Internet Technical Committee Meeting

IEEE ICC 2017
May 24, 2017
Paris, France

Stefano Secci (Université Pierre et Marie Curie – Paris 6, France)
Meeting Agenda

1. Introduction
2. Approval of last meeting minutes
3. Conference activities
4. ITC awards
5. Internet Security SIG - Lightening Talks
6. IRTF activities
7. Recertification
8. Fall elections
9. Open discussions and other business
10. Adjourn
1. Introductions

Structure: IEEE, ComSoc, and TAC

IEEE Communication Society (ComSoc)
- One of the 38 societies of IEEE

ComSoc Technical & Education Activities (TEA)
- Members: VP Technical Activities, TAC Vice-chair, TC Chairs and Vice-chairs
  - 26 TCs, 14 Emerging Tech. Subcommittees: [http://www.comsoc.org/about/committees/Technical](http://www.comsoc.org/about/committees/Technical)
  - Internet TC is a joint tech. committee of ComSoc and ISOC
1. ITC Officers

• Officers (2015-2017):
  – Chair:
    Stefano Secci (U. Pierre and Marie Curie – LIP6, France)
  – Vice-Chair:
    Dijiang Huang (Arizona State University, USA)
  – Secretary:
    Michele Nogueira (Federal Univ. of Parana, Brazil)

Elected in Dec. 2015.
Next elections: Fall 2017.

• Previous Chairs (1995-2015):
1. ITC Community

ITC members

<table>
<thead>
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<th>Year</th>
<th>Q2</th>
<th>2017 Q2</th>
<th>2016 Q4</th>
<th>2016 Q1</th>
<th>2014 Q4</th>
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Q1 2016: cleaning of about 100 inactive emails.

Subscribing: send an email to listserv@comsoc.org and type in the body of the message “join itc FirstName FamilyName”
2. Approval of Dec. 6, 2016, ITC Meeting Minutes

http://itc.committees.comsoc.org/meetings/itc-meeting-at-ieee-globecom-2016-washington-d-c-usa-dec-6-2016/
3. Conference Activities

- IEEE ICC & GLOBECOM 2017, 2018
- IEEE INFOCOM Global Internet Symposia
- Recently endorsed conferences
  - ITC, NetSys, TMA, DRCN, NoF, CIOT, NETGAMES
3. ICC 2017

- ITC representatives:
  - Shiwen Mao, Auburn U, for NGNI
    - 181 TPC members
    - 213 submissions (179 reviewed, 34 withdrawn, 73 accepted)
    - 10 Lecture sessions and 4 Interactive Sessions
  - Ioannis Papanagiotou, Netflix, for SAC Cloud
    - 113 TPC members
    - 103 submissions (90 reviewed, 13 withdrawn, 32 accepted)
      - +43% (72) submissions increase wrt IEEE ICC 2016
      - +72% (60) submissions increase wrt IEEE GLOBECOM 2016
3. ICC 2018

Welcome to IEEE ICC 2018 in Kansas City, MO
Back in the US after 15 years!

- ITC representatives: Deep Medhi (general chair), Michele Nogueira (NGNI), Stefano Secci (publication co-chair)
- Paper submission deadline: ~Oct. 15, 2017
3. GLOBECOM 2018

• Venue
  – Abu Dhabi, UAE

• ITC representatives:
  – Hongbin Lou (NGNI)
  – Giacomo Verticale (Smart Grid Communications SAC track)
3. 20th IEEE INFOCOM Global Internet Symposium

- 20th Global Internet Symposium at IEEE INFOCOM 2017
  - Co-chairs: Radia Perlman, Olaf Maennel
  - Keynote by Bruce Maggs
  - Panel “hot topics & heresy” - Radia, Bruce, Suresh Krishnan, Geoff Huston
  - 25 submissions, 9 accepted, 30 attendees
3. IEEE INFOCOM
Global Internet Symposium

• Rule for the composition of the GISC (GI Steering Committee)
  – The ITC chair acts as GISC chair
  – one from each of recent 3-4 editions of GI, considering the institution/country/continent diversity maximization as first criterion.

• New GISC taking in charge GI’18 and GI’19
  – Jaime Lloret Mauri (UPV)
  – Marcelo Bagnulo Braun (UC3M)
  – Stefan Schmid (Aalborg U.)
  – Stefano Secci (LIP6)
  – Toru Hasegawa (Osaka U.)
  – Jun Li (Oregon U.)

