

Job Description

At Coventor, we build innovative software products to solve semiconductor technology challenges. Our 3D modeling software is revolutionizing the way that semiconductor chips are fabricated around the world. Enabled by our core intellectual property – an accelerated 3D voxel modeling and visualization engine – our software is evolving fast as our business and customer base expands rapidly.

We are searching for a talented software engineer with a strong background in GPU computing and rendering to join our development team. Our voxel-based 3D modeling engine creates highly accurate and topologically complex models of nanometer-scale semiconductor devices. Consequently, the accurate real-time visualization of such large structures across a variety of hardware platforms is a major challenge. You will participate in the development of a GPU-based ray-tracing engine for complex voxel models, in the implementation of advanced data visualization techniques, as well as in the implementation of other general-purpose computing algorithms on the GPU.

This is a perfect role for candidates who are interested in GPU computing, ray-tracing, 3D computer graphics as well as software engineering in a commercial environment. You will work closely with our semiconductor process technology team to understand technical requirements of our partners and customers. Your work will enable Coventor and our customers to visualize and inspect the highly complex 3D structures of today's semiconductor devices in real time.

Responsibilities

- Participate in the development of a GPU-based real-time ray-tracing engine for complex 3D voxel models
- Implement advanced 3D data visualization algorithms
- Accelerate voxel model operations, numerical linear algebra functions, or geometry processing algorithms
- Collaborate with our applications team to understand and troubleshoot customer requests and problems
- Create high-quality software including unit tests and documentation

Required Qualifications

- PhD or MS in computer science related to GPU computing, computer graphics, or equivalent experience
- Expertise in GPU computing, ray-tracing, level-of-detail techniques, handling of large data sets on the GPU
- In-depth knowledge of one or more GPU computing toolkits such as NVIDIA® CUDA™, OpenCL™, or Vulkan®
- Strong background in C++ programming and software engineering
- Strong fundamental math skills
- Excellent communication skills in English, both written and oral, as well as the ability to clearly communicate technical concepts

Desirable Qualifications

- Familiarity with multiple GPU computing toolkits on different platforms is a plus
- Experience with GPU performance profiling and debugging tools
- Experience with voxel modeling and/or geometry processing algorithms
- Knowledge of agile methods, object-oriented design, design patterns, and cross-platform development (Windows/Linux)
- Experience with C++ libraries such as boost, STL, or Qt. Familiarity with C++11 and template programming. Python coding skills.
- Any professional software development experience is a plus, preferably developing a 3D modeling software product
- Knowledge of semiconductor process technology, or any software related to semiconductor design or manufacturing

Salary, job title, and responsibilities will be commensurate with experience. This opening is in Villebon-sur-Yvette, close to Paris, or in Dublin, Ireland. If you are interested in this opportunity and you are authorized to work in France or Ireland, e-mail your resume in English to jobXXX@coventor.com.