R&D Scientist - Numerical Modeling of Semiconductor Devices (Apply Online)

R&D – Vancouver, British Columbia

The Opportunity

Lumerical is seeking an R&D Scientist to join our R&D team and contribute to our industry-leading photonic design software which runs on some of the world's largest parallel supercomputers. The R&D Scientist is capable of accepting challenging requirements for high-risk R&D problems, working independently to meet those requirements using original or existing concepts, communicating solutions concisely and working with the software development team to implement solutions in highly optimized software. The successful candidate works both independently and within a highly-integrated team to:

- Enhance our simulation products by improving and optimizing existing algorithms, and developing new algorithms, solvers and simulation methodologies;
- Assess feasibility and prototype new or existing numerical simulation techniques to confront challenging, industrially-relevant problems;
- Assist the product marketing team in identifying product requirements by interfacing with internal stakeholders as well as external users, including prospective customers;
- Work in conjunction with the software development team to commercialize best-in-class modeling algorithms within highly-usable software products;
- Support product end users by acting as a technical resource;
- As required by the product marketing team, respond to specific customer requests for improved modeling capabilities by adding or improving algorithms in a timely manner; and
- Keep abreast of the latest developments in relevant numerical simulation methods as applied to leading-edge applications employing photonic components, devices and processes.

Qualifications

The successful applicant will possess all or most of the following qualifications and experience:

- Ph.D. in Physics, Electrical Engineering or equivalent;
- Comprehensive knowledge and understanding of semiconductor device physics and optoelectronics;
- Familiarity with semiconductor device simulation;
- Demonstrated experience with numerical techniques for non-linear systems;
- Minimum 3 years of experience in software development for numerical modeling;
- Proficiency with MATLAB and C/C++;
- Advanced understanding of quantum transport in semiconductor systems;
- Experience implementing algorithms for semiconductor transport simulation, including semiconductor behavioural modeling;
- Excellent problem solving skills and analytic ability; and
- Excellent verbal and written communications skills.

Any of the following additional qualifications would be considered an asset:

- Experience with finite element numerical simulation, numerical optimization, and/or distributed computing techniques;
- In-depth knowledge of object-oriented design in C++; and
- Experience with software development best practices, including revision control and defect tracking.

The ideal candidate is a self-starter, able to operate both independently and as part of a tightly-knit team on a variety of projects within a fast-paced and dynamic environment. They will have a desire to improve the way in which their responsibilities are met so as to deliver best-in-class software products to the customer by adopting innovative approaches.

Location of Employment: Suite 1700 - 1095 West Pender Street, Vancouver, BC, Canada

Term of Employment: Permanent, full-time position

Wage: $70,000 - $120,000 annually depending on experience

Benefits: Extended health care, dental, life insurance, dependent life insurance, AD&D, long-term disability

Start Date: As soon as possible

Apply for this position online or send your resume and a cover letter to hr@lumerical.com, or Suite 1700 - 1095 West Pender Street, Vancouver, BC, V6E 2M6, Canada (attention HR department)

Contact Information & Business Address

Lumerical
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