



Quirijn Bouts
Software Design Engineer
ASML

About Me

I am a passionate software engineer with a broad interest and skill set. My education and PhD have provided me with a strong background in algorithms and excellent problem solving skills. My experience in education has given me the communication skills needed to explain complex problems and work together to find the optimal solution.

Experience

- Algorithms
- Design Patterns
- Agile / SCRUM
- Test-Driven Development
- C++11/14/17

Programming

- C++
- GLSL
- Perl
- Python
- PHP

Contact

- **Email:** info@qbouts.com
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- **Birth Date:** 13-04-1990
- **Nationality:** Dutch
- **Languages:** Dutch & English

Experience

Software Design Engineer at ASML 2017-now

Metrology Department

ASML is the largest supplier in the world of photolithography systems for the semiconductor industry. Simply put: ASML makes machines to 'print' computer chips. As a software design engineer in the metrology department I am responsible for designing and writing software to do the measurements that are needed to work at a nanometer scale.

Our team follows an agile way of working (SCRUM) and has a high focus on quality. I myself try to apply test-driven development as much as possible and ensure that all software I design is efficient, maintainable and testable.

PhD Candidate: Eindhoven University 2013-2017

Applied Geometric Algorithms Group - Promotor: Prof. dr. Bettina Speckmann

Research Area: My research was in the area of computational geometry, which is a branch of algorithms focussing on problems which can be expressed in terms of geometry. To put it simply: if your data has coordinates associated with it, then you can use geometric algorithms to process it.

Thesis: "*Geographic Graph Construction and Visualization*"

My thesis focusses on geographic graphs. A graph is a mathematical way to represent a network and consists of points and connections between them. In a *geographic* graph the points represent locations and have coordinates, which makes them an important part of many geometric algorithms.

Results: Over the course of my PhD I have improved upon state of the art solutions to various problems. My findings were published in top-tier conferences and journals. Most projects involved proof of concept code to show how a theoretical break-through can be applied in practice.

Member of the PhD Council 2015-2016

As a member of the PhD Council I was involved in the organization of several workshops and events. Furthermore, the council was regularly asked for input by the board on decisions related to PhD candidates at the university.

Jury of the BAPC: ACM-ICPC Jun. - Oct. 2014

The Benelux Algorithm Programming Contest (BAPC) is one of the preliminaries for ACM-ICPC International Collegiate Programming Contest. After participating in the BAPC several times as a student, I was asked to join the Jury in 2014.

Education

Master Computer Science and Engineering Eindhoven University (Honors, Cum Laude) 2011-2013

After developing an interest in algorithms during my bachelor I customized my master to include every algorithms course thought by either the computer science or the mathematics department. I also participated in the Honors programme which consisted of an algorithms and a visualization project.

Master Education and Communication Eindhoven University (Partially completed) 2011-2013

I initially started a double master program in order to obtain my teaching qualification next to my master in computer science but decided to stop the education master when I was offered a PhD position.