PL-03-07

How science is becoming and industry

Rupert Ursin

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Biography

Dr. Rupert Ursin is co-founder of qtlabs GmbH. He has 20+ years research experience in quantum communication at the Austrian Academy of Science. His scientific publication describe ground breaking experiments at the time and are among the highest cited in the field – still today. His research focus is the development of quantum communication and quantum information processing technologies, especially for free space transmission up to satellites, but also for fiber-based systems. Aims of his work range from short-term engineering solutions for secure key partitioning (quantum cryptography) to speculative research (quantum teleportation and entanglement swapping). He is now CEO at the company he founded with his former postDoc Thomas Scheidl who is now CTO and CEO of qtlabs GmbH. qtlabs is doing R&D and prototyping of quantum technologies aimed at performing full scale QKD from satellites and through optical fibers; first products include, besides the tasks as aquantum engineering firm for architecture, design and simulation of quantum networks, optical ground receivers for quantum states.

Abstract

Quantum Physics originated from very deep questions about the nature of reality and locality. Only in the 80's it turned out, that might become the basis of a new kind of technology – today called quantum technology. In my presentation I will show my personal journey from experiments about basic interest in academia up to a research group leader and deputy

director at the Austrian Academy of Sciences here in Vienna. Just recently I quit my permanent position to become a full-time entrepreneur, now developing products for the so-called quantum technology revolution. I'll present the ecosystem, including a Chinese satellite mission MICIUS, we've been part of, to the European quantum Programs, the demand from the finance- and critical-infrastructure industry and the products we are developing, both for space and terrestrial applications.