Announcement of an *IEEE/OSA Journal of Lightwave Technology Special Issue* on: Ultra-Wideband WDM Systems

This special issue addresses three important questions, namely: "how", "what", and "what quality for what purpose": The "***how***" identifies the technologies and systems upon which UWB-WDM networks will be built. In particular, we seek solutions to realize components, such as optical amplifiers, filters, and transceivers that present sufficient performance over the entire spectrum; the "***what***" considers the way of exploiting the upcoming plethora of WDM channels. What kind of network / node architectures and routing schemes would emerge? Does this lead to a lower CAPEX platform and how? Will it simplify network operations, leading to lower OPEX, and what innovations are needed to achieve this?; The "***what quality for what purpose***" aims to provide guidelines on how we will make the most of all bands, which, due to their different local fiber parameters, will provide dissimilar quality-of-transmission. The use-cases for these sub-bands need to be investigated as well.

The special issue will address the following topics:

- Ultra-wideband optical amplification
- Integrated ultra-wideband transceivers for elastic optical networks.
- Optical multiplexing technologies for a massive number of channels and optical switching and node architectures for all-optical forwarding of channels.
- Analytical transmission models for physical layer aware optical networking.
- Optical and electrical mitigation and ad-hoc transmission schemes for UWB-WDM.
- UWB-WDNM system design guidelines and benchmarking against alternative solutions, including techno-economic studies. Operator point of view on the exploitation and road-map of the full-spectrum and deployment policies.
- Potential, scalability and the prospects of wavelength-routed networks for UWB-WDM framework. Optical networking challenges associated to multi-band transmission.

On behalf of the Guest Editors and the Editor-in-Chief, we encourage you to submit your work for inclusion in this Special Issue. Accepted papers will appear in the Jan/Feb 2020 hardcopy issue with accepted papers posted online within one week of author final file upload. Mandatory page charges of $260.00 per page are enforced for Original Contributions in excess of 7 pages and in excess of 10 pages for Invited Papers. Tutorial presenters will be invited to write articles that are up to 16 pages in length. The same mandatory fees apply to each Tutorial paper in excess of 16 pages.

Submissions by website only: http://mc.manuscriptcentral.com/jlt-ieee
Manuscript Type: “WDM 2019”
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