

# Markus Weber, Dr. habil.

● 21.12.1974 ● Austrian ● Esswurmstraße 1, München 81371, Germany  
 ● +491707420050 ● markus.physik@gmail.com  
 ● www.linkedin.com/in/markus-weber-dr-habil-406813229



## Profile

As a Senior Project Manager I bring over 5 years of experience in managing high-impact quantum computing projects and 15 years in leading R&D projects in quantum information science. My recent work at the DLR Quantum Computing Initiative focused on overseeing product requirements and IP aspects for groundbreaking initiatives, including the 50 Qubit ion-chip quantum computer project “Toccata” with Universal Quantum. Successfully completing the commissioning of the XQ1i Quantum Computer Demonstrator and coordinating beta-user tests have been critical milestones in advancing next-generation quantum technologies.

Previously at IQM Quantum Computers, I contributed to securing over €4 million in funding, enabling innovative R&D efforts. By leveraging expertise in stakeholder management, resource allocation, and process optimization, I support teams in delivering impactful results. Passionate about quantum computing, I align technical leadership with collaboration to drive technological advancements in the field.



## Strengths

Stakeholder Management

Fundraising

Collaboration

Negotiation

User Focused



## Work Experience

06/2024 – 08/2025  
München, Ulm, Hamburg

### Operational Project Manager German Aerospace Center (DLR) Quantum Computing Initiative

- Managed the operational aspects of the 50 Qubit ion trap Quantum Computer project “Toccata” in collaboration with Universal Quantum GmbH, which streamlined project execution and ensured alignment with strategic goals.
- Led the commissioning of the 4 Qubit Quantum Computer Demonstrator (XQ1i) from XeedQ GmbH, successfully completing final performance and benchmark tests, which validated the system’s capabilities and readiness for advanced applications.
- Coordinated and supervised the first user tests on XQ1i, overseeing the execution of quantum algorithms, which drove innovation and enhanced the development of cutting-edge quantum computing technology.
- Managed requirements and cultivated stakeholder relationships to integrate quantum computers into the QCI-Connect software platform, enhancing accessibility and usability for users, ultimately boosting user engagement and satisfaction.

06/2021 – 05/2024  
München and Espoo

### Project and Grant Manager IQM Quantum Computers

- Secured over €4 million in third-party funding, which enabled the development of innovative quantum computing initiatives and boosted our project capabilities.
- Managed the planning, execution, monitoring, and reporting of multiple R&D projects and internal product development at IQM Quantum Computers, ensuring timely delivery and alignment with strategic goals.
- Coordinated and facilitated company-wide resource allocation, which improved efficiency and optimized our processes across various teams.
- Oversaw project reporting for the Horizon 2020 Accelerator Project Prometheus, which involved developing prototypes of 5 and 20 Qubit quantum computers



## Work Experience

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11/2019 – 12/2020  
Martinsried bei München

with high fidelity and successful execution of quantum algorithms, showcasing our advancements in the field.

### **Project Manager | System Integration Engineer** **Menlo Systems**

- Managed the system integration of optical frequency combs for innovative products, which streamlined the development process and enhanced product functionality.
- Led subproject management for both software development and software-hardware integration of the FC1500-Quantum frequency comb system, ensuring smooth collaboration and timely delivery.
- Designed and qualified a compact fiber-coupled Fabry-Pérot resonator for astrocams, which improved performance and reliability in astrophysical applications.
- Developed an optical-parametric oscillator for frequency spectroscopy in the middle infrared, enabling advanced research capabilities in this critical wavelength range.

10/2016 – 09/2017  
Erlangen, Bayern,  
Deutschland

### **Interim Professor - Physics** **FAU Erlangen-Nürnberg**

- Conducted engaging lectures in various Physics topics, such as Introduction to Physics, nano-optics, and quantum information science, which helped students grasp complex concepts effectively.
- Planned and implemented detailed lecture outlines and created comprehensive teaching materials, ensuring that all resources supported student learning and engagement.
- Coordinated practical exercises and administered tests, which helped reinforce theoretical knowledge and assess student understanding.
- Developed strong communication, organization, and teaching skills in a dynamic academic environment, enabling me to adapt to different learning styles and foster a collaborative classroom atmosphere.

10/2015 – 09/2017  
Erlangen, Bavaria, Germany

### **Senior Research Scientist** **Max Planck Institute for the Science of Light**

- Developed and implemented a novel experimental technique that allows for rapid thermometry of a single trapped Yb ion, which significantly improves measurement precision in quantum systems.

