

## **Technical Committee – Circuits and Systems for Communications (CASCOM)**

Annual Report 6/2017 – 5/2018, - MAY 25, 2018 updated

TC Chair: Shoba Krishnan,

TC Chair-Elect: Joseph R. Cavallaro

Secretary: Hanho Lee

TC website: <http://ieee-cas.org/community/technical-committees/circuits-and-systems-communication-technical-committee>

### ***EXECUTIVE SUMMARY***

The Circuits and Systems for Communications (CASCOM) technical committee of the IEEE Circuits and Systems Society is a multi-disciplinary group of technical leaders in many fields of communication systems. The Technical Committee currently has 72 members from academia and industry with diversity across many of the IEEE regions world-wide. At the ISCAS conference, the CASCOM TC is associated with Track 3. Currently Track 3 has 12 sub-tracks reflecting the current technical interests of the TC. These sub-tracks include: Communications Circuits and Systems, Wireline Communications, Wireless Communications, Optical Communications, Broadband Communication Systems, MIMO and Massive MIMO, Modeling and Analysis of Communication Systems, Software Defined and Cognitive Radio Systems, Error Correcting Codes, Cryptography and Cyber-Security, Sensor Networks, Applications of Nonlinear Dynamics to Communications, and Other Areas in Communication Circuits and Systems. The TC periodically reviews the sub-tracks at ISCAS to reflect new areas of research interest. For instance, the areas of MIMO and Massive MIMO and Cryptography and Cyber-Security are relatively new additions based on member interest.

The CASCOM TC members span a wide variety of interests from analog and digital circuits for communications including areas such as power amplifier design and emerging circuits for millimeter wave communication systems. There is also research interest in reduced precision analog to digital converter design as ADC power consumption is often a key challenge in battery powered communication systems. With the increased concern on system security, cyber-security at both the physical layer and also the medium access control and network layers is of major importance. The areas of sensor networks and the Internet of Things (IoT) are also of research interest to many in the CASCOM TC as these areas combine many layers of communications with application processors and System on Chip (SoC) design. We anticipate that the new area of machine learning for communication systems many be added to the CASCOM track soon.

In addition to their membership in the CASCOM TC, many members are also active in the DSP TC as many challenges in physical layer communications, whether it be filter design or channel estimation, equalization, or detection build upon digital signal processing principles. CASCOM TC member are often members of the VLSI Systems and Applications (VSA) TC as many modern communication systems are implemented with

VLSI technology. Finally the Analog Signal Processing TC also shares many members with the CASCOM TC especially in the areas of radio frequency (RF) circuit design from phase locked loops to up and down converters to power amplifiers.

Beyond the IEEE Circuits and Systems Society, many CASCOM TC members are active in the IEEE Signal Processing Society in the Design and Implementation of Signal Processing Systems (DISPS) and the Signal Processing for Communications and Networking (SPCOM) TCs. They are also active in the IEEE Communications Society in the Signal Processing & Communications Electronics (SPCE) TC and also in the IEEE Computer Society and the IEEE Solid State Circuits Society.

In reviewing the service of the CASCOM TC members reported this year, service to the IEEE Circuits and Systems Society is visible as review committee members for ISCAS as well as Associate Editors for CASS journals as well as current and former Distinguished Visitors. Also, service to other IEEE societies as Associate Editors in Signal Processing and Computer Society journals is indicated. In summary, the CASCOM TC members have broad interests in wireless, wireline, and optical communication systems, circuits, and networks and this diversity is evident in their activities in other CASS TCs and in other IEEE Societies.

## **1. TC memberships and appointments:**

- a. CASCOM now has 72 TC members, and there are candidates for TC. The candidate will be voted by the TC members at the TC meeting at ISCAS'2018 in Florence, Italy, in May 2018:
  - Kheong Sann Chan, Nanjing Institute of Technology, China
  - Jae Ha Kung, Daegu Gyeongbuk Institute of Science and Technology (DGIST), South Korea
  - Jinbo Li, UC Davis, USA
  - Mohamed Shaban, Southern Arkansas University, USA
  - Shan Cao, Shanghai University, China
  - Sri Navaneethakrishnan Easwaran, Texas Instruments, USA
  - Tao Zhang, Google, USA
  - Youngjoo Lee, POSTECH, South Korea
- b. TC co-chair members with 2 year period till May 2018:
  - TC Chair – Shoba Krishnan (Santa Clara University, USA)
  - TC Vice-Chair (Chair-Elect) – Joseph Cavallaro (Rice University, USA)
  - TC Secretary – Hanho Lee (Inha University, South Korea)
- c. New appointment for 2018-2020 TC co-chair members will be elected in TC meeting.
- d. Two nominations were received for the position of Secretary, CASCOM TC election:

- Prof. Maire O'Neill, Queens University of Belfast, N. Ireland
- Prof. Chuan Zhang, Southeast University, China

## **2. ISCAS 2018 involvement:**

The CASCOM track (Track 3) received 105 papers in 12 sub-tracks.

