Issue 18
Feb 2019

APSIPA NEWSLETTER

Asia-Pacific Signal and Information Processing Association Newsletter

Greetings!

Happy New Year. Wishing you a joyful, healthy and wonderful year in 2019!

APSIPA was established in 2009. 2018 marked the ten year anniversary of APSIPA. A magazine was published for its celebration to reflect the body of knowledge of APSIPA, samples of technologies possessed by members and innovative ideas for short-term and long-term future development. In 2018, a new technical committee (TC) called "Multimedia Security and Forensics" has been set up to promote advancement and exchange of research fields of multimedia security and forensics in the Asia-Pacific region. Thus, there are altogether seven TCs established in APSIPA. They are: Signal Processing Systems: Design and Implementation, Signal and Information Processing Theory and Methods, Speech, Language and Audio, Biomedical Signal Processing and Systems, Image, Video and Multimedia, Multimedia Security and Forensics, and Wireless Communications and Networking. Members may visit http://www.apsipa.org/TC/index.html to get more information. Besides, APSIPA ASC 2018 has been held successfully in Honolulu, Hawaii from 12 to 15 November 2018.

In 2019, Professor Hitoshi Kiya becomes the APSIPA president while Professor Anthony Kuh takes up the position of President-elect. Please read their messages and sharing in this issue! Of course, in 2019, APSIPA Annual Summit and Conference will be held in Lanzhou, China from 18 to 21 November 2019. The submission deadline for proposal of special sessions and regular session papers are May 1, 2019 and June 1, 2019 respectively. More information is available at http://www.apsipa2019.org/.

Contribution to Newsletter from members are always highly appreciated. All members are invited to send us your contributions to be published in APSIPA Newsletter. Don't forget to give us thoughts about the further development of APSIPA Newsletter. Enjoy reading this issue!

Bonnie Law
APSIPA Newsletter EiC

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Message from the President, APSIPA

It is my great honor and privilege to write to all of you as the new president of the Asia-Pacific Signal Information Processing Association (APSIPA). First, let me express my very best wishes to everyone for a happy and successful New Year 2019. As you may know, APSIPA was established in 2009 as a non-profit organization, and officially registered in Hong Kong, by the strong leadership of its founders. The APSIPA Annual Summit and Conference (ASC) 2018 was held as the 10th anniversary conference under the chairmanship of Prof. Yih-Fang Huang, Prof. Anthony Kuh, and Prof. Susanto Rahardja in its birthplace, Hawaii, where the idea of APSIPA was discussed for the first time during IEEE ICASSP 2007. The APSIPA 10th anniversary magazine was also published for the celebration of the 10th anniversary, under the leadership of Prof. Wan-Chi Siu, the Past President (2017–2018). On behalf of the association, we take this opportunity to thank everyone who has contributed their dedicated effort to make APSIPA a great success.

In the short span of just 10 years, APSIPA has built a solid foundation with rich activities under the leadership of our past presidents and founders. To date, APSIPA has launched:

- APSIPA ASC, an annual conference, in 2009
- Technical Committees in 2009
- APSIPA Transactions on Signal and Information Processing, an open-access journal, published by the Cambridge University Press in 2012
- A Distinguished Lecturer Program (DLP) and APSIPA Newsletters in 2012
- APSIPA Friend Labs Program in 2013
- A strategic partnership with the IEEE Signal Processing Society in 2014
- APSIPA Industry Program in 2014
- Sadaoki Furui Prize Paper Award in 2016
- APSIPA Grand Award in 2018

At APSIPA ASC 2018, a Presidential Forum was organized as an event to celebrate the 10th APSIPA ASC, where each President (past, present, and future) talked about the history of APSIPA from their perspective along with their vision for the future. Future directions for APSIPA were discussed together with audiences, and the Forum was very fruitful for all participants. Through this event, I am confident that APSIPA will continue to thrive and evolve, and will provide a greater leadership to the signal and information processing R&D community. I have accepted this challenge to bring APSIPA to new heights. In addition to furthering the vision of the past presidents, I would like to focus on the following new initiatives.

