Call for Papers

**Journal Title:** Photonic Network Communications (PNET) – Springer
**Title of the Special Issue:** “Resilience in future 5G Photonic Networks”
**Scope of the Special Issue:** Future (i.e., fifth) generation of mobile networks will target unprecedented performance in terms of network capacity, Quality of Service (QoS), latency, and service availability. 5G requirements are mainly driven by the increasing adoption of advanced services such as video/multimedia streaming, cloud services, Internet of Things (IoT), etc., which occupy the largest share of today’s network resources and feature high dynamicity over time and location. To support advanced 5G services, a high-capacity low-latency access/aggregation network is required. Photonic network technologies, based on Wavelength Division Multiplexing (WDM) are considered as a key enabler for a 5G-ready access/aggregation network. Moreover, the design and management of 5G photonic networks will leverage on the control and monitoring functionalities/capabilities provided by Software Defined Networking (SDN) and Network Function Virtualization (NFV), which, in turn, enable an enhanced and a more flexible transport infrastructure. In this scenario, guaranteeing high network resilience is a major challenge; yet network redundancy must be ensured at a reasonable cost, so that high revenues for service providers can be maintained. Similarly, fast and efficient recovery/restoration strategies must be implemented to maintain proper (e.g., “four nines”) service availability. Therefore, new solutions are needed for both design and management of 5G photonic networks.

The objective of this special issue is to collect high-quality peer-reviewed papers specifically focusing on resilience aspects in the world of 5G. The aim is to provide a reference for researchers who would like to get up-to-date views on the latest research efforts on the topic.

Topics of interest are inherent with resiliency aspects in future 5G networks and include (but are not limited to) the following:
- Novel reliable network architectures and systems
- Photonic devices for resilient 5G networks
- Survivable information-centric networking and content delivery
- Routing and resources allocation algorithms
- Fault management, control, and monitoring
- Fixed-mobile convergence
- Use of SDN/NFV paradigms for resilient 5G networks
- QoS in resilient 5G networks
- Network performance evaluation
- Resilience of wired and wireless 5G networks
- Network security for 5G
- Energy efficiency aspects in resilient networks
- Techno-economics of network resilience
- Network slicing for 5G services
- Machine learning and data analytics for fault detection and localization

**Important dates:**
Submission deadline: **July 1st, 2018 (firm)**
First notification to authors: July 20th, 2018
Acceptance notification: Sep 7th, 2018
Final manuscript due date: Oct 5th, 2018

**Editorial Board**
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