



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

Scientific Programmer at CEMWorks Inc.

We seek a new member of the Research & Development team to facilitate the work on current and future projects with the focus on computational electromagnetics. The ideal candidate is interested in cutting-edge techniques for numerical modeling and enjoys solving scientifically challenging problems.

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 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 the form of research reports, presentations, and conference papers.

Responsibilities

- Contribute as a team member on development of the software and algorithms for computational electromagnetics
- Design algorithms and test their implementation on practical examples
- Write well-designed, testable computer code
- Prepare software documentation according to company's standards
- Improve general code performance and adapt it to high-performance computing software & hardware architectures
- Deploy software, perform and analyze numerical simulations

Required Qualifications

- M.Sc. degree in a quantitative research field (engineering, computational physics, mathematics, computer science, etc.)
- Experience with computer simulations of physical phenomena using numerical methods
- Ability to write C++ code for scientific computing
- Strong math background
- Some exposure to Linux/Unix

Desired Skills and Qualifications

- Ph.D. degree in a quantitative research field
- Fluency in C++ and object-oriented programming with application to parallel high-performance computing
- Experience with CAD software and common computational geometry algorithms
- Exposure to electromagnetic theory and common algorithms for computational electromagnetics

Apply by email to jobs@cemworks.com