Of the 105 papers that were submitted to our track, 58 papers were accepted (55% acceptance rate) with 26 papers in 5 lecture sessions and 32 papers in 4 poster sessions.

3 TC members served as CASCOM track co-chairs, Shoba Krishnan, Joseph R. Cavallaro, and Hanho Lee.

The CASCOM TC had 72 members. 52 TC members (and some member candidates (about 70%) served as 2018 CASCOM track Reviewer Committee Members:

Aboushady, Hassan; Abugharbieh, Khaldoun; Badawy, Wael; Cavallaro, Joseph; Choi, Jaehyouk; Desgreys, Patricia; Huang, Xinming; Kang, Jin-Ku; Katti, Rajendra; Kim, Ji-Hoon; Kim, Kyung Ki; Koc, Ut-Va; Kong, Jun Jin; Korotov, Alexander; Krishnan, Shoba; Lao, Yingjie; Lee, Hanho; Lee, Chang-Ho; Li, Li; Lin, Jun; Liu, Weiqiang; Liu, Liang; Ma, Hsi-Pin; Ma, Shaodan; Mak, Pui-In Elvis; Manganaro, Gabriele; Mukund, P. R.; O'Neill, Maire; Ogunfunmi, Tokunbo; Paliouras, Vassilis; Park, Jongsun; Rangel De Sousa, Fernando; Sai, Vyasa; Ser, Wee; Sha, Jin; Shieh, Ming-Der; Sobelman, Gerald E.; Studer, Christoph; Torlak, Murat; Van, Lan-Da; Velez, Miroslav; Wang, Zhongfeng; Wu, Yik-Chung; Yan, Zhiyuan; Yu, Qiaoyan; Yuan, Bo; Zhang, Tong; Zhang, Jingyi; Zhang, Kai; Zhang, Xinmiao; Zhang, Chuan; Zhao, Danella;

### **2a. ISCAS 2017 involvement:**

- a. The CASCOM track (Track 3) received 132 papers in 12 sub-tracks.
- b. Of the 132 papers that were submitted to our track, 56 papers were accepted (41.2% acceptance rate) with 30 papers in 8 lecture sessions and 26 papers in 4 poster sessions.
- c. 3 TC members served as CASCOM track co-chairs, Shoba Krishnan, Joseph R. Cavallaro, and Hanho Lee.
- d. The CASCOM TC had 68 members. 33 TC members (about 50%) served as 2017 CASCOM track Reviewer Committee Members:  
Hassan Aboushady, Wael Badawy, Joseph Cavallaro, Jaehyouk Choi, Xinming Huang, Jin-Ku Kang, Rajendra Katti, Kyung Ki Kim, Ji-Hoon Kim, Ut-Va Koc, Alexander Korotov, Shoba Krishnan, Chang-Ho Lee, Hanho Lee, Li Li, Jun Lin, Liang Liu, Weiqiang Liu, Pui-In Elvis Mak, Maire O'Neill, Vassilis Paliouras, Jongsun Park, Fernando Rangel De Sousa, Wee Ser, Gerald E. Sobelman, Christoph Studer, Lan-Da Van, Zhongfeng Wang, Zhiyuan Yan, Chuan Zhang, Tong Zhang, Xinmiao Zhang, Danella Zhao
- e. 2 Non-TC members served as 2017 CASCOM track Reviewer Committee Members:  
Gabriele Manganaro, Miroslav Velez,

### **3. Reports on Activities from IEEE CASCOM TC Members.**

**Of the 72 CASCOM TC members, 20 members reported on their activities. Our member reports include:**

#### ***Tokunbo Ogunfunmi***

**- ISCAS2018 Activities:** RCM, Review and Session Chair for ISCAS 2017,

**- Service on journal editorial boards:**

Associate Editor, Circuits, Systems and Signal Processing ([CSSP](#)) journal

Guest Editor, Special Issue titled: Algorithms and Architectures for Machine Learning-based Speech Processing for Circuits, Systems and Signal Processing journal

See this [weblink](#) for more details.