- Establishing APSIPA local chapters to collaborate with DL activities, Friend Labs, local associations, seasonal schools, and workshops
- Launching events to encourage young researchers, Ph.D. students, and women researchers—not only to increase our visibility, but also to link such people with senior individuals in the APSIPA community for future APSIPA activities.

There are various languages, cultures, traditions, and economic environments in the Asia-pacific region. Each country and area has its own characteristics and technology bases, and therefore APSIPA should provide services that carefully consider such individuality while providing a collective identity and representation to the world community. Fortunately, many senior researchers and educators with very rich experience are a part of the APSIPA community. As one of the above initiatives is to link senior people to the younger generation, APSIPA will offer members the opportunity to network and make connections with such senior people.

We look forward to working with many active people in the area of signal and information processing, and to furthering technological progress in the Asia-Pacific region. We would like to ask you all to regularly participate in our conference, APSIPA ASC, where first-class plenary talks, tutorials, overviews, and panels are provided, and to submit your articles to our open access journal, APSIPA Transactions on Signal and Information Processing, which enables us to instantly disseminate new research findings to the worldwide community at low cost.

We are open to new ideas and suggestions for encouraging APSIPA activities, so please feel free to contact us. We will certainly benefit from your insights. In closing, let me remind you that APSIPA ASC 2019 will be held in Lanzhou, China, and APSIPA ASC 2020 will be held in Auckland, New Zealand.

I look forward to seeing all of you in Lanzhou and Auckland.

Hitoshi Kiya

President (2019-2020), APSIPA

Sharing from President-Elect

Professor Anthony Kuh

University of Hawaii, Kuh@hawaii.edu

It is my great honor to serve as President-Elect of the Asia Pacific Signal and Information Processing Association (APSIPA) for 2019-2020. I look forward to working with President Hitoshi Kiya, the Board of Governors, and members of APSIPA to continue strengthening and growing our association. We have been very fortunate to have very strong leadership that started from our founding President, Sadaoki Furui, followed by past Presidents Jay Kuo, Haizhou Li, and Wan-Chi Siu, and founding member and organizer, Ray Liu. Last year was a milestone for APSIPA, for it was the 10^{th} year of this association. We celebrated this special anniversary with the 10^{th}-year anniversary magazine edited by Wan-Chi, featuring excellent contributions from many key APSIPA founders, members, and contributors. We also held the 10^{th} APSIPA Annual Summit and Conference (ASC) in Honolulu, Hawaii. The 10^{th} APSIPA ASC had more than 500 registered participants, a record for APSIPA ASC. It is worth noting that it was in Honolulu, at IEEE ICASSP 2007, where the ideas for APSIPA were initially formulated. In my ten years with APSIPA I have benefitted tremendously from getting to know many in the community, collaborating with some in research activities, rendering service activities, and making many new friends. It has been a pleasure for me to

serve on the Board of Governors, as Vice President of Technical Activities, as an Associate Editor for the *APSIPA Transactions on Signal and Information Processing*, to assist with Friend Labs, and to organize APSIPA ASC this past year in Honolulu.

We look forward to continue serve the APSIPA membership and will look for ways to provide improved benefits to our members. This includes increasing our membership, especially that of the under-represented groups. I will work to encourage current students to become regular members once they graduate, and recruit more women, junior faculty, industry members, and members from underrepresented countries to become members of the APSIPA community.

Our two major activities, APSIPA ASC and *APSIPA Transactions on Signal and Information Processing* have been doing well. This past year we saw a record number of registrations at APSIPA ASC in Honolulu and a record number of papers published in the *APSIPA Transactions on Signal and Information Processing*. In 2018 we also added a seventh technical committee, Multimedia Forensics and Security. Other activities include Friend Labs, Distinguished Lecturers, Newsletters, and Technical Committee Workshops. The President, myself, and the Board of Governors all look forward to hearing from you on suggestions to improve our services and benefits to the APSIPA membership. I would encourage you to contact me if you have any comments or suggestions.

