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SUMMERY

*I am an experimental physicist who has diverged to software development in the recent years. Great in solving technical problems, finding technical solutions, and doing experimental research. Firsthand experience in optics, lasers, electronics, vacuum, mechanics, numerical simulation, mathematics, and programming.*

*Specialties C, C++, LabVIEW, lasers, vacuum technology, flow cytometry, modelling, solving technical problems.*

WORK EXPERIENCE

# Present Optical engineer

Amsterdam UMC LEKC/BMEP

Improving cytometry 100 times faster. In this project I improved the state of the art of cytometry in the following way’s:

1. I developed advanced data analysis that resulted in 100 times speed improvement.
2. Massive parallelization by the employment of an imaging sensor.
3. Also, I made a design for an interferometric cytometer that will the posses the highest possible sensitivity.

# 1 Sep 2017–1 Sep 2018 Wind tunnel engineer

TU/e Eindhoven Build Environment

At the wind tunnel in Eindhoven, I am building the instrumental infrastructure including drag measurement set up and flow velocity imaging using Laser Doppler Anemometry.

6 Jan 2014–6 Jan 2016 Software engineer

At A. Hak Industrial systems, I designed and implemented navigation software for a tank cleaning robot. The navigation software works extremely accurate and reliable. Also, for pipeline inspection tools, I developed robust algorithms that are running without human intervention.

1 Mar 1995–1 Apr 2013 laser specialist/investigator

Laser centrum, Vrije Universiteit, AMSTERDAM (Netherlands)

Together with my colleagues, we designed and built state-of-the-art scientific equipment and the conduction and interpretation of experiments. Programming is an essential skill in this work. I wrote (C++) programs for driving instruments and data acquisition as well as programs for data interpretation and model evaluation. I have shown to be a strong debugger, whenever insuperable problem showed up, people asked for my help.

# Mar 1995–Sep 1995 developer /investigator

FOM-Instituut voor Atoom- en Molecuulfysica, Amsterdam (Netherlands)

development of an atomic oxygen source

Oct 1994–Mar 1995 Investigator

Universidade Nova de Lisboa (Portugal)

building a Low Energy Ion scattering apparatus

Apr 1990–Sep 1994 PhD student

FOM-Instituut voor Atoom- en Molecuulfysica, Amsterdam (Netherlands)

Experimental research on molecule - surface scattering. I developed equipment, conducted experiments, analyzed the data, and interpreted the data using trajectory calculation.

Sep 1985–Apr 1990 research technician

FOM-Instituut voor Atoom- en Molecuulfysica, Amsterdam (Netherlands)

In this period, I build apparatuses for experimental research. Besides the mechanical electronic and optical part, I was also involved in the data acquisition system.

EDUCATION AND TRAINING

4 Jun 2015 Exam Certified Associate LabVIEW developer

National Instruments, Woerden (Netherlands)

LabVIEW

16 Mar 1990–16 Sep 1994 PhD Experimental Physics

Universiteit van Amsterdam/ FOM instituut voor Atoom- en Molecuulfysica, Amsterdam (Netherlands)

Experimental research on gas- surface interaction. Thesis: Direct scattering and Chemisorption

1 Jul 1986–1 Jul 1988 Post-HTS computer science, 2 years evening study (1988)

PHTO Amsterdam

# 1 Jan 1989 colleges including Quantum Mechanics, Solid State Physics and Classical mechanics. Universiteit van Amsterdam, Amsterdam (Netherlands)

# 1 Sep 1985–1 Apr 1986 Middelbare Vacuümtechniek (vacuum technique at AMOLF)

# 1 Sep 1980–1 Aug 1984 HTS Natuurkunde (applied physics)

IHBO Eindhoven, Eindhoven (Netherlands)

Graduation project: development and implementation of a Laser Doppler Anemometer

1 Sep 1977–1 Jun 1980 MTS Weg- en Waterbouwkunde (Civil Engineering)

MTS Vlissingen, Vlissingen (Netherlands)

# PERSONAL SKILLS

Native language Dutch

Other language(s)

English Proficient user (C1) German Independent user (B2)

**Job-related skills Technical Experience**

Programming languages C++, LabVIEW, FORTRAN, Pascal, NI-measurement studio, Originlab, MAPLE ; Lasers: TiSaf fs laser, regenerative TiSaf Amplifier, tunable TiSaf ps laser, generation of harmonics using crystals, ns YAG lasers, ps YAG lasers, Dye lasers, excimer lasers; experimental techniques REMPI, mass spectrometry, Time Correlated Single Photon Counting, ellipsometry, LEIS, Circular dichroism, Ion optics; Electronics; Time Correlated Single Photon Counting, Photomultipliers, Multi Channel Plate Detectors, channeltron multipliers, multi anode photomultipliers, CCD detectors; Vacuum:

Pulsed valves, molecular beams, HV, and UHV.

SELF-ASSESSMENT

Information processing

Communication

Content creation

Safety

Problem solving

Proficient user Proficient user Proficient user Proficient user Proficient user

Digital competences - Self-assessment grid

I am an experienced programmer with ample experience coding advanced mathematical models and simulations. I program in C++, C, LabVIEW, FORTRAN, and Pascal.

Driving license BE

ADDITIONAL INFORMATION

Publications https://www.researchgate.net/profile/Adriaan\_Wiskerke