



# Technical Committee on Transmission, Access, and Optical Systems (TAOS)

## *Annual Summary Activity Report*

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<b>Period:</b>	<b><u>January 1, 2016- December 31,2016</u></b>
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## 1 2016 Strategic Focus

Green Communications and Networking continued as a special *Strategic Theme* for TAOS' technical activities. This area is of interest to both industry and academia and has witnessed increasing interest in research and development. The SAC Track on Green Communication Systems was elevated to a full symposium, *Green Communications Systems and Networks Symposium*, after approval at the GTC meeting on Globecom 2014 of the proposal submitted by TAOS. The first such symposium on Green Communications Systems and Networks took place in ICC 2016 (Kuala Lumpur, Malaysia), and continued to be a symposium at Globecom 2016. TAOS continued to co-sponsor the ICC/GC symposium on Green Communications Systems and Networks (GCSN). This symposium has continued to attract a large number of submissions during 2016.

TAOS also continued to be the sole sponsor of the SAC track on Access Networks and Systems at ICC/GC 2016. In addition, TAOS continued its traditional activities in the area of optical system and has sponsored the ICC/GC Optical Networks and Systems (ONS) Symposium at ICC/GC 2016. The ONS symposium in ICC 2016 witnessed a significant increase in the number of submissions, mainly because of an increase in the number of submissions to the *systems* area.

## 2 Organization and Administrative Updates

### 2.1 Officers

During 2016, TAOS officers continued to serve the second year of their term as follows:

- Ahmed Kamal, Chair
- Athanasios Manikas, Vice Chair
- Fabrizio Granelli, Secretary

Walter Cerroni continued to serve as the webmaster. Jochen Maes was appointed as the industry liaison, succeeding Fillipo Cugini. Jochen is in charge of the TAOS newsletters which are published twice a year.

During the Globecom 2016 TAOS meeting, Steve Hranilovic was elected as new secretary. Therefore, the new officers starting January 1, 2017 will be:

- Athanassios Manikas, Chair
- Fabrizio Granelli, Vice-Chair
- Steve Hranilovic, Secretary

Ahmed Kamal has completed his two year term as chair of TAOS.

## **2.2 TAOS Policies and Procedures**

The TAOS Policies and Procedures (P&P), which were last updated in 2014, are being followed by all TAOS meetings and activities. No further revisions to the P&P were made during 2016.

## **2.3 Website and Mailing list**

The new TAOS website, which was completed by the end of 2014, became operational at the beginning of 2015. The web site was migrated by IEEE ComSoc to a new server during 2016. Walter Cerroni worked with IEEE ComSoc to facilitate and complete this migration.

The TAOS mailing list has also continued to increase.

## **2.4 Membership and Leadership Updates**

Throughout 2016, TAOS maintained the traditions of attracting new members/blood, and launching new activities. TAOS introduced new faces to co-Chairing ICC/GC symposia, new colleagues to serve as TPC members, and other TC members playing leading roles in technically co-sponsored conferences. The TAOS meeting at ICC 2016 was attended by 16 attendees and the meeting at GC 2016 had an attendance of 28.

Nominations for conferences co-Chairs are drawn from pools of active TAOS members who exhibited excellent service in past reviewing and TPC assignments. On the other hand, officers' nominations by TAOS' Steering Committee are drawn out of a continuously updated pool of active members with remarkable contributions to the TC. TAOS enjoys a rich base of experienced professionals.

## **3 Conferences and Publications**

TAOS' 2016 minutes of meetings and meetings' slides provide details about our 2016 Technical Activities. The ICC minutes and slides are posted online on the TAOS website. The meeting slides and minutes of ICC 2016 is available at:

[http://taos.committees.comsoc.org/files/2016/10/minutes\\_of\\_meetingICC16slides.pdf](http://taos.committees.comsoc.org/files/2016/10/minutes_of_meetingICC16slides.pdf)

and the meeting slides and minutes of GC 2016 are available at:

[http://taos.committees.comsoc.org/files/2015/08/minutes\\_of\\_meetingGC16slides.pdf](http://taos.committees.comsoc.org/files/2015/08/minutes_of_meetingGC16slides.pdf)

## 4 Contributions to ComSoc leadership

TAOS continues to provide ComSoc with senior/leadership personnel in numerous technical and administrative areas. TAOS leads all ComSoc TCs in this regards:

- Stefano Bregni, Tarek El-Bawab, Nelson Fonseca, Steve Gorshe and Fabrizio Granelli serve in ComSoc Board of Governors
  - o Stefano Bregni: VP, Members and Global Activities
  - o Tarek El-Bawab: Educational Activities Board
  - o Nelson Fonseca: VP, Publications
  - o Steve Gorshe: Member at Large
  - o Fabrizio Granelli: Acting Chief, Online Content Officer
- Tarek El-Bawab is a member of the EAB committee on Global Accreditation Activities (CGAA)
- Jaafar Elmirghani continues to Co-Chair the IEEE Green ICT initiative, hosted by ComSoc. Tarek El-Bawab represents TAOS in this Group
- Editorships: George Rouskas, Editor-in-Chief, Elsevier's Optical Switching and Networking, Ahmed Kamal, Fabrizio Granelli and Paolo Monti, IEEE Communications Surveys and Tutorials; Tarek El-Bawab, Frank Effenberger, and Ravi Subrahmanyam, IEEE Communications Magazine; Ahmed Kamal and Filippo Cugini, Elsevier's Journal of Optical Switching and Networking (OSN)
- Distinguished Lecturers during 2016: Jaafar Elmirghani, Anura Jayasumana, Fabrizio Granelli, Tarek El-Bawab, Athanassios Manikas and Abdallah Shami
- Fabrizio Granelli represents TAOS in ComSoc Rapid standardization activity, and Chairs the Research Group on Software Defined and Virtualized Wireless Access
- Walter Cerroni represented TAOS in ComSoc's student competition 2016
- Please, see the ICC 2016 and Globecom 2016 slides for more details and members contributions.

## 5 Awards

- Best Paper Award in ICC 2016 Access Networks and Systems (ANS) Track, Symposium on Selected Areas in Communications was presented to the paper: "**Time-Domain Precoding for LTE-over-Copper Systems**" by Yezi Huang, Eduardo Medeiros, Thomas Magesacher, Stefan Höst, Chenguang Lu, Per-Erik Eriksson, Per Ödling and Per Börjesson.
- Best Paper Award in the ICC 2016 Green Communications and Computing (GCSN) was presented to the paper: "**Online Ski Rental for Scheduling Self-Powered, Energy Harvesting Small Base Stations**" by Gilsoo Lee, Walid Saad, Mehdi Bennis, Abolfazl Mehbodniva and Fumiyuki Adachi
- Best Paper Award in the Globecom 2016's Access Networks and Systems (ANS) Track, Symposium on Selected Areas in Communications (SAC) is presented to the paper: "**Real-time Demonstration of PHY Processing on CPU for Programmable Optical Access Systems**" by Takahiro Suzuki, Sang-Yuep Kim, Jun-ichi Kani, Ken-Ichi Suzuki and Akihiro Otaka
- Best Paper Award in the Globecom 2016's Green Communication Systems and Networks (GCSN) Symposium is presented to the paper: "**Backscatter Communications Over Ambient OFDM Signals: Transceiver Design and Performance Analysis**," by Gang Yang and Ying-Chang Liang
- TAOS' Outstanding Service Award to Filippo Cugini in recognition of his contributions to the TAOS newsletter