

# **IEEE Communications Society Quantum Communications and Information Technology - ETC (QCIT-ETC)**

**Meeting held at IEEE Globecom 2019**

Dec 12, 2018  
9am – 10:30am  
Abu Dhabi, UAE

## **Meeting Minutes**

Minutes taken by: Andrea Conti

## Participants

The total of participants was 19, all in presence.

### 1. Welcome / Introduction

The Chair Lajos Hanzo opened the meeting at 9am. There were 19 members present.

The 4 founding members are: Lajos Hanzo, Andrea Conti, Michael Ng, and Peter Mueller.

All participants introduce themselves and reported on their interest in the field of quantum communications and information technology.

The Chair presented the agenda as below

1. Approval of the Agenda
2. Welcome / Introduction
3. Approval of Previous Meeting Minutes
4. QCIT-ETC Awards
5. Report on ETC Technical Activity Council Meeting
6. Report on Workshops & Conferences
7. Report on Keynotes & Invited Talks
8. Report on Publications & Future Events
9. Standards Liaison
10. New Business Items
11. Next QCIT-ETC Meeting
12. Adjourn

The QCIT-ETC website is <http://qcit.committees.comsoc.org/>

There are two e-mail distribution lists (400+ members):

- [qcit@comsoc.org](mailto:qcit@comsoc.org)

for internal announcements only (e.g., ICC, Globecom, Committee meetings like today, and Awards)

- [qcit-announce@comsoc.org](mailto:qcit-announce@comsoc.org)

for CFP email distribution list. It is open to all signed-up members to distribute QCIT related CFPs

Sign-up: Send “join QCIT(-ANNOUNCE)” message to [list@comsoc.org](mailto:list@comsoc.org)

Unsubscribe: Send “SIGNOFF QCIT” message to [list@comsoc.org](mailto:list@comsoc.org)

## 2. Approval of the Agenda

The agenda was approved.

## 3. Approval of Previous Meeting Minutes

The minutes of previous meeting (held at Globecom 2018 in Abu Dhabi) circulated via QCIT email list and website were approved.

## 4. QCIT-ETC Awards

The information related to this point are the same of previous meeting as reported below.

The QCIT-ETC award program will start as soon as we receive approval from the ETC TAC.

Acting Awards Committee Chair is the elected QCIT-ETC Chair.

Members of the Awards Committee will be the Awards Committee Chair, three QCIT officers, one external member.

Calls for nominations as defined in the QCIT-ETC Policies & Procedures will be sent out via our distribution list. For details, see QCIT URL:

<http://qcit.committees.comsoc.org/>

## 5. Reports on ETC-TAC Meeting

From ETC-TAC Meeting at ICC 2018:

‘Smart Grid Communications’ and ‘Molecular, Biological and Multiscale Communications’ have been elevated to full technical committees.

QCIT was started since about a couple of years. It was reviewed together with all ETCs and put on probation (come back in two years). Overall, our evaluation was positive. QCIT represents an important topic and has some very good people involved and is making good progress. For the ETC-TAC it was too early to discuss elevation to a full TC, however a goal was set of doing this in 2 years, or even 1 year if you think activities can be ramped up a lot.

Some examples of things they would like to see (and may be in progress already): more knowledge dissemination, including tutorials and accessible materials. A great idea could be to do a ComSoc Best Readings. Moreover, organize Special Issues (Magazine, JSAC, etc.). Broader membership, and activities by more members beyond the officers (also a breakdown of where these members are, industry vs. academia, etc.).

There will be a new review and it is important to increase the number of members and of the activities, especially dedicated journal’s special issues.

## 6. Reports on Conferences

A report on QCIT Workshop at Globecom 2018, Singapore, was given, followed by a brief discussion on other special sessions at conferences. Three sessions were organized and a keynote “Quantum Communications at Local and Global Scales” by Mohsen Razavi (School of Electronic and Electrical Engineering, University of Leeds, UK).

Please use the QCIT-ANNOUNCE distribution list to send your CFPs and report your conferences, workshops, sessions, etc.

If you are looking for IEEE ComSoc support for your event, please ask anyone of the officers.

## 7. Reports on Keynotes and Invited Talks

The following keynotes and invited talks have been given by QCIT members:

- Participation to Schools:

- “QCALL School of Quantum Communications Networks”, Padova, Italy, 19-22 September 2018. URL <http://www.qcall-itn.eu/sqcn/>
- “Quantum Information for Developers 2018”, Quantum computing school and Hackathon, ETH Zurich, 11-14 September 2018. URL <https://qid.ethz.ch/>

- Invited talk on Quantum-assisted Communications at Tsinghua University Beijing, China, on 26<sup>th</sup> October 2017. URL: <http://www.phys.tsinghua.edu.cn/publish/phy/8220/2017/20171024140011262894960/201710241400112.html>

- Invited Talk on Quantum-assisted Communications at UESTC Chengdu, China, on 3<sup>rd</sup> November 2017. URL: [http://files.wireless.ecs.soton.ac.uk/QCIT-ETC/20171103\\_UESTC\\_talk/tn/UESTC.01\\_Hu\\_Ng\\_Yang.JPG.html](http://files.wireless.ecs.soton.ac.uk/QCIT-ETC/20171103_UESTC_talk/tn/UESTC.01_Hu_Ng_Yang.JPG.html)

- Keynote at IEEE Future Technologies Conference (FTC) 2017 on Quantum Information Processing, 29<sup>th</sup> November 2017. URL: <http://saiconference.com/Conferences/FTC2017>

- Invited Talk on Scalable Quantum Computing – Towards useful applications, Paris, France, 29<sup>th</sup> March 2018. URL: [http://orap.irisa.fr/?page\\_id=899](http://orap.irisa.fr/?page_id=899)

**Meeting Talks:** during the meeting there was a technical talk by Robert Malaney from UNSW, Sydney, was given on “Quantum Communications via Satellite with Photon Substraction”.

