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## **Optical Fiber Communications**

Guest Editor:

# Dr. Mario F. S. Ferreira

Department of Physics, University of Aveiro, 3810-193 Aveiro, Portugal

Deadline for manuscript submissions: closed (1 August 2018)

### Message from the Guest Editor

Dear Colleagues,

Optical fiber communication systems have been deployed worldwide since 1980, and have revolutionized the field of telecommunications. The capacity of such systems has been continuously increasing. Over the last three decades, the aggregate bit-rate of optical transmission systems based on single-mode fiber (SMF) has increased by a factor of four orders of magnitude by means of multiplexing techniques that use time, wavelength, and polarization as a degree of freedom to encode information. In addition to multiplexing, coherent transmission techniques also allow to increase the aggregate bit-rate of optical communications systems by exploiting both the phase and the amplitude of the light to carry information. As today's wavelength-division multiplexing (WDM) coherent optical communication has already taken advantage of all degrees off freedom of a lightwave in a single-mode fiber, further multiplicative growth must explore new degrees of freedom that do not exist in SMFs.









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#### Prof. Dr. Martin J. D. Clift

In Vitro Toxicology Group, Institute of Life Sciences 1, Swansea University Medical School (SUMS), Swansea SA2 8PP, Wales, UK

### Message from the Editor-in-Chief

*Fibers* is intended as an integrative platform, bringing together specialists with expertise concerning a large range of biological, synthetic, metallic and mineral fibers. The intent is to bring together scientists who would otherwise be unlikely to encounter each other's findings. By facilitating communication across specialties, the journal will advance understanding of the underlying commonality of many physical and chemical aspects of fibers.

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*Fibers* Editorial Office MDPI, Grosspeteranlage 5 4052 Basel, Switzerland Tel: +41 61 683 77 34 www.mdpi.com mdpi.com/journal/fibers fibers@mdpi.com X@JFibers