

Greetings!

Welcome to the December issue of the APSIPA newsletter.

It is December and APSIPA ASC 2020 is just around the corner. This year, the APSIPA Annual Summit and Conference (APSIPA ASC 2020) will be held in fully virtual style, from 7th to 10th December 2020. Since this is the first time the event is held in virtual style, we have included a dedicated page about "How to join APSIPA ASC 2020 and Summer Workshop?" More information is available at http://www.apsipa2020.org/.

Although it might be a bit too early at the time of this publication, I would like to wish all APSIPA members - Merry Christmas and a Wonderful New Year ahead!

Enjoy reading this issue!



A/Prof. KokSheik Wong EiC Monash University Malaysia Malaysia

| In this issue | | | |
|--|--------|-----------------------|---------|
| How to join APSIPA ASC 2020 and Summer | | APSIPA local chapters | Page 9 |
| Workshop | Page 2 | APSIPA ASC 2020 | Page 10 |
| 2-Day IEEE Workshop on Deep Learning | | APSIPA ASC 2021 | Page 11 |
| Call-for-Speakers | Page 3 | Summary of links | Page 12 |
| Latest Articles from ATSIP | Page 5 | APSIPA Who's Who | Page 13 |
| APSIPA membership | Page 8 | | |
| | | | |

How to join APSIPA ASC 2020 and Summer Workshop?

2020 APSIPA Annual Summit and Conference (APSIPA ASC 2020) will be held in fully virtual style, from 7th to 10th December 2020. Detailed information for joining the events via the online virtual conference platform can be found by following the links below:

- How to join as a Speaker or Session Chair (https://bit.ly/36nloJb)
- How to join as an Attendee (https://bit.ly/3ljekBp)

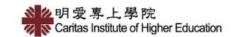
A participant can register for the Summer School from the Home page of the conference <u>website</u>. It is done via a normal registration and one may tick for attending the tutorials and/or the summer school while going through the registration process. They are free for participants without papers.

In case, you may have some questions regarding the events, platforms, tutorial, to name a few, and you might be able to find your answers at the <u>FAQs</u> section (https://bit.ly/36giaae).

In case you have other questions, please contact the organizer.







IEEE HK Section Lecture Series on Continuing Education

4-Days IEEE joint Tutorial/Workshop on Deep Learning (Part2): 2-Day IEEE Workshop on Deep Learning Call-for-Speakers

Date: Friday-Saturday, 5-6 February 2021 (Onsite or Virtual)

Organized and Sponsored by: *IEEE Hong Kong Section, IEEE Hong Kong Life-Member Affinity Group, Caritas Institute of Higher Education, Hong Kong Polytechnic University*

Co-Sponsors and Technical Co-Sponsors: Asia Pacific Association on Signal and Information Processing (APSIPA), TeleEye Founders' Charity Foundation Ltd.

Organizers: Prof. Wan-Chi Siu (PhD, Life-FIEEE), Prof. Anthony HH Chan (PhD, FIEEE),

Dr. Paulina Chan (PhD, SrMIEEE, Chair, IEEE HK Section)

Hong Kong is aspiring to become one of the smart cities in the world. An indispensable part of this development relies on the smart use of computer and information technology (CIT). In the recent years, machine learning with deep learning has achieved drastic achievements for segmentation, pattern recognition, classification, forecasting, ... which are extremely useful for applications such as robotic, imaging, video analytic, surveillance, autonomous vehicle, medical diagnosis, DNA identification, big data, business analysis, finance forecasting, etc. This progress relies on the great advancement of computer architecture and graphic cards which allow heavy learning and the development of various deep learning architectures and system structures. This is a Workshop on **Continuing Education.** Its objective is to refresh/update attendees' knowledge on machine learning, in particular deep learning. The attendees are assumed to have some basic knowledge on machine learning, and the background in Electronic and Electrical Engineering, Information, Computer Science, System Engineering, Data Science, Science or Medical Science.

Call for Speakers: This announcement is to look for Nomination of Speakers for this workshop. Self-nominations are also much welcome. Speakers must be knowledgeable in the area, with good presentation techniques and at high professional level. In order to appreciate their contribution and compensate partly their time for the preparation of this presentation, a nominal amount of honorarium will be provided to each speaker. Note that the presentation should neither be just a literature review of the past works, nor a review of the past works of the speaker, but it should provide the audience with knowledge on the way to apply AI to the subject area. Answering the following questions may help proposing a presentation:

- 1. Why Deep Leaning is useful in the subject area? How? Advantage?
- 2. How can one start working in this direction?
- 3. What is the common/existing practice using AI (especially Deep Learning) in this area?
- 4. Give typical example(s) on the realization structure, network/package to be used (e.g. Alexnet, or, ResNet, or ..), data format, preparation of training samples, testing, etc.

