

Call for Contributions

Inform the Chair: with the Title of your Contribution

Submission URL:

<https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ICN+2017+Special>

Please select Track Preference as **OINDCN**

Special track

OINDCN: Optical Interconnection Networks (OIN) for Data Center Network (DCN)

Chair and Coordinator:

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along with

ICN 2017, April 23 - 27, 2017 - Venice, Italy

The Sixteenth International Conference on Networks

<http://www.iaria.org/conferences2017/ICN17.html>

The need for large volume of data storage and exchange continues to grow and shape today's computing and communication systems. Data center networks (DCN) are the critical backbone systems that allow large volume of information to be exchanged in the personal, community and global level. The technologies that support such DCNs have been experiencing a very rapid ongoing evolution. While the existing DCN architectures work with the current data flow, such traffic pattern itself could also potentially and quickly change as technology evolves. Optical fiber technology that supports the high capacity transmission systems have been developed and matured in the past 30 years, however, effective and flexible optical switching still remains quite challenging and not dominantly used in current DCN. Interconnection networks that utilize optical and hybrid technology are important steps to develop DCN network capacity, but many questions remain.

This special track is seeking for recent researches in the area of optical interconnection network (OIN) specifically for DCN applications. In the device level, many technologies such as Silicon Photonics provide promising switching and transceivers for cost effective integration with CMOS electronics. Passive components also continue to move to be the same platform for integration. Energy consumption is a bottleneck of current DCN, and the hope of optical technology to remove the ceiling and keep the DCN relatively low energy consumption is an important drive for developing OIN in DCN. The network architectural design should improve topology and integration with control plane to match the needs of DCN. Many existing topologies are either not suited for optical devices or not optimized to match the switching capability and potential of newer devices.

We invite authors to submit unpublished papers, which are not under review in any other conference or journal in the following, but not limited to, topic areas:

- Traffic characterization in the Data Center Networks
- Network architecture design for OIN
- OIN network performance measure
- Scalability of OIN networks

- Optical switching devices for OIN
- Hybrid switching integration in OIN
- QoS support for OIN
- Multicast support for OIN
- Energy consideration for OIN
- Physical layer integration technology for OIN
- Crosstalk issues in OIN systems
- Potential of silicon photonics devices in OIN systems
- Power budget and amplification needs in OIN systems

Important Datelines

- Inform the Chair: As soon as you decided to contribute
- Submission: ~~January 15~~ **March 15**
- Notification with comments for camera-ready: ~~February 20~~ **March 22**
- Registration: ~~March 5~~ **April 1**
- Camera ready: ~~March 15~~ **April 1**

Contribution Types

- Regular papers [in the proceedings, digital library]
- Short papers (work in progress) [in the proceedings, digital library]
- Posters: two pages [in the proceedings, digital library]
- Posters: slide only [slide-deck posted on www.iaria.org]
- Presentations: slide only [slide-deck posted on www.iaria.org]
- Demos: two pages [posted on www.iaria.org]

Paper Format

- See: <http://www.iaria.org/format.html>
- Before submission, please check and comply with the editorial rules: <http://www.iaria.org/editorialrules.html>

Publications

- Extended versions of selected papers will be published in IARIA Journals: <http://www.iariajournals.org>
- Print proceedings will be available via Curran Associates, Inc.: <http://www.proceedings.com/9769.html>
- Articles will be archived in the free access ThinkMind Digital Library: <http://www.thinkmind.org>

Paper Submission

<https://www.iariasubmit.org/conferences/submit/newcontribution.php?event=ICN+2017+Special>
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Registration

- Each accepted paper needs at least one full registration, before the camera-ready manuscript can be included in the proceedings.
- Registration fees are available at <http://www.iaria.org/registration.html>

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