Associate Editor, IET Electronics Letters

**- Conferences organized or chaired:**

General Chair, 2018 IEEE Signal Processing Systems (SiPS) workshop, Cape Town, South Africa.

**- Participation in conference committees:**

Workshop Co-Chair of the 2017 IEEE International UMedia Conference, Thailand

Track Chair for 2017 Asilomar Conference on Circuits, Systems and Computers

Organized and Chaired a Special Session on “Machine Learning for Information Retrieval, Speech, and Image Processing”.

Track Chair for 2018 Midwest Symposium on Circuits and Systems (MWSCAS).

Member, Technical Committee, 2018 IEEE GHTC Conference

Member, Technical Committee, 2018 IEEE IoT Conference

Technical Program Co-Chair, 2019 IEEE ISCAS.

**- Invited talks**

Delivered a Government of India Academic Network (GIAN) workshop titled Designing Smart Cities based on Internet of Things (IoT), Nov. 2017

Visiting Professor, TIFAC Research Lab, Vellore Institute of Technology (VIT University), India, August 2017.

Delivered a one-day workshop on Signal Processing Research on August 15, 2017 in celebration of the 70<sup>th</sup> Independence day of India.

Delivered an invited lecture at the Indian Institute of Technology, Madras (IITM), Chennai, India. The talk was titled “An Information Theoretic Learning approach to Machine Learning”, Aug. 18, 2017.

**- Other relevant professional activities (e.g. chair/organizer for professional activities, steering committee members, etc.)**

National Science Foundation (NSF) proposal review panel, 2017.  
Carnegie Foundation Fellowship, Proposal Review Panel, 2017.

### ***Pui-In Mak***

#### **- Awards, distinguished lecturer and honors**

Distinguished Lecturer, IEEE Solid-State Circuits Society (2017-2018)  
Chairman of Distinguished Lecturer Program, IEEE Circuits and Systems Society (since 2018)

#### **- Service on journal editorial boards**

IEEE Solid-State Circuits Letters (since 2017)  
IEEE Journal of Solid-State Circuits (since 2018)

#### **- Participation in conference committees**

TPC Member, IEEE International Solid-State Circuits Conference (ISSCC), 2017-2018, USA

#### **- Books published**

Handheld Total Chemical and Biological Analysis Systems - Bridging NMR, Digital Microfluidics and Semiconductors, Springer, Jan. 2018.

#### **- Invited talks**

“Ultra-Low-Power Radios Using Current-Reuse/Function-Reuse/Ultra-Low-Voltage Techniques,” Shenzhen University, Shenzhen, China, Mar. 2018.

“Ultra-Low-Power Radios Using Current-Reuse/Function-Reuse/Ultra-Low-Voltage Techniques,” Peking University, Beijing, China, Jan. 2018.

“Ultra-Low-Power Radios Using Current-Reuse/Function-Reuse/Ultra-Low-Voltage Techniques,” Institute of Microelectronics, Chinese Academy of Sciences, Beijing, China, Jan. 2018.

“Multidisciplinary Research - Microelectronics meet Chemistry,” IEEE Circuits and Systems Society Shenzhen Workshop, Shenzhen, China, Dec. 2017.

“Ultra-Low-Power Radios Using Current-Reuse/Function-Reuse/Ultra-Low-Voltage Techniques,” Zhuhai National Hi-tech Zone, Zhuhai, China, Dec. 2017.

### ***Yichuang Sun***

#### **-Editors of Journal:**

Associate Editor of IEEE Transactions on Circuits and Systems-I: Regular Papers  
Editor of ETRI Journal (South Korea, on Info, Telecom and Electronics)  
Editor of Journal of Semiconductors (China, including Integrated Circuits and Systems)  
Editor of Journal of Sensor and Actuator Networks  
Editor of Active and Passive Electronic Components

**-TPC Members of Conferences:**

TPC Member of IEEE/ECS European Conference on Circuit Theory and Design (ECCTD), 2017.

