges will constitute the major part of the job. The new team member is also expected to participate in code testing/verification/validation, fixing software errors and present the work results in a form of technical reports, presentations, and whitepapers.

Responsibilities

- Design and develop new components in C++ for the existing software architecture and propose improvements for performance, extendibility, and maintainability
- Write well-designed, testable computer code
- Prepare software documentation according to company's standards
- Deploy software, perform and analyze numerical simulations

Required Qualifications

- B.Sc. degree in Computer Science or Computer Engineering or equivalent experience in writing code for scientific computing
- C++ fluency with good understanding of new C++11/14/17 features and desire to write beautiful and efficient code
- Knowledge of commonly used design patterns and object-oriented programming
- Confident usage of Linux/Unix systems and exposure to version control systems (GIT)
- Strong math background

Desired Skills and Qualifications

- Experience with computer simulations of physical phenomena using numerical methods
- Experience with coding for high-performance computing environment and parallel programming technologies (OpenMP, TBB, MPI, etc.) is an advantage
- Strong math background

Apply by email to jobs@cemworks.com