07/2012 – 08/2015  
München, Bayern,  
Deutschland

### **Assistant Professor of Physics (Privat Dozent)** **Ludwig-Maximilians-Universität München**

- Conducted engaging lectures and seminars on nano-options, atomic physics, and quantum information science, which enhanced student understanding and interest in advanced physical concepts.
- Led an experimental research group focused on coupling NV centers to integrated optical nano structures, driving innovative research initiatives that contributed to cutting-edge advancements in the field.

07/2005 – 06/2012  
München, Bayern,  
Deutschland

### **Postdoctoral Research Scientist** **Ludwig-Maximilians-Universität München**

- Led a research group focused on pioneering methods to entangle distributed quantum processors through entanglement swapping, which advanced our understanding of quantum communication.
- Developed innovative strategies for entanglement swapping, helping to enhance the efficiency and effectiveness of quantum information transfer.
- Collaborated with interdisciplinary teams, fostering a dynamic environment that encouraged knowledge sharing and accelerated research progress.
- Published findings in reputable journals, which contributed to the scientific community's grasp of quantum entanglement and its applications.



## Work Experience

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11/2000 – 06/2005  
München, Bayern,  
Deutschland

### Doctoral Research Scientist Ludwig-Maximilians-Universität München

- Set up a complex atomic physical apparatus, successfully integrating systems to ensure seamless operation, which laid the groundwork for groundbreaking research in quantum physics.
- Demonstrated quantum entanglement between a single trapped Rb87 atom and a single photon, showcasing the potential for advanced quantum communication and computing technologies.



## Education

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01/2001 – 06/2012  
Munich, Germany

### Physics | PhD + Habilitation Ludwig-Maximilians-Universität München

Atomic Physics, Quantum Optics, Quantum Information Science

10/1998 – 09/2000  
Munich, Germany

### Physics | Master of Science Ludwig-Maximilians-Universität München

10/1993 – 09/1998  
Graz, Austria

### Physics | Bachelor of Science Technische Universität Graz

General Physics, Optics, Laser Physics, Laser Spectroscopy



## Certificates

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08/2025

### Certified Product Manager Stanford School of Engineering

[https://www.researchgate.net/publication/394532433\\_Stanford\\_Product\\_Management\\_Program](https://www.researchgate.net/publication/394532433_Stanford_Product_Management_Program)

04/2021

### Certified Project Manager (IPMA Level C) International Project Management Association

[https://www.researchgate.net/publication/375371962\\_CERTIFIED\\_PROJECT\\_MANAGER\\_IPMAR\\_LEVEL\\_C](https://www.researchgate.net/publication/375371962_CERTIFIED_PROJECT_MANAGER_IPMAR_LEVEL_C)

07/2019

### SCRUM Master GRUNDIG AKADEMIE e.V.

02/2011

### Team Leadership LMU Center for Leadership and People Management

Working in a team - opportunities and risks in common problem solving



## Languages

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### - LANGUAGES

English  
**PROFESSIONAL**

French  
**LIMITED**

German  
**PROFESSIONAL**



## Volunteering

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01/2007 – present

### Scientific Referee American Physical Society (Physical Review Letters)

04/2024 – present

### Member of the Quantum Computing Benchmarking Working Group IEEE Standards Association | IEEE SA



## Publication Highlights

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- 08/2025            **Collected Scientific Production (> 2700 citations)**  
                  Google Scholar  
[https://scholar.google.de/citations?user=xCv9K\\_UAAAAJ&hl=de&oi=ao](https://scholar.google.de/citations?user=xCv9K_UAAAAJ&hl=de&oi=ao)
- 11/2023            **QUANTUM COMPUTING FOR EARTH OBSERVATION STUDY (QC4EO STUDY)**  
                  European Space Agency  
<https://eo4society.esa.int/projects/qc4eo-study/>
- 11/2019            **Measuring the temperature and heating rate of a single ion by imaging**  
                  **New J. Phys. 21 113014**  
<https://iopscience.iop.org/article/10.1088/1367-2630/ab4f43/meta>
- 01/2014            **Tapered fiber coupling of single photons emitted by a deterministically positioned single nitrogen vacancy center**  
                  **Appl. Phys. Lett. 104, 031101 (2014)**  
<https://doi.org/10.1063/1.4862207>
- 07/2012            **Heralded Entanglement Between Widely Separated Atoms**  
                  **SCIENCE 6 Jul 2012 Vol 337, Issue 6090 pp. 72-75**  
<https://doi.org/10.1126/science.1221856>
- 04/2010            **Quantum memories - A Review based on the European Integrated Project “Qubit Applications (QAP)”**  
                  **The European Physical Journal D**  
<https://link.springer.com/article/10.1140/epjd/e2010-00103-y>
- 01/2006            **Observation of entanglement of a single photon with a trapped atom**  
                  **Phys. Rev. Lett. 96, 030404**  
<https://doi.org/10.1103/PhysRevLett.96.030404>