TPC Member of IEEE Global Communications Conference (GLOBECOM) - Cognitive Radio and Networks, 2017, 2018

TPC Member of IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), 2017, 2018

TPC Member of IEEE Vehicular Technology Conference (VTC), 2017

**- Member of IEEE Society Committees:**

IEEE Circuits and Systems Society Technical Committees on: ASP, CASCOM

IEEE Communications Society Technical Committees on: WTC, RCC

***Weiqiang Liu***

**- ISCAS 2018 activities:** RCM , Reviewer

**-Awards, distinguished lecturer and honors:**

Paper on "High Performance Parallel Decimal Multipliers using Hybrid BCD Codes" is the Feature Paper of IEEE Transactions on Computers in the 2017 December issue.

**-Service on journal editorial boards:**

Steering Committee Member, IEEE Transactions on Multi-Scale Computing Systems (TMSCS), Jan. 2018-Dec.2019

Associate Editor, IEEE Transactions on Computers, May 2015-Apr. 2019

**-Participation in conference committees:**

Technical Program Committee member of ARITH, ASAP, ISVLSI, NANOARCH and ICONIP

***Jongsun Park***

**- ISCAS 2018 activities:** RCM, Reviewer

**-Service on Journal Editorial Boards:**

Associate Editor – IEEE Transactions on Circuits and Systems II: Express Briefs

Associate Editor – Journal of Low Power Electronics and Applications (JLPEA)

Associate Editor – Journal of Semiconductor Technology and Science (JSTS)

Associate Editor – Journal of Hardware and System Security

**-Participation in conference committees:**

International SOC Conference (ISOCC) 2017 (TPC vice chair)

International Symposium on Hardware Oriented Security and Trust (HOST) 2018 (TPC)

International Conference on Computer Aided Design (ICCAD) 2018 (TPC)

## ***Bo Yuan***

**- ISCAS 2018 activities:** RCM, Reviewer

**- Service on journal editorial boards**

Associate editor, Springer Journal of Signal Processing Systems

**- Participation in conference committees:** ICCAD, ISVLSI, ICASSP

**- Invited talks:**

02/18, University of California, Santa Cruz, “Energy-efficient high-performance deep learning systems: algorithm and hardware design”

## ***Liang Liu***

**-ISCAS 2018 activities:** RCM, Reviewer

**- Awards, distinguished lecturer and honors:**

Göran Linds Prize in Electronics, Royal Physiographic Society of Lund, Sweden, 2017 for building the world’s first 5G massive MIMO testbed and with it setting the world record in wireless spectrum efficiency

**-Conferences organized or chaired:**

Organize Tutorial on “5G Circuits and Systems”, IEEE Nordic Circuits and Systems Conference, 2017

**-Participation in conference committees:**

Technical/Reviewer Committee Member: IEEE NORCAS 2017

**-Invited talks:**

IEEE Live Webinar, Massive Signal Processing for Massive MIMO: Challenges and Lessons Learned

**-Other relevant professional activities:**

Board Member, IEEE Sweden Solid-State Circuits/Circuits & Systems Joint Chapter

## ***Vyasa Sai***

**- ISCAS 2018 activities:** RCM, Reviewer

**- Awards:** AIM Global Ted Williams Award 2018

**- Service on journal editorial boards**

Associate Editor @ IEEE Access

Associate Technical Editor @ IEEE Communications Magazine

Associate Editor and Guest Editor @ Elsevier's Computers and Electrical Engineering

**- Reviewer/Review Board activities:**

IEEE Journal of Translational Engineering in Health and Medicine, IEEE Internet of Things Journal, IEEE Biomedical and Life Science Circuits and Systems (BioCAS) 2017, Elsevier's Sustainable Computing: Informatics and Systems, Springer's Circuits, Systems & Signal Processing, International Journal of Communication Systems (IJCS), John Wiley and Sons, etc.

*Weisi Lin*

**- Awards, distinguished lecturer and honors:**

Distinguished Lecturer, IEEE Circuits and Systems Society 2016-2017

**- Service on journal editorial boards:**

Associate Editor, IEEE Trans. Circuits and Systems for Video Tech.

Associate Editor, Quality and User Experience, Springer

Associate Editor, Journal of Visual Communication and Image Representation

**- Conferences organized or chaired:**

Technical Program Co-Chair, IEEE Visual Communications and Image Processing (VCIP 2017)

**- Invited talks**

Invited talk, "Just-Noticeable Difference (JND) for Multimedia Signals", Department of Computer and Information Science, University of Macau, 20 July 2017.

