

Greetings!

Welcome to the October issue of the APSIPA newsletter.

In this issue, we have the pleasure to introduce the APSIPA US Local Chapter. Earlier, you might have received some emails regarding the panel discussion events organized by the APSIPA US Local Chapter. More information can be found in the introduction by Prof. C.-C. Jay Kuo, Chair of APSIPA US Local Chapter.

Don't forget that the 13th APSIPA ASC 2021 will be held in Tokyo, Japan this year from 14-17 Dec. 2021. For authors, the registration fees are due on 1 Oct. 2021. After careful consideration of the serious influence of COVID-19 worldwide, APSIPA ASC 2021 organizing committee has decided to hold this conference as a hybrid in-person/online event to encourage many more people to participate safely at APSIPA ASC 2021. More information is available at <u>http://www.apsipa2021.org/</u>.

Lastly, we invite you to send us your contributions to be published in the APSIPA Newsletter. You are also welcome to share your thoughts with us about future developments in this newsletter.

Please enjoy reading this issue!

A/Prof. KokSheik Wong EiC Monash University Malaysia Malaysia



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Introduction to APSIPA US Local Chapter

Professor C.-C. Jay Kuo Chair APSIPA US Local Chapter

APSIPA US Local Chapter was established in February 2021. There were 10 founding members: C.-C. Jay Kuo (Chair), Nam Ling (Vice Chair), Yuhong Liu (Secretary and Treasurer), Anthony Kuh, Antonio Ortega, K. J. Ray Liu, Yih-Fang Huang, Ming-Ting Sun, Shrikanth Narayanan and Min Wu. The mission of the chapter includes: 1) to recruit more APSIPA US members through local activities such as seminars, webinars, social events, etc., 2) to support APSIPA related activities such as APSIPA ASC conferences, APSIPA transaction, APSIPA DLP, etc., 3) to promote activities between APSIPA local chapters, and 4) to train new generation APSIPA leaders.

The US Local Chapter has organized a sequence of panel discussion events in 2021:

- February: Computing Security, Trust and Privacy in a Hyper-Connected World
- March: Artificial Intelligence for Healthcare
- April: On the Future of Video Coding
- May: On the Future of Wireless Communications
- June: Media Forensics in the New AI Era
- July: On the Future of Graph Signal Processing
- August: On the Future of Computer Vision
- October: On the Future of Affective Computing
- November: On the Future of Machine Learning

Since they were held in a zoom-based virtual platform, invited panelists came from different regions of the world, including north America, Asia, and Europe. All events were well attended. Some recorded videos are available in the APSIPA headquarter website. Furthermore, a panel organizer can invite the participating panelists to convert the oral discussion content to a forum paper for publication in the APSIPA Transaction on Signal and Information Processing. The first completed and submitted forum paper is "On the Future of Video Coding", which is under review right now.

The APSIPA US Local Chapter has a website (<u>http://www.apsipa-us.org/</u>). It covers the activities held by the local chapter. It also has weekly news items that introduce the labs of panelists. The website targets at building a researchers' community. The first year of the US local chapter has been fruitful thanks to many volunteers' efforts. We hope to have an even better year in 2022, especially, with in-person activities after the pandemic. Stay tuned.



Panel Discussion on the Future of Video Coding



Snapshot of APSIPA US Local Chapter website

Call for papers of Themed Series in APSIPA T-SIP

Title: Multi-Disciplinary Dis/Misinformation Analysis and Countermeasures

With the pervasiveness of social networks and media, digital information (health, climate, political, news articles, etc.) can be easily created and shared online by individuals, includes people and bots. This significantly changes how humans access, search and perceive information. More people are making their economic, political, health and daily life decisions by referring to online information due to its convenience and low cost. Yet, online social media has become a battleground for malicious attackers to fabricate and propagate massive amounts of disinformation, with the participation of massive groups of people online (leader-follower feedback loops). This is often referred to as the "info-demic". The uncontrolled rapid propagation of disinformation can lead to severe consequences such as financial losses, hostile online environments, damaging people's confidence in trusting online information, and even endangering people's lives.

