

Ceremonial Talk

PSV V Tue 16:00 HSZ/AUDI

Quantum computers as large research instruments - what can we expect and how do we develop them? — ●FRANK WILHELM-MAUCH — Institute for Quantum Computing Analytics, Forschungszentrum Jülich, Wilhelm-Johnen-Straße, 52428 Jülich, Germany — Theoretical Physics, Saarland University, 66123 Saarbrücken, Germany

Quantum computing is currently a ubiquitous topic in the science and

technology media. This has good reasons: The progress has been remarkable, quantum computers promise enhanced computational reach without relying on Moore's law - on the other hand, some promises are also far beyond what can be seriously justified. This talk will give a review of the status of the field and argue that they currently should be viewed as large research instruments. This means that they should be developed with open access and leave room for creative uses and solutions. This opens great opportunities for physicist to co-develop, understand, and use these machines.