• Thanks to outgoing members:
  – Xiaoming Fu (UGOE)
  – Joerg Ott (TUM)
  – Tilman Wolf (Umass)
  – Colin Perkins (U.Glasgow)
3. 21\textsuperscript{th} IEEE INFOCOM
Global Internet Symposium

– Co-chairs: Kevin Almeroth (UCSB), Xenofontas Dimitropoulos (FORTH)
– Deadline: ~January 2018
3. IEEE ICC 2019@ Shanghai

- **Nominations**
- **Next Generation Networking**
  - ITC representatives: Yang Chen (Fudan), Jerzy Domzal (AGH)
- **CSSM**: none due to ICC’19 nomination policy limiting symposia

- **Additional proposals made to TPC chairs for SAC tracks:**
  - **SAC Cloud Networks Track**
    - ITC representative: Alessio Botta (Naples U)
  - **Internet Security Track (new proposal from Internet Security SIG)**
    - ITC representative: Nirmal Shenoy (RIT)
3. IEEE GLOBECOM 2019@Hawaii

- **Nominations**
- **Next Generation Networking**
  - Pietro Manzoni (UPV)
- **Communications Software and Services**
  - Nadjib Ait Saadi (UPEC)
- **SAC Cloud Networks Track**
  - Shiwen Mao (Auburn U)
3. IEEE GLOBECOM & ICC

• Nominations – refresh on the procedure
  – About the co-chair position: each symposium will have its own technical program committee that is managed by a set of 2-4 Symposium Co-Chairs. The co-chairs retain full responsibility for all aspects of the symposium technical program, including the shaping of its technical program, managing the review process, selecting accepted papers, and organizing its sessions. Symposium co-chairs are highly respected leaders in their fields of expertise, with outstanding records of IEEE publications and proven experience in the peer review process.
  – Strongest profiles will be nominated so as to increase selection chances
  – Send nominations to ITC_Officers@comsoc.org
  – Next loop for ICC & GC ’20 starting early 2018
• General Co-chairs: Franco Davoli (Univ. of Genoa, IT), Nikhil Jain (Qualcomm US)
• TPC Co-chairs: Raffaele Bolla (Univ. of Genoa, IT), Florin Ciucu (Univ. of Warwick, UK)
• ITC Representatives: Prosper Chemouil, Pedro Casas, Deep Medhi, Tobias Hoßfeld
• Conference Statistics
  – 94 full paper submissions
  – Decision on acceptance: end of May; acceptance rate from last year: 34%
  – 2 co-located workshops: (1) Soft 5G Workshop, (2) Ph.D. Workshop
  – Two workshops without open call: (3) Information and Communication Technology (ICT) Standards, (4) Management & Control for Reliable Softwarized Networks
NetSys’17, March 13-17, 2017, Göttingen, Germany

- Biannual conference historically held at German speaking regions since 1979
  - Recently with more and more international penetration

- NetSys’17 info: [http://netsys17.uni-goettingen.de](http://netsys17.uni-goettingen.de)
  - IEEE/ACM/GI/VDE technical co-sponsorship
  - ITC representative: Xiaoming Fu, Stefano Secci, Joerg Ott
  - Keynotes: Henning Schulzrinne, Wieland Holfelder, Rolf Stadler
  - 18 (out of 43 completed submissions) full papers accepted: 41.8%
  - Demos, posters, PhD forum + 3 co-located workshops (SDNFlex, PerEL, SIREMTI)
  - Planned: industry session, history of computing session
- ITC representatives: Pedro Casas, Stefano Secci, Michele Nogueira
- Merge of TMA, TRAC & WNM workshops
- Decisions pending and notifications being sent out soon
- Related SIG: NMA ITC SIG http://nmasig.info/
ITC representative: Massimo Tornatore

• 13th EDITION

• 25 submissions, 16 paper accepted (No ComSoc technical co-sponsorship this time, too late)

• Technical program
  – 2 keynotes, 2 tutorials, 5 invited, 16 regular presentations