APSIPA has several opportunities to do well. Looking at some statistics for the IEEE Region 10 (which includes countries in Asia and the Pacific region), where a predominant percentage of our membership comes from, I observed that Region 10 has the largest membership among all IEEE regions with 30.1% of total IEEE membership. More interestingly, Region 10 has an even higher percentage of student members (53.7% of total IEEE student members) and women members (45.7% of total IEEE women members). Quite importantly, this is a region that is quickly becoming the center of technology development in the world. All these present great opportunities for recruiting new APSIPA members, and making APSIPA more beneficial to her members and the technical community at large.

Finally, there has been a tremendous number of activities in academia, industry, and government in Artificial Intelligence (AI), data science, and machine learning. Many APSIPA members are leading researchers and educators in this area. The APSIPA can play a prominent global role in the research and education efforts of AI, data science, and machine learning. This includes fundamental theory, applications, and development of these technologies. Many of the papers in the *APSIPA Transactions on Signal and Information Processing* are directly related to machine learning and data science (especially in the areas of speech recognition and image processing). At last year's APSIPA ASC in Honolulu, the theme of the conference was ``*Catch the Big Data Wave in Signal and Information Processing*''. The keynote speeches, one overview session, the tutorials, and many of the special and regular sessions focused on this topic. In the future many large societal problems, including those of health care, infrastructure systems (e.g. power grid, transportation systems), and data protection and security, will require the use of AI, data science, and machine learning technologies.

[1] From IEEE MGA Annual Statistics: https://mga.ieee.org/resources/annual-statistics/the-annual-statistics-of-the-ieee-2017

APSIPA Sadaoki Furui Prize Paper Award

Professor Sadaoki Furui was the APSIPA founding president (2009 to 2012). In 2015, Professor Furui kindly donated a sum of US$25,000 to APSIPA. The donation is used to promote and recognize high quality papers in the APSIPA Transactions on Signal and Information Processing through establishing a "best paper award", named **APSIPA Sadaoki Furui Prize Paper Award**. We are pleased to tell that the 2018 APSIPA Sadaoki Furui Prize Paper Award was given to:

Chung-Hsien Wu, Jen-Chun Lin and Wen-Li Wei

"Survey on Audiovisual Emotion Recognition: Databases, Features and Data Fusion Strategies"

APSIPA Transactions on Signal and Information Processing, Volume 3, 2014, e12

https://doi.org/10.1017/ATSIP.2014.11

The award (including the certificate and the cash prize of US $1000) has been presented in the opening ceremony of APSIPA ASC 2018.

Congratulations!

Latest Articles from APSIPA Transactions on Signal and Information Processing (ATSIP)

- **Learning from past mistakes: improving automatic speech recognition output via noisy-clean phrase context modeling**
  - Prashanth Gurunath Shivakumar, Haoqi Li, Kevin Knight, Panayiotis Georgiou
  - DOI: https://doi.org/10.1017/ATSIP.2018.31
  - Published online: 01 February 2019, e8

- **Grayscale-based block scrambling image encryption using YCbCr color space for encryption-then-compression systems**
  - Warit Sirichotedumrong, Hitoshi Kiya
  - DOI: https://doi.org/10.1017/ATSIP.2018.33
  - Published online: 01 February 2019, e7

- **Analysis and generation of laughter motions, and evaluation in an Android robot**
  - Carlos Toshinori Ishi, Takashi Minato, Hiroshi Ishiguro
  - DOI: https://doi.org/10.1017/ATSIP.2018.32
  - Published online: 25 January 2019, e6

- **Towards visible and thermal drone monitoring with convolutional neural networks**
  - Ye Wang, Yueru Chen, Jongmoo Choi and C.-C. Jay Kuo
  - DOI: https://doi.org/10.1017/ATSIP.2018.30
  - Published online: 15 January 2019, e5

- **Decentralized tracing protocol for fingerprinting system**
  - Minoru Kuribayashi and Nobuo Funabiki
  - DOI: https://doi.org/10.1017/ATSIP.2018.28
  - Published online: 9 January 2019, e2

Most Read Articles from ATSIP

https://www.cambridge.org/core/journals/apsipa-transactions-on-signal-and-information-processing/most-read

