Jarn de Jong

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Quantum physicist & researcher.
Most recently I was a researcher in quantum communication and cryptography; also interested in quantum information science, physics, mathematics, computer-science & engineering. Many scientific collaborations throughout Europe. **List of publications**.

Professional qualities include
Leadership, explaining, teaching & lecturing, (event) planning, teamwork, analytical thinking and being a versatile 'computer nerd'.

Extensive practical experience beyond my theoretical knowledge
with computers, software and websites, through e.g. the Graphstabilizer package I developed, self-hosting and smaller software projects. Additional experience with R&D in the lab.

Experiences

2022-2025 **Member of Use Case Team**, *Quantum Internet Alliance (QIA)*, Berlin.
QIA is the EU-flagship project creating the first quantum internet.
Tasks include: interim team lead, use case development, reporting to European Commission.

May 2023 **Visiting researcher**, *LIP6 at CNRS & Sorbonne Université*, Paris.
Research visit at the LIP6 QI Department of CNRS and Sorbonne in Paris. I presented my previous work and collaborated with various researchers.

2020-2025 **Scientific Employee**, *TUB*, Berlin.
Scientific Employee ('*Wissenschaftliche Mitarbeiter*') in the QCC group of Anna Pappa at TU Berlin. In the scope of my PhD, but in principle separate.
Tasks include: Designing & giving lectures, supervising students, scientific talks.

2019-2020 **Research assistant and software developer**, *QuTech*, Delft.
Developed soft- and hardware of MVP for an *MDI-QKD* system that span-off into *QBird* in 2021.
Tasks include: both (quantum) hardware- & software development plus simulations.

2019 **Intern at Quantum Technology department**, *TNO*, Delft.
Internship at the Quantum Technology department of the Netherlands Organisation of Applied Sciences research (TNO).
Tasks include: designing and developing experiments for an upcoming quantum device, including extensive software development and simulations.

2015 **Physics teacher intern**, *Gymnasium Sorghvliet*, The Hague.
Half-year physics teacher internship for first 3 years of highschool. This was in the scope of the minor of my BSc. at DUT. Culminated in official teaching qualification.

2011–2018 **Tutoring & Teaching**, *Steunlescollectief & TNW Faculty DUT*, Haarlem & Delft.
Tutoring high school students while in highschool.
Teaching assistant for various BSc. courses.
Teaching a retake course of various maths courses (lecturing, managing the course, grading, creating handouts & supervising exams).
Designing various MOOCs (in a team) on quantum computing (list of MOOCs).

Education and Qualifications

2020–2025 **PhD (Dr. rer. nat.)**, *TUB*, Berlin, With distiction (summa cum laude).
Under Dr. Anna Pappa in the Quantum Communication and Cryptography group.
Thesis - *Harnessing multi-partite entanglement in quantum networks*:
on fundamental properties and the utilisation of multi-partite entanglement.

2016–2019 **MSc. Applied Physics (AP)**, *DUT*, Delft, *GPA: 8.4*.
Quantum Nanoscience track with electives in Quantum Information Science.
Thesis - *Quantum error correcting codes and Fault tolerant quantum computation*
Supervisor: *Prof. Dr. B.M. Terhal* at QuTech.

2014–2015 **Second degree teaching qualification**, *DUT*, Delft.
Qualified physics teacher for year $1-3$ Dutch high school students, all levels, or equivalent in foreign countries. Obtained during minor of BSc.

2012–2016 **BSc. Applied Physics**, *DUT*, Delft, *GPA: 7.5*.
Thesis - *Laser Beam Shaping using a low order deformable mirror*
Supervisor: *Prof. Dr. Ing. M. Verhaegen* at Delft Centre for Systems and Control.

2006–2012 **Pre-university education**, *Stedelijk Gymnasium Haarlem*, Haarlem, GPA: 8.0.
Science and engineering profile, courses in classical languages.

Extracurricular experiences and activities

2012–2017 **Various 'Commissies'**, *VvTP, study association of Physics at DUT.*.
('16–'17) **President** of Case Tour committee, organising one-week intensive tour in London for selective group of 30 Applied Physics & Aeronautics MSc. students at DUT. Visits to many leading international companies in Finance, Consulting and Engineering.
('14–'15) **President** of Symposium commitee, organising a physics symposium with $200+$ attendants. Speakers included *Jan van Schoot* (ASML) and *Matthew Greenhouse* (JWST, chief engineer, NASA).
Members & Interim president of various other committee's & activities, including a pilot promoting a career as PhD, (interim chief) editor of quarterly magazine by VvTP, member of sport committee etc.

Languages

Dutch	**Native**	
English	**Expert**	*Cambridge Certificate in Advanced English, CEFR C2*
German	**Competent**	*CEFR B2*

Computer Skills

General Proficient to expert in a versatile range of computer methods, OS'es & software, hardware, self-hosting, software development, networking, docker, `SSH`, git, REST api.

Coding Python (Advanced), LATEX (Advanced), MATLAB (Proficient), JAVA (Basic).

Interests and hobbies

DIY e.g. stereo system, woodworking

Music Vinyl & CD collecting, discovering

Self-hosting Website, Cloud, Music server, Git server, home automation, etc.

Chess OTB & online, bullet chess