• Best Paper Award
  – Cristina Rottondi (Dalle Molle Institute For Artificial Intelligence, Switzerland), Alexander Erreygers (Ghent University, Belgium), Giacomo Verticale (Politecnico Di Milano, Italy) Jasper De Bock (Ghent University, Belgium), “Modelling Spectrum Assignment In A Two-Service Flexi-Grid Optical Link With Imprecise Continuous-Time Markov Chains”

• Best student Paper award
  – Mortada Aman & Egemen K. Çetinkaya (Missouri University Of Science And Technology, USA), “Towards Cloud Security Improvement With Encryption Intensity Selection”
• General Chairs: Toktam Mahmoodi, Stefano Secci
• Program Chairs: Antonio Cianfrani, Filip Idzikowski
• Confirmed keynote speakers:
  – Mischa Dohler (IoE & beyond cellular)
  – Marco Fiore (mobile network analytics)
• Tutorials on unmanned vehicle networks, 5G slicing, etc
• ONOS Hackathon Session
• Target acceptance ratio = 33%
Cloudification of the Internet of Things

3rd Cloudification of the Internet of Things
CloT 2017
November 8 - 10, 2017
Brussels, Belgium

Key dates
- Paper submission deadline: July 2, 2017
- Acceptance notification: September 4, 2017
- Camera Ready Paper: September 18, 2017
- Conference: November 8-10, 2017

General Co-Chairs
- Blondia Chris (University of Antwerp, Belgium)
- Nadjib Aitssaadi (ESIEE Paris, France)
- Harry Perros (NCSU, USA)

TPC Co-Chairs
- Ilhem Fajjari (Orange Labs, France)
- Amel Achour (CETIC, Belgium)

Publicity & Publication Chair
- Abdulhalim Dandoush (ESME Sudria, France)

Tutorials chair
- Mohamed Faten Zhani (Ecole de technologie supérieure, Canada)
- Walter Cerroni (University of Bologna, Italy)

Demonstration Co-Chairs
- Marc-Oliver Pahl (TUM, Germany)
- Alberto Schaeffer-Riho (UFRGS, Brazil)

Organizing Committee Chair
- Aziza Lounis (DNAC, France)

Steering Committee
- Guy Pujolle (UPMC, France)
- Raouf Boutaba (University of Waterloo, Canada)
- Harry Perros (NCSU, USA)
- Yutaka Takahashi (Kyoto University, Japan)
- Nadjib Aitssaadi (ESIEE Paris, France)
- Nathalie Mitton (INRIA, France)
ITC representatives: Maha Abdallah, Kuan-Ta Chen, Carsten Griwodz

Co-located with ACM Multimedia Systems conference (ACM MMSys’17)

Technically co-sponsored by the IEEE ComSoc, and In co-operation with ACM SIGCOMM and ACM SIGMM

Workshop Chairs: David Chu, Yutaka Ishibashi

Keynote Speaker: Polly Huang (National Taiwan University)

Acceptance Rate = 33%

Related SIG: ITC SIG on Networked Games

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IEEE ITC SIG on Networked Games (NetGames)
3. Technical Co-Sponsorship Procedure

- Technical Co-Sponsorship – refresh on the procedure
  - You are organizing a conference in the scope of ITC (i.e., Internet as primary scope)
  - TPC contains 3+ ITC members
  - Wish IEEE publication and ComSoc dissemination (magazines, etc)
  - Send required material to ITC_Officers@comsoc.org
    - Names of ITC members in the TPC
    - CFP in PDF & website
    - Topics related to the Internet scope
    - Acceptance statistics from the previous 3 events (if new, detailed description of the new event, targeted reach, target acceptance rate)
  - Do this at least 4 months before paper submission deadline, 6 months ahead the conference takes place
  - Do not show IEEE/ComSoc logos and “pending” string in CFP and website until approval
4. ITC Awards

Xiaoming Fu, Deep Medhi
May 23, 2017
4. Purpose and Considerations

- Recognize Individuals with Significant Contributions to the Field and the TC
- Promote and Raise Awareness of the Field and the TC
- Pool of Qualified Candidates; Sustainability
- Financial Means, Impact
- Selection Process – Uniqueness of the TC
4. ITC Awards

- “ITC Best Paper” Award
  - Established in 2013
- “ITC Early Career” Award
  - Established in 2014
- “ITC Outstanding Service” Award
  - Established in 2014
4. ITC Best Paper Award