- **Dimensionality reduction of visual features for efficient retrieval and classification**
  - Petros T. Boufounos, Hassan Mansour, Shantanu Rane, Anthony Vetro
  - DOI: https://doi.org/10.1017/ATSIP.2016.14
  - Published online: 12 July 2016, e14

- **A tutorial survey of architectures, algorithms and applications for deep learning**
  - Li Deng
  - DOI: https://doi.org/10.1017/atsip.2013.9
  - Published online: 22 January 2014, e2

- **Use cases and challenges in telecom big data analytics**
  - Chung-Min Chen
  - DOI: https://doi.org/10.1017/ATSIP.2016.20
  - Published online: 12 December 2016, e19

- **Unified access in licensed and unlicensed bands in LTE-A Pro and 5G**
  - Boon Loong Ng, Hongbo Si, Aris Papasakellariou, Jianzhong Charlie Zhang
  - DOI: https://doi.org/10.1017/ATSIP.2017.7
  - Published online: 12 July 2017, e6

- **Automatic exposure compensation using an image segmentation method for single-image-based multi-exposure fusion**
  - Yuma Kinoshita, Hitoshi Kiya
  - DOI: https://doi.org/10.1017/ATSIP.2018.26
  - Published online: 02 January 2019, e22

Most Cited Articles from ATSIP

https://www.cambridge.org/core/journals/apsipa-transactions-on-signal-and-information-processing/most-cited

- **A tutorial survey of architectures, algorithms and applications for deep learning**
  - Li Deng
  - DOI: https://doi.org/10.1017/atsip.2013.9
  - Published online: 22 January 2014, e2

- **An overview on video forensics**
  - Simone Milani, Marco Fontani, Paolo Bestagini, Mauro Barni, Alessandro Piva, Marco Tagliasacchi, Stefano Tubaro
  - DOI: https://doi.org/10.1017/ATSIP.2012.2
  - Published online: 28 August 2012, e2

- **Recent advances on active noise control: open issues and innovative applications**
  - Yoshinobu Kajikawa, Woon-Seng Gan, Sen M. Kuo
  - DOI: https://doi.org/10.1017/ATSIP.2012.4
  - Published online: 28 August 2012, e3

- **Survey on audiovisual emotion recognition: databases, features, and data fusion strategies**
  - Chung-Hsien Wu, Jen-Chun Lin, Wen-Li Wei
  - DOI: https://doi.org/10.1017/ATSIP.2014.11
  - Published online: 11 November 2014, e12

- **Survey on securing data storage in the cloud**
  - Chun-Ting Huang, Lei Huang, Zhongyuan Qin, Hang Yuan, Lan Zhou, Vijay Varadharajan, C.-C. Jay Kuo
  - DOI: https://doi.org/10.1017/ATSIP.2014.6
  - Published online: 23 May 2014, e7

APSIPA Membership

Membership Benefits:

- Links to highly qualified people within the organization to develop research, technology, teaching, and career
- Discount fee on APSIPA conferences
- Reduced subscription fee for APSIPA journals
- Access to information about the international activities in signal and information processing such as conferences, continuing education, short courses, seminars, distinguished lecture series, student internships, scholarships, job listings, publication venues, and mentorships

To motivate APSIPA members to participate in APSIPA conferences, the registration for the 11th APSIPA conference implies an automatic renewal of APSIPA membership up to the end of December 2020.

You may join as:

- Student Membership: Student members are those who are enrolled full time in universities, institutes, or any accredited degree
- Full Membership: Full members are individuals interested in being part of the APSIPA mission to excel signal and information processing field. They are eligible to vote, hold positions in APSIPA association, and contribute to serve as editorial board and program committee members in APSIPA journals and conferences
- **Life Membership**: Full members may choose to subscribe as life members pending on paying the discount fee of life membership. Early-bird registration fee is available for life members at all times when registering for APSIPA ASC

Type of membership	Fees in US$	Fees in HK$
Student Membership	10 (per annual)	78 (per annual)
Full Membership	30 (per annual)	234 (per annual)
Life Membership	300 (a one-off fee)	2340 (a one-off fee)