Invited talk, "Multimedia Processing & Communication To Enhance Quality of Life", Huawei Singapore Research Center, 10 Nov 2017

**- Other relevant professional activities**

Special Session organizer in international conferences:

Astronomical Big Data Processing, IEEE Visual Communications and Image Processing (VCIP), 2017,

Multi-Sensory Experiences, ACM MMSys, 2017

Perceptual Quality Evaluation of Advanced Multimedia Systems, IEEE ICIP 2017

*Fernando Rangel de Sousa*

**- ISCAS 2018 activities:** RCM, Reviewer.



**-Participation in conference committees:** I participated as TC member for the conferences below, among others:

30th Symposium on Integrated Circuits and Systems Design -SBCCI 2017

31th Symposium on Integrated Circuits and Systems Design -SBCCI 2018

7th Workshop on Circuits and System Design - *WCAS 2017*

9th IEEE Latin American Symposium on Circuits and Systems- LASCAS 2018

2nd International Symposium on Instrumentation Systems, Circuits and Transducers - INSCIT 2017

**- Other relevant professional activities**

Chair of the IEEE Technical Chapter IM09/CAS04/COM19 (Brazil South Section)

Co-organizer and member of the steering committee of the 2st Symposium on Instrumentation Systems, Circuits and Transducers, INSCIT 2016

Track-chair of IEEE *I<sup>2</sup>MTC* – International Instrumentation and Measurement Technology Conference2018

***Chuan Zhang***

**Organizers: Conferences, Workshops, Panels, Special Sessions, Tutorials, etc.**

- Financial Chair, IEEE Workshop on Signal Processing Systems 2018 (SiPS 2018), Cape Town, South Africa, 21-24 October 2018 (<http://sites.ieee.org/sips2018/>).
- Special Session Chair, IEEE Workshop on Signal Processing Systems 2018 (SiPS 2018), Cape Town, South Africa, 21-24 October 2018 (<http://sites.ieee.org/sips2018/>).
- Special Session Organizer, 2017 IEEE 12th International Conference on ASIC (ASICON 2017), Guiyang, China, October 25 to 28, 2017 (<http://www.asicon.org/>).
- Special Session Organizer, 2018 International Symposium on Circuits and Systems (ISCAS 2018), Florence, Italy, May 27-30, 2018 ([www.iscas2018.org](http://www.iscas2018.org)).
- Special Session Organizer, 2018 IEEE 23rd International Conference on Digital Signal Processing (DSP 2018), Shanghai, China, November 19 to 21, 2018 ([dsp2018.org/](http://dsp2018.org/)).
- Track Chair, The IEEE International Midwest Symposium on Circuits and Systems (MWSCAS 2018), Windsor, Canada, 2018 (<https://mwscas2018.org/>).
- Symposium Chair, The 6th IEEE Global Conference on Signal and Information Processing (GlobalSIP 2018), Anaheim, CA, on November 26-28, 2018 ([2018.ieeeglobalsip.org](http://2018.ieeeglobalsip.org)).
- Program Committee, IEEE Workshop on Signal Processing Systems 2017 (SiPS 2017), Lorient, France, from 3rd to 5th October 2017 (<http://sips2017.org/>).
- Conference Secretary, The Ninth International Conference on Wireless Communications and Signal Processing October 11-13, 2017, Nanjing, China (<http://www.ic-wcsp.org/2017/index.asp>).

**Invited talks: plenary sessions, keynotes, invited lectures, tutorials,**

- Tutorial Speaker: Alternative Perspective on Physical Implementation of DSP Algorithm, Online Series Tutorial, Ministry of Industry and Information Technology Talent Exchange Center, November.

- Invited Speaker: Think Twice: A Physical Point View to Understand Signal Processing Systems, July 20, 2017, Nanjing University.
- Invited Speaker: Demo for Uniform Belief Propagation, January 27, 2018, Intel Lab, Santa Clara, USA.

### **Editorial services**

- Corresponding Guest Editor: IEEE Journal on Emerging and Selected Topics in Circuits and Systems, Special Issue on Advanced Baseband Processing Circuits and Systems for 5G Communications

### **Awards and honors for year 2017-18**

- Best Student Paper Award, 2017 IEEE 12th International Conference on ASIC (ASICON 2017), Guiyang, China, October 25 to 28, 2017 (<http://www.asicon.org/>).
- Excellent Paper Award: The 11th International collaboration Symposium on Information, Production and Systems (ISIPS 2017), 14th - 16th, November, 2017 (<http://www.waseda.jp/assoc-ics/2017/>).