Possible Subject Areas but not limited to - **Scientific applications**: Deep Learning for Robotic vision, super-resolution imaging, object recognition, video analytic, speech recognition, traffic control, autonomous vehicle, machine translation, medical imaging/diagnosis, smart city, ...; **Commercial Application**: Deep Learning for handling big data, banking, stock market analysis, risk analysis, regulatory

compliance, Patent search, .. etc.

Deadline: Monday, 21 December 2020

Announcement of Speaker Acceptance: Wed. 30 December 2020

Coordinator: Ms Daisy Kwok, dkwok@cihe.edu.hk, CIHE



2-Days IEEE Workshop on Deep Learning

Speaker Nomination Form

Nomination for Speaker of the 2-Days IEEE Workshop on Deep learning to be held between 5-6 February

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

- DSNet: an efficient CNN for road scene segmentation
 - Ping-Rong Chen, Hsueh-Ming Hang, Sheng-Wei Chan, Jing-Jhih Lin
 - DOI: https://doi.org/10.1017/ATSIP.2020.25
 - Published online: 26 November 2020, e27
- An evaluation of voice conversion with neural network spectral mapping models and WaveNet vocoder
 - Patrick Lumban Tobing, Yi-Chiao Wu, Tomoki Hayashi, Kazuhiro Kobayashi, Tomoki Toda
 - DOI: https://doi.org/10.1017/ATSIP.2020.24
 - Published online: 25 November 2020, e26
- End-to-end recognition of streaming Japanese speech using CTC and local attention
 - Jiahao Chen, Ryota Nishimura, Norihide Kitaoka
 - DOI: https://doi.org/10.1017/ATSIP.2020.23
 - Published online: 23 November 2020, e25

Industrial Technology Advances

- Ground-distance segmentation of 3D LiDAR point cloud toward autonomous driving
 - Jian Wu, Qingxiong Yang
 - DOI: https://doi.org/10.1017/ATSIP.2020.21
 - Published online: 23 November 2020, e24

Original papers

- An SMLB-based OFDM receiver over impulsive noise environment
 - Chengbo Liu, Na Chen, Minoru Okada, Yafei Hou
 - DOI: https://doi.org/10.1017/ATSIP.2020.22
 - Published online: 20 November 2020, e23
- PortraitGAN for flexible portrait manipulation
 - Jiali Duan, Xiaoyuan Guo, C.-C. Jay Kuo
 - DOI: https://doi.org/10.1017/ATSIP.2020.20
 - Published online: 06 October 2020, e22

- Discreteness and group sparsity aware detection for uplink overloaded MU-MIMO systems
 - Ryo Hayakawa, Ayano Nakai-Kasai, Kazunori Hayashi
 - DOI: https://doi.org/10.1017/ATSIP.2020.19
 - Published online: 06 October 2020, e21
- A study for 2-D indoor localization using multiple leaky coaxial cables
 - Junjie Zhu, Pengcheng Hou, Yafei Hou, Satoshi Denno, Minoru Okada
 - DOI: https://doi.org/10.1017/ATSIP.2020.18
 - Published online: 25 September 2020, e20

Most Read Articles from ATSIP

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

- An overview of channel coding for 5G NR cellular communications
 - Jung Hyun Bae, Ahmed Abotabl, Hsien-Ping Lin, Kee-Bong Song, Jungwon Lee
 - DOI: https://doi.org/10.1017/ATSIP.2019.10
 - Published online: 24 June 2019, e17
- An Overview of Coding Tools in AV1: the First Video Codec from the Alliance for Open Media
 - Yue Chen, Debargha Mukherjee, Jingning Han, Adrian Grange, Yaowu Xu, Sarah Parker, Cheng Chen, Hui Su, Urvang Joshi, Ching-Han Chiang, Yunqing Wang, Paul Wilkins, Jim Bankoski, Luc Trudeau, Nathan Egge, Jean-Marc Valin, Thomas Davies, Steinar Midtskogen, Andrey Norkin, Peter de Rivaz, Zoe Liu
 - DOI: https://doi.org/10.1017/ATSIP.2020.2
 - Published online: 24 February 2020, e6
- Graph representation learning: a survey
 - Fenxiao Chen, Yun-Cheng Wang, Bin Wang, C.-C. Jay Kuo
 - DOI: https://doi.org/10.1017/ATSIP.2020.13
 - Published online: 28 May 2020, e15