Act Today! Join us at: http://www.apsipa.org/reg.asp

APSIPA ASC 2018

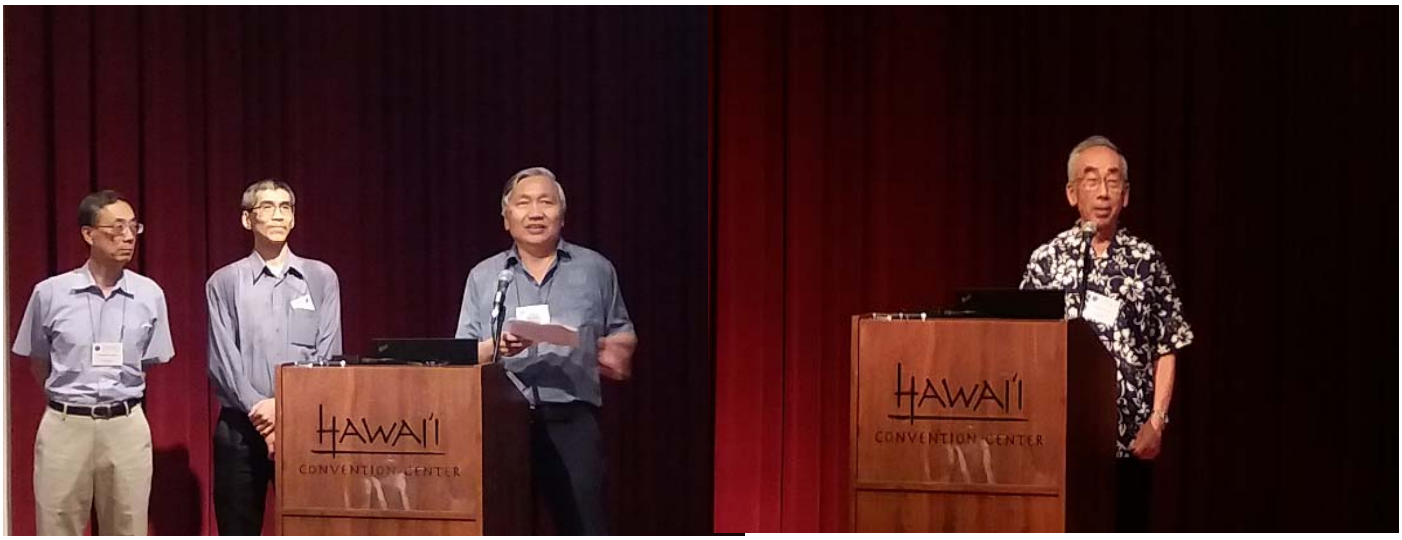
Professor Anthony Kuh

University of Hawaii at Manoa, USA

The 2018 APSIPA Annual Summit and Conference (APSIPA ASC 2018) was held in Hawaii, USA during 12-15 November, 2018. This is the tenth annual conference organized by APSIPA, and 356 papers were accepted for presentation. The conference attracted papers on all aspects of signal and information including signal processing, recognition, classification, communications, networking, computing, system design, security, implementation, and technology with applications to scientific, engineering and social areas. To introduce state-of-the-art techniques in signal and information processing, six tutorials, four invited overview sessions, four keynote speeches and a Presidential forum were organized in APSIPA ASC 2018.

The APSIPA ASC 2019 will be held in Lanzhou, China from 18 to 21 November 2019. You can find more information at http://apsipa2019.org/. See you in APSIPA ASC 2019!

Snapshots of APSIPA ASC 2018



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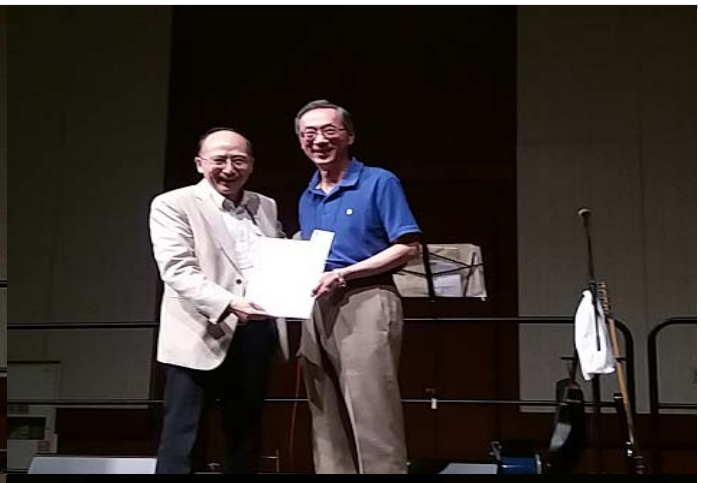
Birth of the idea of founding APSIPA
(ICASSP 2007 in Hawaii)



