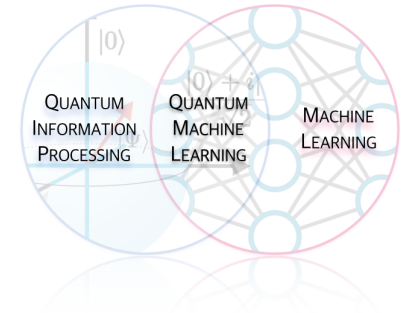


## PhD and PostDoc position in the field of Quantum Machine Learning (Prof. A. Lucchi, Dr. Stefan Woerner and Dr. David Sutter)

100%

The University of Basel (Prof. Aurelien Lucchi) and IBM Research Zurich (Dr. Stefan Woerner and Dr. David Sutter) are seeking **applications for PhD and Postdoc positions in Quantum Machine Learning**. This position offers an exciting opportunity to work on cutting-edge research projects at the intersection of quantum computing and machine learning. Potential topics for the position include developing the next generation of quantum deep neural networks and developing new training algorithms with convergence guarantees.



### About the University of Basel:

The University of Basel is a research university located in Switzerland. It is one of the oldest universities in Europe, with a long history of excellence in natural sciences. The university has a strong focus on interdisciplinary research and collaboration, with a wide range of research groups and institutes across different faculties. The position is offered in the department of mathematics and computer science.

### About IBM Research - Zurich:

The IBM Research Laboratory in Zurich, Switzerland, is part of IBM's research division, which employs 3000 individuals at twelve research laboratories worldwide. It is the largest industrial IT research organization in the world. Cutting-edge research and outstanding scientific achievements – most notably two Nobel Prizes – are associated with the Zurich Laboratory.

Ideal starting date: second half of 2023.

### Your position

Your tasks include:

- Conduct research in the field of applied mathematics and computer science
- Write research papers, articles, and present results at leading international conferences. We publish in peer-reviewed machine learning conferences (ICML, NeurIPS, etc. ), in quantum conference avenues (QIP, TQC, IEEE QCE, etc.), and in quantum journals (Nature, PRL/PRX, Quantum, etc.).
- Interact with national and international teams of mathematicians and computer scientists

Position available starting in the second half of 2023 (position may begin later based on agreement). The position will be either primarily based in Basel or in Zurich.

## Your profile

Applicants should hold a Master's degree in mathematics, theoretical physics, or computer science (or comparable). You should have several of the following skills:

- Quantum information theory (theoretical aspects, algorithms, etc)
- Machine learning
- Optimization
- Software engineering (coding in python, Qiskit, etc)

Additional requirements include: outstanding academic record, very strong mathematics background, experience with research is not required but is a plus.

Excellent communication skills and fluency in English (spoken and written) are required.

We also seek to increase the number of women and other groups in areas where they are underrepresented and therefore explicitly encourage such groups to apply.

## We offer you

- Close supervision on your Ph.D. research, working with and access to international collaborators
- A diverse range of tasks in a dynamic environment
- The possibility to travel to international conferences to meet with distinguished scientists
- Excellent salary, benefits and working conditions

## Contact

If interested, please send an application as described below to [ubasel\\_ibm\\_zurich@yahoo.com](mailto:ubasel_ibm_zurich@yahoo.com).

Your application should be a **\*\*single pdf file\*\*** containing the following files:

- Curriculum vitae (including list of publications if applicable)
- Scanned transcripts of bachelor and master's degree
- Contact information (no direct recommendation letters) for at least two references that can recommend you
- Your latest thesis (and/or one of your publications if applicable)

You are encouraged to send your application before June 7, 2023. However, there is no deadline for applying, and the position will be open until a suitable candidate is found. If your application is short-listed, we will contact you within three weeks. Due to a large volume of applications, we cannot inform you if your application is not selected for an interview.