Most Cited Articles from ATSIP for the Last 3 Years

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

- A comprehensive study of the rate-distortion performance in MPEG point cloud compression
 - Evangelos Alexiou, Irene Viola, Tomás M. Borges, Tiago A. Fonseca, Ricardo L. de Queiroz, Touradj Ebrahimi
 - DOI: https://doi.org/10.1017/ATSIP.2019.20
 - Published online: 12 November 2019, e27
- A review of blind source separation methods: two converging routes to ILRMA originating from ICA and NMF
 - Hiroshi Sawada, Nobutaka Ono, Hirokazu Kameoka, Daichi Kitamura, Hiroshi Saruwatari
 - DOI: https://doi.org/10.1017/ATSIP.2019.5
 - Published online: 14 May 2019, e12
- 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

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 <u>11th APSIPA</u> <u>conference</u> 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. <u>Early-bird registration fee is available for life members at all times when registering for APSIPA ASC</u>

| 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

Local Chapters

Call for Establishing APSIPA Local Chapters

APSIPA starts Local Chapter system from the beginning of 2020. If you are interested in establishing a local chapter in your region, please see the guideline and submit the application form to APSIPA Head quarter and VP Membership Relations and Development. Membership Benefits:

APSIPA Local Chapters

APSIPA spans more than 20 countries in Asia-Pacific region, but local Chapters serve APSIPA members by holding meetings at the local level. If you're interested in connecting with professionals, academics and students in your region, getting involved locally provides exciting opportunities for networking, research, and project collaboration with others.

Chapters are constituted by a minimum of ten active members, and are established by application to APSIPA.

APSIPA offers unique benefits to individual groups, including industry, students and young professionals, and women in APSIPA, and numerous specialized events throughout the year.

For more details, please see the guideline of APSIPA Local Chapters. If you want to establish a local chapter in your region, please fulfill the application form and submit it to APSIPA Headquarter and VP Membership Relations and Development.

APSIPA Chapter Operation Manual

APSIPA Chapter Application Form

Webpage for APSIPA Local Chapters

- (a) Japan Chapter http://www.apsipa.org/chapter/Japan.htm
- (b) Taiwan Chapter http://www.apsipa.org/chapter/Taiwan.htm



Empowering societies with new generation AI & deep machine Learning

APSIPA ASC 2020 (www.apsipa2020.org) is the 12th annual conference organised by Asia-Pacific Signal and Information Processing Association (APSIPA), which will be held on December 7 – 10, 2020, Auckland, New Zealand. Founded in 2009, APSIPA organisation (www.apsipa.org) aims to promote research and education in signal processing, information technology, and communications. The annual conferences have been held previously in Lanzhou, China (2019), Hawaii, USA (2018), Kuala Lumpur, Malaysia (2017), Jeju, Korea (2016), Hong Kong, China (2015), Siem Reap, Cambodia (2014), Kaohsiung, China (2013), Los Angeles, USA (2012), Xi'an, China (2011), Singapore (2010), and Sapporo, Japan (2009).

APSIPA is interested in all aspects of signal and information processing theories, algorithms, securities, implementations, and applications. Call for Special Sessions – APSIPA ASC 2020 program augments the main program with selected special sessions. Please refer to the conference web page for information about the proposals and submissions of the special sessions. Call for Tutorials – Organising tutorials at APSIPA ASC 2020 is one of APSIPA organisation strategies to proliferate and ease learning in core subjects and new topics in evolving research branches. Therefore, the tutorials should be addressed to attract a wide audience. Applicants interested in presenting tutorials may discuss their proposals with one of the tutorial chairs for more information. Call for Exhibitors and Sponsors – APSIPA ASC 2020 organisers encourage exhibitors, publishers, and companies to showcase their products during the conference period. Please refer to the conference web page for full information. All accepted papers are expected to be included in IEEE Xplore and indexed by EI, like all previous years.

