

Quantum Communications Technologies: Now and the Future

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Abstract

Quantum communications is perhaps the most advanced of the emerging technologies that rely on quantum information science. It offers secure communications immune to any possible computational advancement in the future. Having successfully demonstrated over dark and commercial fibre, it is now the right time to step up the efforts and plan for extending this technology to the end users, where many can enjoy its benefits. In this talk, I will describe the key applications of quantum communications and some of the technological challenges that their implementation is facing. I will then introduce some of the possible solutions and the future trends in such disruptive technologies.