### **Other Professional Activities**

- Session Chair, 2017 IEEE 12th International Conference on ASIC (ASICON 2017), Guiyang, China, October 25 to 28, 2017 (<http://www.asicon.org/>).
- Session Chair, 2018 International Symposium on Circuits and Systems (ISCAS 2018), Florence, Italy, May 27-30, 2018 ([www.iscas2018.org](http://www.iscas2018.org)).
- Session Chair, 2017 IEEE 22rd International Conference on Digital Signal Processing (DSP 2017), London, Great Britain, 2017 ([dsp2017.org/](http://dsp2017.org/)).
- Session Chair, IEEE Workshop on Signal Processing Systems 2017 (SiPS 2017), Lorient, France, from 3rd to 5th October 2017 (<http://sips2017.org/>).
- Session Chair, The Ninth International Conference on Wireless Communications and Signal Processing October 11-13, 2017, Nanjing, China (<http://www.ic-wcsp.org/2017/index.asp>).

### ***Máire O'Neill***

#### **- ISCAS 2018 activities:**

- CASCOM Review committee member
- CASCOM Paper Reviewer
- Session Chair: Cryptography & Cyber Security

#### **-Awards, distinguished lecturer and honors**

Selected to be Director of a £5M UK Research Institute in Secure Hardware and Embedded Systems (RISE: [www.ukrise.org](http://www.ukrise.org)), a UK wide collaborative initiative, funded by EPSRC and the National Cyber Security Centre (NCSC), 2017 – 2022.

#### **- Journal Editorial Boards**

Associate Editor, IEEE Transactions on Computers,  
Associate Editor, IEEE Transactions on Emerging Topics in Computing  
**-Conferences organized or chaired**

Organized a Spring School in Hardware Security, University of Cambridge, UK, 28-29  
March 2018

Program Chair of 16<sup>th</sup> IMA International Conference on Cryptography and Coding,  
University of Oxford, UK, 2017

### **-Invited Talks**

Invited talk at Real World Crypto, Zurich, Switzerland, Jan 2018 (>600 attendees –  
premier conference in field of cryptography)

Invited talk, UK Royal Academy of Engineering Research Forum, London, September  
2017

Keynote talk, Belfast Cyber Security Summit, May 2018.

### **-Professional Activities**

Member of the UK Royal Academy of Engineering's (RAEng) research committee (2017-  
2020)

Member of the Royal Irish Academy's Engineering and Computer Sciences  
Committee (2018 -2022)

Member of the UK Royal Academy of Engineering (RAEng) Research Fellowship Sift  
Panel and Interview Panel, March 2018.

Chair, EPSRC Panel, Research Institute in Hardware Security - Call for Research  
Projects, September 2017.

## ***Lan-Da Van***

### **-Editorial Services**

IEEE Transactions on Computers (Associate Editor, Oct. 2014~Present)

IEEE Access (Associate Editor, Feb. 2018~Present)

Journal of Medical Imaging and Health Informatics (Associate Editor, Oct. 2014~Aug.  
2017)

Journal of Medical Imaging and Health Informatics (Board Member, Aug. 2017~Present)

### **-Technical/Program Committee Member:**

IEEE International Symposium on Circuits and Systems (ISCAS) (VLSI Systems and  
Applications TC Member, 2017)

IEEE International Symposium on Circuits and Systems (ISCAS) (Circuits and Systems  
for Communications TC Member, 2017)

IEEE International Symposium on Circuits and Systems (ISCAS) (Nanoelectronics and  
Gigascale Systems TC Member, 2017)

1st New Generation of Circuits and Systems (NGCAS) Conference 2017 (PC Member, 2017, sponsored by IEEE)

**-Award/Honor:**

2017 National Chiao Tung University: Mentoring Award

***Zhongfeng Wang***

**- ISCAS 2018 activities:** RCM

**- Service on journal editorial boards**

Guest editor for a special issue (5G baseband processing) of IEEE Journal of Emerging and Selected Topics in Circuits and Systems