The technical program includes, but not limited to, the following areas

- 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
- Wireless Communications and Networking
- Signal and Information Processing in Education
- Medical Signal Acquisition, Analysis and Processing
- Internet of Things Technology
- · Data Analytics and Machine Learning
- Deep Learning: Algorithms, Implementations, and applications
- Human Biometrics and Security Systems
- Renewable Energy, Sustainability and the Environment
- · Al and Smart Grids
- · Al and Power Systems
- · Wireless Power Transfer
- Autonomous Intelligent Self-Driving Cars
- · Smart Materials and Sensors
- · Signals and Control Systems

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Important Dates

May 1, 2021 August 31, 2021 October 1, 2021 October 1, 2021 December 14 - 17, 2021 Proposals for For Panel & Tutorial Sessions

APSIPA ASC 2021 (www.apsipa2021.org) is the 13th annual conference organized by Asia-Pacific Signal and Information Processing Association (APSIPA), which will be held on December 14 – 17, 2021, Tokyo, Japan. Founded in 2009, APSIPA organization (www.apsipa.org) aims to promote research and education in signal processing, information technology, and communications. The annual conferences have been held previously in Auckland, New Zealand (2020), Lanzhou, China (2019), Hawaii, USA (2018), Kuala Lumpur, Malaysia (2017), Jeju, Korea (2016), Hong Kong SAR (2015), Siem Reap, Cambodia (2014), Kaohsiung, Taiwan (2013), Los Angeles, USA (2012), Xi' an, China (2011), Singapore (2010), and Sapporo, Japan (2009). APSIPA is interested in all aspects of signal and information processing theories, algorithms, securities, implementations, and signal and information processing theories, algorithms, securities, implementations, and applications. Please refer to the conference web page for full information. All accepted papers are expected to be included in IEEE Xplore and indexed by EI, like all previous years. The technical program includes, but not limited to, the following areas

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- Signal and Information Processing Theory and Methods
 Speech, Language, and Audio
 Biomedical Signal Processing and Systems
 Image, Video, and Multimedia
 Multimedia Security and Forensics
 Wireless Communications and Networking

- Deep Learning: Algorithms, Implementations, and applications
- Signal and Information Processing in Education
 Medical Signal Acquisition, Analysis and Processing
 Internet of Things Technology
- · Data Analytics and Machine Learning
- Human Biometrics and Security Systems
 Signal and Information Processing for Smart Systems

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- I Industrial Forum Co-Chairs Seishi Takamura, Mingyi He, Yotaro Kubo
- I Tutorial Co-Chairs Kazunori Hayashi, KokSheik Wong, Chung-Hsien Wu
- Plenary Co-Chairs
- -Seng Gan, Antonio Ortega, Kazushi Ikeda
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Summary of Links

- APSIPA ASC 2020: http://www.apsipa2020.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 Magazine: http://www.apsipa.org/doc/magazine/apsipa magazine2018.pdf
- APSIPA Photo Gallery: http://www.apsipa.org/photo/photo.htm

APSIPA Who's Who

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Past Presidents: Sadaoki Furui (2009-2012), C.C. Jay Kuo (2013-

2014), Haizhou Li (2015-2016)

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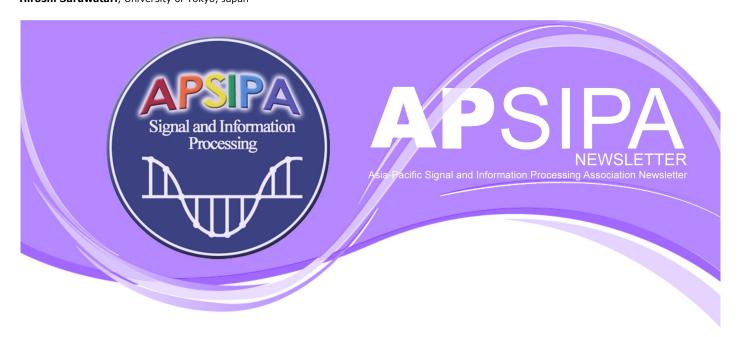
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Officers:

Director: Wan-Chi Siu, email: enwcsiu@polyu.edu.hk Manager: Kin-Man Lam, Kenneth, email: enkmlam@polyu.edu.hk Secretary: Ngai-Fong Law, Bonnie, email: ennflaw@polyu.edu.hk

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Are you an APSIPA member?

If not, then register online at http://www.apsipa.org