



**Announcement of an *IEEE/OSA*
Journal of Lightwave Technology Special Issue on:
OPTICAL NETWORKS SUPPORTING WHITE BOXES AND INTER-
OPERABILITY**

Submission Deadline: 7 November 2017
Publication: May 2018

This special issue covers the topic of White Boxes and optical network multi-vendor inter-operability spanning the data, control, and management planes. In the last years, network operators and service providers have shown strong interest in pushing vendors to deploy hardware and control software enabling multi-vendor interoperability. This way, systems of different vendors can be used by operators to optimize performance, reduce capital expenditure, without the need of being tied to single vendor equipment. This trend has also brought up the concept of *white boxes*, disaggregating hardware from software, e.g. control, forwarding and management planes. To support control and management of white boxes, standard defined data models are required. YANG is a widely agreed language to define data models, exploited by emerging protocols such as NETCONF and THIRIFT.

The scope includes:

- assembling white boxes (e.g., transponder, add&drop, optical line system, switching, control system, monitoring & analytics) and interfaces among modules
- transmission modeling and advanced digital signal processing (e.g., non-linear impairment compensation) accounting for inter-operability issues
- white box design and approaches
- network design and modeling (e.g. physical layer simulation engines), techno-economic analysis
- APIs and emerging protocols – such as NETCONF, RESTCONF, and THIRIFT –, and telemetry
- SDN and Network Operating System (NetOS) for optical devices
- emerging data modeling languages such as YANG
- management of monitoring information, correlation algorithms, and flexible operations upon monitoring in elastic optical networks considering inter-operability

The upcoming Special Issue will provide hints about the future associated roadmaps for metro, core, and DC networks, as seen by different relevant industry associations, standardization bodies, and researchers.

On behalf of the Guest Editors and the Editor-in-Chief, we encourage you to submit your paper to the journal. Typically, these papers 18 pages for the tutorial reviews, 10 pages for invited papers, and 7 pages for the regular papers. Mandatory page charges of \$260USD per page are enforced in excess of 7 pages. This paper would appear in an upcoming JLT special issue titled "Optical Networks Supporting White Boxes and Inter-operability" Target 2018 May issue with accepted papers posted online within 1 week of author final file upload.

Guest Editors: **Nicola Sambo** (Scuola Superiore Sant'Anna), **Ioannis Tomkos** (Athens Information Technology Center), **Hans-Juergen Schmidtk** (Facebook), **Sebastien Bigo** (Nokia), **Anees Shaikh** (Google), **Masatoshi Suzuki** (KDDI).

Submissions by website only: <http://mc.manuscriptcentral.com/jlt-ieee>

Manuscript Type: "White Boxes"

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