**- Conferences organized or chaired**

- Special session organizer: Asilomar 2017, ASICON 2017, DSP 2017

**- Participation in conference committees**

- Track chair for SOCC'2017, RCM for ICASSP'2017, TPC for ASICON'2017, TPC for SiPs'2017

- General chair for CCSDS'2017

**-Invited talks**

Gave invited talks in some universities including Tianjin University and keynote speeches at some technical forums including AITech'2018

***Hanho Lee***

**-ISCAS 2018 activities:** Track chair, Reviewer

**- Service on Journal editorial boards**

Associate Editor, Journal of Semiconductor Technology and Science

**- Conference organized or chaired:**

Special Session Chair, 2017 International SoC Design conference (SoCC2017)

**-Participation in conference committees**

IEEE CASCOM TC, VSA TC, Technical Committee Member

**- Other professional activities**

IEEE CASCOM TC, Secretary

IEEE Circuits and Systems Society Seoul Chapter, Secretary

IEIE Semiconductor Society, Secretary

## *Nam Ling*

### **- Awards, distinguished lecturer and honors**

Nam Ling, Outstanding Paper Award, Umedia (2017).

### **- Service on journal editorial boards**

Associate Editor, Human-centric Computing and Information Sciences (Springer).

### **- Conferences organized or chaired**

Honorary Co-Chair, 10th International Conference on Ubi-Media Computing and Workshops (Umedia), Aug 1-4, 2017.

### **- Participation in conference committees**

International Advisory Committee Member, The 12<sup>th</sup> IEEE Conference on Industrial Electronics and Applications (ICIEA), Jun 18-20, 2017.

### **- Invited talks**

Seminar at Center for System Intelligence and Efficiency (EXQUISITUS) (Nanyang Technological University) and the IEEE Industrial Electronics Society Singapore Chapter, Singapore, Dec 18, 2017.

Seminar at School of Mathematical Sciences, Nankai University, Tianjin, China, Sep 1, 2017.

Seminar at School of Electrical and Information Engineering, Tianjin University, Tianjin, China, Sep 1, 2017.

Seminar at Institute of Digital Media, School of Electronics Engineering & Computer Science, Peking University (Beijing University), Beijing, China, Aug 31, 2017.

Seminar at IEEE Circuits and Systems (CAS) Society Singapore Chapter and Center for Infocomm Technology (INFINITUS) (Nanyang Technological University), Singapore, Aug 10, 2017.

## *Gerald Sobelman*

### **- ISCAS2018 Activities: RCM**

### **- Participation in conference committees**

- Member, Program Committee, IEEE International Conference on Digital Signal Processing, 2017.
- Member, Technical Program Committee, IEEE International Conference on ASIC (ASICON), 2017.
- Member, Technical Program Committee, and Track Co-Chair for Signal and Image Processing, IEEE Midwest Symposium on Circuits and Systems (MWSCAS), 2017.

- Member, Technical Program Committee, European Signal Processing Conference (EUSIPCO), 2018.
- Member, Technical Program Committee, IEEE International Conference on Electronics, Circuits and Systems (ICECS), 2018.
- Session Chair for “Low-power Digital Techniques (2),” IEEE International Conference on ASIC (ASICON), Guiyang, China, October, 2017.

**- Invited talks:**

“VLSI Architectures for Communications,” Changsha University of Science and Technology, Changsha, China, October, 2017.

**-Other professional activities:**

Completed a 3-week Fulbright Specialist Program project at Hanoi University of Science and Technology in Hanoi, Vietnam, 2017.

## ***Susanto Rahardja***

**- Participation in conference committees**

Advisory Co-Chair, ACM IMCOM 2018, *the 12<sup>th</sup> International Conference on Ubiquitous Information Management and Communication*, Jan 5-7, 2018, Langkawi, Malaysia.

Review Committee Member, *IEEE International Symposium on Circuits and Systems*, Florence, Italy, May 27-30, 2018.

Session Chair, Lecture, Computing Architecture for Multimedia Content Analysis, B3L-A, V.V.G.5, 29 May 2018, 10:15-11:45am, *IEEE International Symposium on Circuits and Systems*, Florence, Italy, May 27-30, 2018.

Best Paper Award Committee Member, *Journal of Visual Communication & Image Representation*, 2018.

General Co-Chair, Ubi-Media, *the 11<sup>th</sup> International Conference on Ubi-Media Computing*, August 22-25, 2018, Nanjing, China.