## 8. Reports on Publications

It was encouraged to submit papers at the QCIT workshop that will be held during Globecom 2019. Submissions will be handled via EDAS and you will receive other updates in the near future.

A JSAC Special Issue is upcoming on *Advances in Quantum Communications, Computing and Cryptography*, by Soon Xin Ng, Lajos Hanzo, Peter Mueller, Andrea Conti, Gui-Lu Long, Jinhong Yuan

Please use the QCIT-ANNOUNCE distribution list to send your CFPs and report your special issues, book chapters, and so on.

QCIT is actually looking for a member who would be willing to serve in the position of an Appointed Representative of Publications.

If you are interested, please contact the officers.

## 9. Standards Liaison

The QCIT-ETC is supporting standards work within the field.

IEEE SA - 1913 - Software-Defined Quantum Communication

<http://standards.ieee.org/develop/project/1913.html>

IEEE SA - 1913 - Software-Defined Quantum Communication IEEE.org IEEE Xplore Digital Library IEEE Standards.

Liaison: [Steven Bush \(bushsf@research.ge.com\)](mailto:bushsf@research.ge.com)

IEEE SA - 7131 - Standard for Quantum Computing Performance Metrics & Performance Benchmarking

<http://standards.ieee.org/develop/project/7131.html>

IEEE SA - 7131 - Standard for Quantum Computing Performance Metrics & Performance Benchmarking IEEE.org IEEE Xplore...

Liaison: [Peter Mueller \(pmu@zurich.ibm.com\)](mailto:pmu@zurich.ibm.com)

IEEE SA - 7130 - Standard for Quantum Computing Definitions

<http://standards.ieee.org/develop/project/7130.html>

IEEE SA - 7130 - Standard for Quantum Computing Definitions IEEE.org IEEE Xplore Digital Library IEEE...

Liaison: [Peter Mueller \(pmu@zurich.ibm.com\)](mailto:pmu@zurich.ibm.com)

## 10. New Business Items

NAE report <https://www.nap.edu/catalog/25196/quantum-computing-progress-and-prospects>

### Worldwide Large Regional Programs

US IARPA and others

China Secure Backbone

EU Flagship and Quanterra

### European Efforts:

European Flagship Program on Quantum Technologies

## 9. Next QCIT-ETC Meeting

Next QCIT ETC meeting will be held at IEEE ICC 2019 in Shanghai.

## 10. Adjourn

The meeting was adjourned at 10:30 am.

## Participants QCIT Meeting

Name	Affiliation	Email
Vincent Chan	MIT (ComSoc President Elect)	<a href="mailto:chan@mit.edu">chan@mit.edu</a>
Stefano Guerrini	University of Ferrara	<a href="mailto:stefano.guerrini@unife.it">stefano.guerrini@unife.it</a>
Priya J Nadkarni	Indian Institute of Science	<a href="mailto:priya@iisc.ac.in">priya@iisc.ac.in</a>
Valeria Locri	INRIA	<a href="mailto:valeria.locri@inria.fr">valeria.locri@inria.fr</a>
Koji Kamakura	Chiba Institute of Technology	<a href="mailto:kama@cs.it-chiba.ac.jp">kama@cs.it-chiba.ac.jp</a>
Pooi Yuen Kam	National University of Singapore	<a href="mailto:elekampy@nus.edu.sg">elekampy@nus.edu.sg</a>
Liangping Ma	Interdigital	<a href="mailto:liangping.ma@ieee.org">liangping.ma@ieee.org</a>
Prabhat Sharma	VNIT Nagpur	<a href="mailto:prabhatmadhavec1@gmail.com">prabhatmadhavec1@gmail.com</a>
Vladimir Hahanov	NURE Ukraine	<a href="mailto:hahanov@icloud.com">hahanov@icloud.com</a>
Anthony Soong	Huawei	<a href="mailto:anthony.soong@huawei.com">anthony.soong@huawei.com</a>
Renzhi Yuan	UBC	<a href="mailto:renzhiyuanqo@gmail.com">renzhiyuanqo@gmail.com</a>
Zhengyuan Xu	USTC	<a href="mailto:xuzy@ustc.edu.cn">xuzy@ustc.edu.cn</a>
Mohsen Razavi	University of Leeds	<a href="mailto:m.razavi@leeds.ac.uk">m.razavi@leeds.ac.uk</a>
Andrea Conti	University of Ferrara	<a href="mailto:a.conti@ieee.org">a.conti@ieee.org</a>
Peter Mueller	IBM Research Zurich	<a href="mailto:pmu@zurich.ibm.com">pmu@zurich.ibm.com</a>
Salvador E. Venegas-Andraca	Tecnológico de Monterrey	<a href="mailto:salvador.venegas-andraca@keble.oxon.org">salvador.venegas-andraca@keble.oxon.org</a>
Chia-Han Lee	National Chiao Tung University	<a href="mailto:chiahannctu.edu.tw">chiahannctu.edu.tw</a>



Lajos Hanzo	University of Southampton	lh@ecs.soton.ac.uk
Liqiang Zhao	Xidian University	<a href="mailto:lqzhao@mail.xidian.edu.cn">lqzhao@mail.xidian.edu.cn</a>