Dis/misinformation is a complex problem which cannot be well addressed in one traditional discipline. There is an emerging need for researchers of multiple disciplines (e.g., computing, communication, journalism, social psychology, law, etc.) to have a joint forum to understand the disinformation propagation mechanism, how people evaluate the authenticity of online information, and investigate potential solutions to combat info-demic. This themed series aims to provide a venue to facilitate idea exchange among researchers of relevant but diverse disciplines. Inter-disciplinary studies are especially welcomed. Interesting topics include but are not limited to:

- Information aspects
 - Definitions of information trustworthiness, authenticity, and/or credibility
 - Detection and prediction of dis/misinformation and bias
 - New approaches to extract ground truth or labeling information
 - Defining and detecting/classifying boundaries of journalistic behavior online
 - Suitability of news content from journalistic entities to surface ground truth

- User aspects
 - Definitions and analysis of online authentic behavior
 - Human behavior analysis against dis/misinformation in social media
 - Human behavior regulation on political disinformation
 - Compatibility of regulating social media content with freedom of expression
 - Studies on mechanisms of trust establishment
 - Application of moral foundations & ethical frameworks to "participatory disinformation"
 - Analysis and comparison of human performance in the face of DeepFake media
- Propagation/Communication aspects
 - Dis/misinformation (e.g. health, news, political, climate) propagation mechanism
 - Data-driven approaches on propagation patterns
 - Connections or relationships between propagation and authenticity
- Model aspects
 - Countermeasures against formation and circulation of dis/misinformation
 - Explainable AI for detection of dis/misinformation
 - New datasets and evaluation methodologies for dis/misinformation identification
 - DeepFake media (e.g. image, video, audio) generation and detection
 - Artificial intelligence chatbots as information assistant or opinion influencer
 - Open-source toolkits for DeepFake detection

Each paper submitted to this series will be reviewed with the first-come-first-serve principle. The first round of decision targets at 4 weeks. Each paper will be published as an open access article immediately after its acceptance. Once all papers in this series are published, they will be assembled into an online book with an editorial written by the guest editorial team. If a paper cannot be accepted within the publication window, it will be changed to a regular paper. If you are interested in paper submission, please refer to: http://cambridge.org/sip/ifc.

Submission Window:

May 16, 2021 to October 31, 2021

Publication Window:

June 16 to December 31, 2021

Guest Editorial Team:

Mauro Barni, Professor of Information Engineering, University of Siena, Italy Yi Fang, Professor of Computer Science and Engineering, Santa Clara University, USA Yuhong Liu, Professor of Computer Science and Engineering, Santa Clara University, USA Kazutoshi Sasahara, Professor of Environment and Society, Tokyo Institute of Technology, Japan Subramaniam Vincent, Director of Journalism and Media Ethics, Santa Clara University, USA Xinchao Wang, Professor of Electrical and Computer Engineering, National University of Singapore, Singapore Zhizheng Wu, Facebook Inc, USA Hong (Vicky) Zhao, Professor of Automation, Tsinghua University, China

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

Industrial Technology Advances

- . Immersive audio, capture, transport, and rendering: a review
 - . Xuejing Sun
 - DOI: <u>https://doi.org/10.1017/ATSIP.2021.12</u>
 - . Published online: 16 September 2021, e13

Original paper

- . **3D** skeletal movement-enhanced emotion recognition networks
 - . Jiaqi Shi, Chaoran Liu, Carlos Toshinori Ishi, Hiroshi Ishiguro
 - DOI: <u>https://doi.org/10.1017/ATSIP.2021.10</u>
 - Published online: 05 August 2021, e12
- . Compression efficiency analysis of AV1, VVC, and HEVC for random access applications
 - . Tung Nguyen, Detlev Marpe
 - DOI: <u>https://doi.org/10.1017/ATSIP.2021.10</u>
 - . Published online: 13 July 2021, e11

A protection method of trained CNN model with a secret key from unauthorized access

- . AprilPyone Maungmaung, Hitoshi Kiya
- DOI: <u>https://doi.org/10.1017/ATSIP.2021.9</u>
- . Published online: 09 July 2021, e10