General Co-Chair, *Asia Pacific Signal and Information Processing Association (APSIPA)*, Hawaii, USA, Dec 2018.

Board of Governor, *Asia Pacific Signal and Information Processing Association (APSIPA)*, Jan 2018 – Dec 2019.

Technical Council Evaluator, IEEE Industrial Electronics Society Fellow Nomination, 2018.

**- Service on journal editorial boards**

Associate Editor, *IEEE Transactions on Multimedia*.

Associate Editor, *Journal of Visual Communication & Image Representation*.

## ***Xinmiao Zhang***

**- ISCAS 2018 activities**

RCM, special session organizer, tutorial speaker,  
Co-Chair for Late Breaking News Track,  
Member of Industry Board, chair for 3 sessions

**- Service on journal editorial boards**

Associate Editor for TCAS-1

**- Participation in conference committees**

Tutorial co-chair, IEEE Workshop on Signal Processing Systems (SiPS) 2018  
TPC, NVMW 2018, ICC 2018, GLOBECOM 2018

**- Invited talks**

ECE Department seminar at University of Minnesota

**- Other relevant professional activities**

Vice-Chair, Data Storage Technical Committee, IEEE Communications Society

***Joseph Cavallaro***

**- ISCAS 2018 activities (e.g. RCM, Review, Session Chair, etc.)**

Track Co-Chair for CASCOM  
Session Chair for Wireline Communications Session

**- Service on journal editorial boards**

Associate Editor, IEEE Transactions on Signal Processing  
Associate Editor, IEEE Signal Processing Letters  
Associate Editor of the Journal of Signal Processing Systems (JSPS)  
Guest Co-Editor, IEEE Transactions on Circuits and Systems I (TCAS-1) Special Issue on the 2017 IEEE International Symposium on Circuits and Systems (ISCAS 2017)  
Guest Co-Editor, Journal of Signal Processing Systems (JSPS) Special Issue on Signal Processing Systems, 2018.

**- Conferences organized or chaired**

Technical Chair, IEEE Asilomar Conference on Signals, Systems, and Computers, 2017

**- Participation in conference committees**

Review Committee Member, IEEE International Conference on Acoustics, Speech, and Signal Processing, (ICASSP), DISPS Track, Calgary, Canada, 2018.  
Program Committee, IEEE International Conference on Application-specific Systems, Architectures and Processors (ASAP), 2017.  
Program Committee, EUSIPCO Conference, 2017.  
Program Committee, Signal Processing for Communications Symposium, IEEE Global Communications Conference (GLOBECOM), Singapore, 2017.

**- Invited talks**

Invited Lecture, "Algorithms, Architectures, and Testbeds for Advanced Wireless Communication Systems," Texas A&M University, ECE Department, College Station, TX (April 20, 2018).

Invited Lecture, "Algorithms, Architectures, and Testbeds for 5G Wireless Communication Systems," Samsung Research America, Mountain View, CA (November 1, 2017).

**- Other relevant professional activities (e.g. chair/organizer for professional activities, steering committee members, etc.)**

Review Panelist, CNS Division, CISE, National Science Foundation, 2018

Chair-Elect, IEEE Circuits and Systems Society, TC on Communications, 2017, 2018

Award Committee Chair, IEEE Computer Society Technical Committee on VLSI, 2018

Advisory Board Member, IEEE Signal Processing Society Design and Implementation Technical Committee, 2017, 2018

Member, IEEE Computer Society Fellow Evaluation Committee, 2017.

Member, IEEE Communications Society Signal Processing for Communications and Electronics Technical Committee (SPCE TC), 2017, 2018.

Member, IEEE USA R&D Technical Committee, IEEE CAS Society Representative, 2017, 2018.

***Kyung Ki Kim***

**- Invited talks**

"Advanced Digital Circuit and System Design", CASS workshop in Wuhan, China, 11/2017

**- ISCAS 2018 activities**

IEEE ISCAS 2018, RCM, Reviewer

**- Service on journal editorial boards**

Associate Editor, IEIE Journal

**- Participation in conference committees**

IEEE MWSCAS 2017, Reviewer

IEEE Asian Solid-State Circuits Conference, TPC and local chair

ISOCC 2017, Secretary

**- Other relevant professional activities**

Steering Committees, The Institute of Semiconductor Engineers

IEEE CASS Taegu Chapter Chair