• **Eligibility:** Papers published at ITC-endorsed conferences of the year

• **Current selection committee**
  – Deep Medhi (UMKC) – Chair; Jorge Liebeherr (U. Toronto); Lixin Gao (UMass)

• **Awardees:**
4. ITC Early Career Award

• Aim at an ITC member in *the early career* for his/her technical contributions in the area of Internet research and technology development
  – Within 10 years after PhD
  – No older than 40 years at the time of nomination

• Current selection committee:
  – Xiaoming Fu (U. Göttingen) – Chair; Jörg Ott (TU Munich); Henning Schulzrinne (Columbia U.); Lixia Zhang (UCLA)

• Awardees:
  – (2014): Ben Zhao, UCSB (for his contributions to the large-scale network systems and data analytics research)
  – (2016): Stefan Schmidt, Aalborg U. & TUB (for his contributions to both theoretical and applied networking and distributed systems research)
4. ITC Outstanding Service Award

• Aim:
  – to an ITC member in recognition of excellent service rendered to the fields of ITC over a long period of time

• Current selection committee:
  – Xiaoming Fu (U. Göttingen) – Chair; Jörg Ott (TU Munich); Henning Schulzrinne (Columbia U.); Lixia Zhang (UCLA)

• Awardees:
  – (2014): Henning Schulzrinne, Columbia U. (for his service to the Internet technical community)
  – (2016): Joe Touch, ISI&USC (for his leadership in ITC including the establishment of policies and procedures for the technical committee and conferences, and his service in the wider networking community)
5. ITC Special Interest Groups (SIGs)

- Active
  - Location ID Separation
  - Information-Centric Networking
  - Network Support for Games
  - Network Measurement and Analytics
  - Internet Security – NEW!

- Closed
  - Cloud Networking, Internet of Things
5. Internet Security SIG

- Activity
  - ONOS Security & Performance Brigade
  - SAC proposals at ICC/GC

- Today’s Lightening Talks
  – Sandra Scott-Hayward, QUB, Ireland
    • SDN Security – What’s done, what’s next?
  – Nirmala Shenoy, RIT, USA
    • A Secure Routing Architecture
5. Call for new Special Interest Groups

- New propositions are welcome!
- A SIG is generally opened
  - on a very recent subjects in Internet-working,
  - if there is a clear activity related to the subject,
    - Conferences, workshops, special issues, standardization, large research projects, etc
- in which ITC members are involved and willing to report.
- Please send propositions to ITC_officers@comsoc.org
6. IRTF Activities Report

Dimitri Papadimitriou
dimitri.papadimitriou@nokia-bell-labs.com
Bell Labs
Machine Learning

• Past trials
  – Learning-Capable Communication Networks (LCCN) Proposed RG: from IETF 80/Nov2010 to IETF 82/Nov.2011

• New initiative@IETF: Intelligence Defined Network (IDNET)
  Mailing list https://www.ietf.org/mailman/listinfo/idnet

• So far didn’t make it ... some potential reasons
  – How to reconcile statistical/inductive learning with deterministic network/protocol operations
  – Automated diagnostic/identification/analysis/etc. (troubleshooting) vs. control model very close to model-predictive control, self-adaptive closed loop control ... What’s the overall finality from the Internet perspective?
  – Generic (what could be done beyond info model) vs. case-specific (what’s the learning objective, task)
  – Algorithmic vs. Protocol (IETF) ... like Traffic engineering 20 years ago (may be role of IETF is in defining a communication protocol between agent/node and a learner/server)
  – Epistemic uncertainty (due to lack of knowledge) vs. aleatory uncertainty (due to randomness/process variability)
  – Fundamental role of data and their properties (i.i.d. assumption often not verified)
MAPRG: Measurement and Analysis for Protocols RG

• Chartered since Aug.2016 (IETF 96) <https://datatracker.ietf.org/doc/charter-irtf-maprg/>
  – Meeting as proposed RG @ IETF 95 and 96
  – Chairs: Mirja Kühlewind, Dave Plonka
  – Open membership

• Scope: internet measurement research ↔ IETF
  – Exchange of measurement-derived insight
  – Discussion of techniques and best practices for measurement relevant to protocol
  – Engineering and network operations
  – Collaborations to share data supporting these measurements
  – "landing pad" for the Internet measurement community to introduce its efforts to the IETF

• Relay of many EC projects related to measurement/monitoring
# IRTF Research Groups

