

Special Issue

Optical Communication Networks: Progress and Challenges

Message from the Guest Editors

Optical networks play an important role in fast data transmission over long distances, and optical fibers are moving from core and metro networks to access networks. It is not, however, just speed that makes optical networks stand out when it comes to data transmission, which is of great importance in today's society; other photonic services offered by optical networks include accuracy, stable frequency, etc. Recently, attention has focused on fiber-optic sensing and secure cryptography key exchange—also known as quantum key distribution (QKD). Research in these new services and especially the results from field trials are very welcome. Topics of interest include, but are not limited to, the topics outlined in the keywords. **Keyword:** Software-defined networks (SDN); Flexible and elastic optical (fiber) networks; Photonic services; Optical spectrum as a service, spectrum allocation; High-speed optical data transmission in global and local networks; Precise time/stable frequency transmission; Quantum key distribution (QKD) over

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As the world of science becomes ever more specialized, researchers may lose themselves in the deep forest of the ever increasing number of subfields being created. This open access journal Applied Sciences has been started to link these subfields, so researchers can cut through the forest and see the surrounding, or quite distant fields and subfields to help develop his/her own research even further with the aid of this multi-dimensional network.

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