

Discussion PV XIII Wed 20:00 RW 1
Quantum Fundamentals and Technologies – what comes next? — ●JOHN DOYLE¹, ●WOLFGANG KETTERLE², ●FERDINAND SCHMIDT-KAHLER³, ●ANDREAS BUCHLEITNER⁴, ●IMMANUEL BLOCH⁵, ●JÜRGEN MLYNEK⁶, ●GEREON NIEDNER-SCHATTEBURG⁷, and ●DIETER MESCHKE⁸ — ¹Harvard — ²MIT — ³Johannes Gutenberg-Universität Mainz — ⁴Albert-Ludwigs-Universität Freiburg — ⁵Max Planck Institut für Quantenoptik, München/Garching — ⁶Chairman of the Board of the WE-Heraeus Foundation, Berlin — ⁷RPTU Kaiserslautern-Landau — ⁸Universität Bonn

Quantum technologies have received substantial public recognition as a candidate for transforming science, technology and ultimately societies with new opportunities ranging from sensing to secure communication to quantum computing. While in the past driven mostly by academic institutions the expectation of an economic impact has prompted large companies to heavily invest into this field. In this discussion round we will address questions including: Where do we expect the first big impact? What are the most serious obstacles to be overcome? Where is the role of future academic research? And more.