<table>
<thead>
<tr>
<th>IRTF Research Groups</th>
<th>IETF 96 (Berlin)</th>
<th>IETF 97 (Seoul)</th>
<th>IETF 98 (Chicago)</th>
<th>IETF 99 (Prague)</th>
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<tbody>
<tr>
<td>Crypto Forum (CFRG)</td>
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<td>Global Access to the Internet for All (GAIA)</td>
<td>Meeting, IAB Review</td>
<td>Meeting, IAB Review</td>
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<td>Human Rights Protocol Considerations (HRPC)</td>
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<td>Internet Congestion Control (ICCRG)</td>
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<td>Information-centric Networking (ICNRG)</td>
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<td>Network Function Virtualization (NFVRG)</td>
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<td>Software-defined Networking (SDNRG)</td>
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Others

• Activity on Decentralized Data & Service Federation (met @ IETF 95, 96, 98):
  – mailing list: https://www.ietf.org/mailman/listinfo/din

• New IRTF Chair (since IETF 98, Jul.2017): Allison Mankin

• ACM, IRTF & ISOC Applied Networking Research Workshop (ANRW)
  – Peer-reviewed workshop; Collocated with IETF-99 Prague
  – Date: July 15, 2017
  – TPC chairs: Renata Teixiera (INRIA), Jörg Ott (TU Munich)
  – ACM Open access proceedings

• Applied Networking Research Prize (jointly with ISOC)
  – URL: https://irtf.org/anrp
  – 26 award winners to date from IETF 81 (2011) to IETF 96 (2016): 8x ACM IMC, 4x ACM SIGCOMM, 3x USENIX NSDI, 2x ACM CoNEXT, 2x IEEE SSP, 7x other (CCR, TON, JSAC, ICNP, ...)
  – Selection rate: 10-15%
  – Observation: IEEE -both journals and conferences- to increase nominations
7. Recertification

- Recertification form submitted on March 2017

- Reported on the Active Membership issue raised in last recert as:

  12. DO YOU HAVE AN “ACTIVE” MEMBERSHIP TIER AND WHAT ARE THE ELIGIBILITY CRITERIA FOR ACTIVE MEMBERSHIP?

  As per ITC bylaw, everything is performed by Internet and meeting participation is not an active membership criterion.

  Nevertheless, a discussion and a survey with ITC members took place among all ITC members about the introduction of a definition of active membership, in order to meet the request of the last recertification. The outcome of the survey was the introduction of the following active membership definition:

  “An ITC Member is an Active Member if he/she has been Ordinary Member for at least the last six months.”

  This definition appears to be compatible with the version of the ComSoc P&P in place at that time (likely unchanged until now), which differs from the ComSoc P&P document in place during the last recertification (the one making explicit reference to the need to have an active membership definition).

  More details can be found in a meeting minutes at this page:
  http://itc.committees.comsoc.org/itc-e-meeting-friday-may-27-2016/

- Lesson learned:

  - we had to report on ITC members being promoted to senior and fellow grades and indicated some names but likely not all → if you are promoted as Senior/Fellow (or need TC support for that), please contact itc_officers@comsoc.org

- Feedback from the recertification committee expected next summer
8. Fall elections

- Election committee (see P&P)
  - Current ITC chair and last two chairs + up to two additional members if needed
  - Xiaoming Fu, Jaime Lloret Mauri, Deep Medhi, Stefano Secci (chair)

- Modalities:
  - Via email. Instant Runoff Voting
  - Nominations to be solicited on July 17, 2017, with Sept. 11 as deadline
  - Candidates announced on Oct. 2
  - Request to register to vote sent on Oct. 2
  - Voting on Oct. 23
9. Other Business

• Technical & Educational Activity (TEA) council feedback
  – TC-specific award process may be synched at the ComSoc level
  – Discussion about the introduction of a Ph.D. thesis award
  – Internet TC recertification: review in June-August with other 7 TCs. Decision to be announced in GC’17 TEA meeting

• Join ITC:
  – Join the mail list by sending an email to listserv@comsoc.org and type in the body of the message "join itc FirstName FamilyName”
  – Participate/raise discussions in the list
  – Provide your inputs and help
10. Adjourn

Next ITC meeting:

IEEE GLOBECOM 2017 or IEEE ICC 2018