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Summary of Links

- APSIPA ASC 2019: http://www.apsipa2019.org
- APSIPA Transaction on Signal and Information Processing: http://journals.cambridge.org/sip
- Paper Submission to APSIPA Transaction on Signal and Information Processing: http://mc.manuscriptcentral.com/apsipa
- APSIPA Industrial Activities: http://www.apsipa.org/industrial.htm
- APSIPA Friend's Lab: http://www.apsipa.org/friendlab/FriendLabs.htm.
- APSIPA Membership Registration/Renewal: http://www.apsipa.org/reg.asp

APSIPA Who's Who

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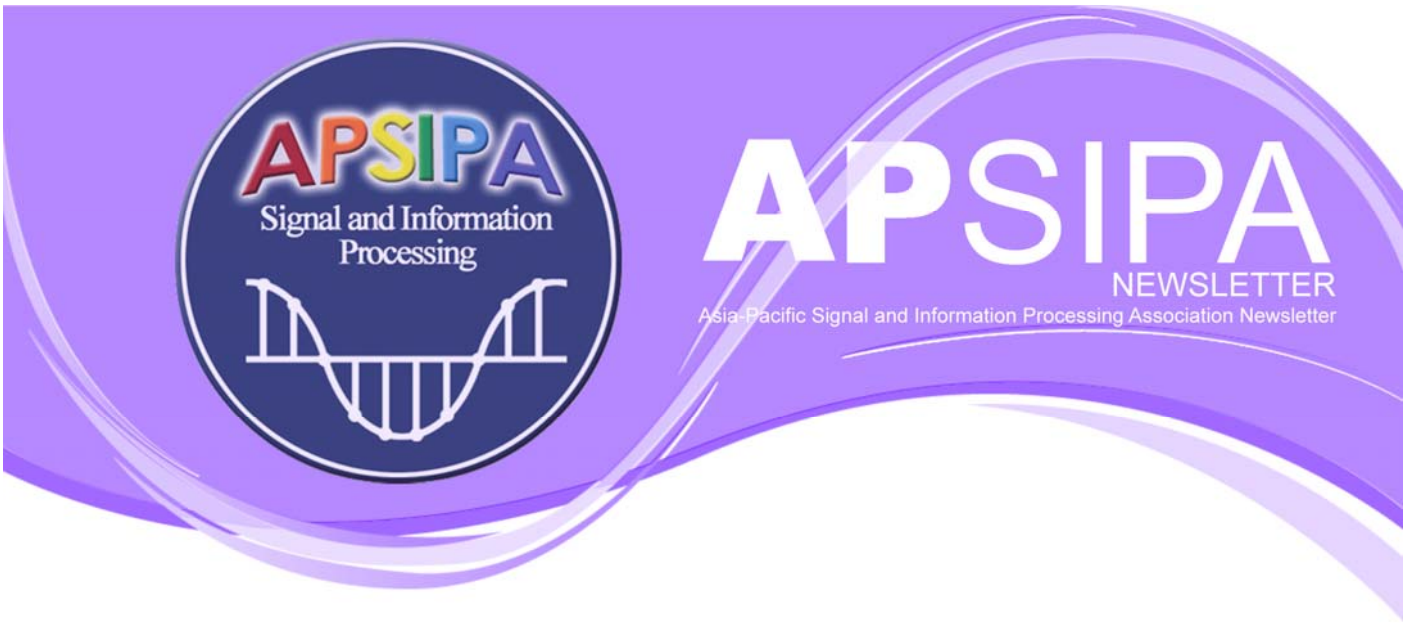

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