



LUDWIG-
MAXIMILIANS-
UNIVERSITÄT
MÜNCHEN

PROF. DR. JOCHEN KUHN
FACULTY OF PHYSICS • CHAIR OF PHYSICS EDUCATION



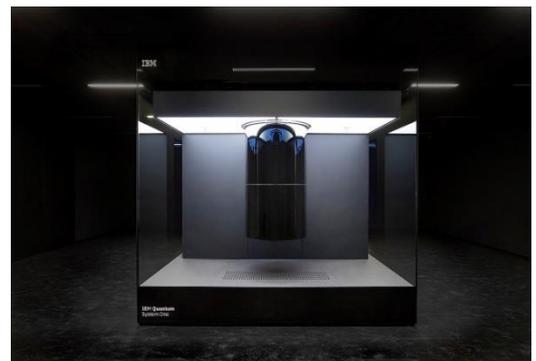
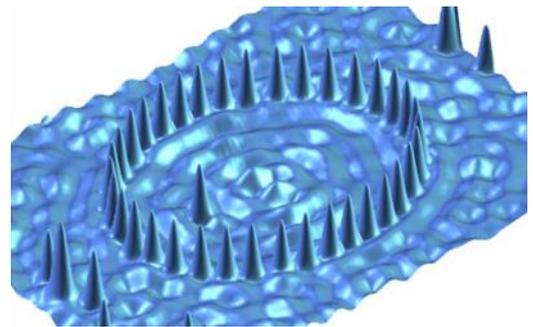
The Ludwig-Maximilians-Universität (LMU) München is one of the largest and most renowned universities in Germany with a wide range of specializations. The Chair of Physics Education at the Faculty of Physics is looking for a

**PhD student/Postdoc (m/f/d)
in Physics Education for the topic
"Quantum Technology Education Research" in the EU project DigiQ
(part-time/full-time, 75-100%)**

within the cooperation in an international project group starting on 01.10.2022. The Faculty of Physics is one of the strongest research faculties at LMU. In this context, the newly structured Chair of Physics Education is one of the internationally leading research groups in the field of multimedia learning in Physics with modern interaction media (AR, VR) and physiological investigation methods (eye-tracking, EEG), analysis methods with artificial intelligence (AI), which are used, among other things, in empirical teaching/learning research on quantum physics.

What is the topic about?

Quantum technologies are rapidly gaining importance in society. As a result, a variety of courses of study and continuing education programs are being developed that specifically convey an understanding of these technologies. The Chair of Physics Education at LMU München is involved in several further education programs in the field of quantum technologies in cooperation with physicists and physics education experts from all over Europe. Within the framework of these initiatives, physics students in Munich will now have the opportunity to make their studies in quantum technologies more diverse and to fine-tune them to their own interests by participating in lectures, seminars and practical courses at other European universities. The Chair of Physics Education, in addition to its focus on AI and AR, is characterized by a variety of experiments to demonstrate and experience quantum phenomena. In this project, these three foci will be combined in experimental AI/AR quantum lab courses and made accessible to European students.



Content and aim of the work

Within the framework of this project, several internships per semester at the Chair of Physics Education will be given to European exchange students. The goal of these two- to three-month internships is to use methods of AI and AR in quantum experiments in such a way that other students better understand the underlying concepts. This requires close coordination with ongoing research projects at the Chair of Physics Education and the European project partners as well as the own implementation and empirical evaluation of AR and AI implementation.

Your tasks:

- Coordination with project partners.
- Development of research/development internships for European exchange students
- Supervision and guidance of European exchange students during the internships
- Support of AR-/AI-programming

Your Profile:

- At least a good degree in a natural science, computer science or mathematics master's program; a diploma, master's degree or teaching degree (Staatsexamen) is equivalent to a master's degree in this sense. Ideally, a teaching qualification for the grammar school/high school and a very good knowledge of German.
- Willingness and pleasure in communication, coordination and collaboration with all scientists of the international project.
- Affinity or prior knowledge of programming is helpful.
- Curiosity about scientific topics and enjoy creatively generating and developing new ideas and concepts.

Our offer:

- The opportunity for scientific (further) qualification.
- An open, friendly and motivating working environment in the field of physics education as well as Human Computer Interaction.
- Access to innovative technologies for the implementation and realization of own ideas for teaching and learning physics.
- This is a part-time position with 30-39 hours per week (75-100%). The position is initially limited to 1 year according to the Wissenschaftszeitvertragsgesetz and will be extended by 4 years after successful completion. The position is graded according to TV-L E13. A doctorate is possible.
- Applications from women are welcome.
- Severely disabled persons with essentially equal qualifications will be given preference.

Please send your application (exclusively in digital form; one PDF, max. 5MB) by e-mail to **Prof. Dr. Jochen Kuhn** (e-mail: jochen.kuhn@lmu.de) by **15.01.2023**, including the following documents:

- Motivation letter,
- Curriculum vitae,
- References,

We are looking forward to your application!