# CHRISTOPER VERZIJL, PhD

# RÉSUMÉ

Scientific, financial and engineering expertise, effectively communicated.
Interested in solving challenging problems that cross disciplines and borders.

## EXPERIENCE

| 2012 – PRESENT | ABN AMRO Bank N.V. | Amsterdam, Netherlands |
| DESCRIPTION | **Quantitative Risk Specialist** | |

As a quant at the Investment Strategy & Portfolio Expertise group, I work mainly on projects centered around risk/return modeling & scalable analytics for ∼100K clients globally:

- developing risk-bandwidth and -budget models for monitoring client portfolios,
- team lead (4) in developing an integrated platform for performance & risk analysis,
- team lead (5) in developing a business-intelligence platform for investment products & portfolios.

I also work on research projects, such as:

- developing novel risk visualizations to strengthen a risk-aware investment process,
- assessing risk/return trade-offs between active- and passive management of mutual-funds,
- analyzing Monte Carlo performance on pricing and risk of structured products.

| 2013 | Scientific Computing & Modeling N.V. | Amsterdam, Netherlands |
| DESCRIPTION | **Postdoctoral Researcher – Scientific Programmer** | |

Worked on the integration of our molecular-transport code into the commercial ADF/BAND DFT code (scaling up to supercomputer calculations; ADF2013). This included giving tutorials and work on developer documentation and a proposed GUI front-end.

| 2008 – 2012 | Foundation for Fundamental Research on Matter | Utrecht/Delft, Netherlands |
| DESCRIPTION | **PhD Researcher – OIO** | |

My doctoral research improved models for electronic transport in single-molecule nanostructures, to understand molecular-electronics experiments at the Kavli Institute of Nanoscience in Delft:

- addressing quantum transport, quantum chemistry and parallel algorithm design,
- with results presented at a number of international conferences & published in the peer-reviewed literature,
- and released in the commercially available *Amsterdam Density Functional* quantum-chemistry code.

My teaching experience in Delft included designing and teaching a graduate-level tutorial on quantum chemistry, and coaching students in a team-based computational physics course split collaboratively with Michigan State University.

| 2006 – 2010 | Clear Cincom B.V. | Delft, Netherlands |
| DESCRIPTION | **Consultant – Radio Network Planner** | |

In the field and in the lab, my work covered test design, execution & analysis for:

- the test & validation of the HSL and Hanzelijn high-speed rail lines, and on the annual coverage-tests for the Netherlands' national railway network, and
- authoring a number of working papers outlining a GSM-R test methodology which was used as a best-practice approach by the company in the Netherlands and Tunisia.

## Education

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| Ongoing | **Chartered Financial Analyst**, CFA Level III candidate | CFA Institute |
| School | **Santa Fe Institute** | Santa Fe, New Mexico |
| 2015 | Complex Systems Summer School | |
| School | **Delft University of Technology** (**TU Delft**) | Delft, Netherlands |
| | Aerospace Engineering, Applied Physics & Applied Mathematics | |
| 2007 – 2012 | PhD in Physics | |
| 2005 – 2007 | MS in Applied Mathematics, *cum laude* | |
| 2004 – 2007 | MS in Aerospace Engineering, *cum laude* | |
| 2003 – 2007 | BS in Applied Physics, *cum laude* | |
| 2000 – 2004 | BS in Aerospace Engineering, *Sterbeurs* scholarship | |
| School | **University of Texas** (**UT Austin**) | Austin, Texas |
| | Aerospace Engineering & Center for Space Research | |
| Fall 2005 | Graduate Research Internship | |
| School | **H. Milton Peters College** (**VWO**) | St. Maarten, Netherlands Antilles |
| 1994 – 2000 | Class of 2000, *valedictorian* | |

## Specialization

I am interested in understanding and using complex patterns and hidden structure in dynamical systems. This "red thread" connects the fields I've done research and developed projects in, and makes me a passionate technical and non-technical presenter.

**Recent Highlights**

· Designing an integrated market-, credit- and liquidity risk framework for assessing product-based approach to risk in the Asian regulatory regime, in contrast to the typical portfolio-level risk assessment in Europe (Quant at ABN)

· Developed the model for, and major parts of a full transaction-processing, analytics and reporting stack for an "Investment Game" our team organized for charity, mapping the 2014 World Cup to trading portfolios in a "football-securities" market (Quant at ABN)

· Developed a scalable, high-performance, quantum-chemical NEGF transport code (Physics PhD), which was later integrated into a commercial quantum-chemistry modeling solution (Postdoc at SCM)

**Programming Languages, Codes & Environments**

· Experienced with Matlab, Python and Fortran for high-performance computing,

· Experienced with SAS, SQL and R for database programming and statistical/predictive analysis,

· Limited project-based experience with C, C++, Java, Perl, VB, VBA, Maple and Mathematica.

**Languages & Intercultural**

· Native speaker of English and Dutch, conversational in French, Spanish and Portuguese

· Have worked in international collaborations in science and industry, including travel, teaching and technical presentations in the EU, US, Switzerland and Hong Kong.

**Grants, Honors & Awards**

· Netherlands National Computing Facilities Grant on the SARA Supercomputer Cluster — Two (4936-hr & 101641-hr) grants for "NEGF+DFT in Band for Molecular Transport" (*2010, 2011*)

· University Fund Delft and Prof.dr.ir. H.J. van der Maas Foundation Scholarships for studies abroad (*2005*)

· Dutch Mathematics A-lympiad — placed second with team representing St. Maarten (*2000*)

**Affiliations & Interests**

· Society for Industrial & Applied Mathematics member.

· Travel, salsa, intercultural communication, negotiation. I am interested in the many ways people relate to each other across cultures, faiths, and the negotiating table, in particular as concerns constructive conflict-resolution.