Industrial Technology Advances

- . The future of biometrics technology: from face recognition to related applications
 - . Hitoshi Imaoka, Hiroshi Hashimoto, Koichi Takahashi, Akinori F. Ebihara, Jianquan Liu, Akihiro Hayasaka, Yusuke Morishita, Kazuyuki Sakurai
 - DOI: <u>https://doi.org/10.1017/ATSIP.2021.8</u>
 - . Published online: 28 May 2021, e9

Most Read Articles from ATSIP

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

An overview of channel coding for 5G NR cellular communications

- . Jung Hyun Bae, Ahmed Abotabl, Hsien-Ping Lin, Kee-Bong Song, Jungwon Lee
- DOI: <u>https://doi.org/10.1017/ATSIP.2019.10</u>
- . Published online: 24 June 2019, e17
- An overview of ongoing point cloud compression standardization activities: video-based (V-PCC) and geometry-based (G-PCC)
 - . D. Graziosi, O. Nakagami, S. Kuma, A. Zaghetto, T. Suzuki, A. Tabatabai
 - DOI: <u>https://doi.org/10.1017/ATSIP.2020.12</u>
 - . Published online: 03 April 2020, e13
- 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: <u>https://doi.org/10.1017/ATSIP.2020.2</u>
 - . Published online: 24 February 2020, e6

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>

. Evaluating word embedding models: methods and experimental results

- . Bin Wang, Angela Wang, Fenxiao Chen, Yuncheng Wang, C.-C. Jay Kuo
- DOI: <u>https://doi.org/10.1017/ATSIP.2019.12</u>
- Published online: 08 July 2019, e19

Grayscale-based block scrambling image encryption using YCbCr color space for encryption-then-compression systems

- . Warit Sirichotedumrong, Hitoshi Kiya
- DOI: <u>https://doi.org/10.1017/ATSIP.2018.33</u>
- Published online: 01 February 2019, e7

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: <u>https://doi.org/10.1017/ATSIP.2019.20</u>
- . Published online: 12 November 2019, e27

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>12th APSIPA</u> <u>conference</u> implies an automatic renewal of APSIPA membership up to the end of December 2021.

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
- (c) US Chapter http://www.apsipa.org/chapter/US.htm

13th Asia Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA ASC)

DECEMBER 14 – 17, 2021, TOKYO, JAPAN WWW.APSIPA2020.0RG

Signal & Information Processing — Science for Signals, Data, and Intelligence

Registration Information -

Category	Registration Fee
Author Registration (Member) Until Octber 1, 2021	40,000 JPY
Author Registration (Non Member) Until Octber 1, 2021	50,000 JPY
Non-Author Full Registration (Member)	10,000 JPY
Non-Author Full Registration (Non Member)	15,000 JPY
Non-Author Student Registration (Member)	0 JPY
Non-Author Student Registration (Non Member)	5,000 JPY

* The additional registration for onsite participation will be announced at the end of October.

Please visit Registration Site!

Keynote Speakers -



Prof. Shun-ichi Amari Professor-Emeritus at the University of Tokyo, Senior Advisor of the RIKEN Brain Science Institute (BSI)



Prof. Karlheinz Brandenburg Senior Professor(emeritus) at Technische Universität Ilmenau, CEO of Brandenburg Labs



Prof. Min Wu Professor and Distinguished Scholar-Teacher at University of Maryland



General Chair Haizhou Li (NUS, Singapore)

General Co-Chair Sadaoki Furui (NII, Japan)

Honorary Chair Tsuhan Chen (NUS, Singapore)

Technical Program Chairs Woon-Seng Gan (NTU, Singapore) Kai-Kuang Ma (NTU, Singapore)

Finance Chairs Lei Wang (COLIPS, Singapore) Yan Wu (I2R, A*STAR, Singapore)

Special Session Chairs Jonathon Chambers (Uleicester, UK) Zhengguo Li (I2R, A*STAR, Singapore) Pina Marziliano (EPFL, Switzerland)

Plenary Chairs C.-C. Jay Kuo (USC, USA) Helen Meng (CUHK, HK SAR, China) Douglas O'Shaughnessy (INRS, Canada)

Tutorial Chairs Mauro Barni (USiena, Italy) Saeid Sanei (NottinghamTU, UK) Tanja Schultz (U Bremen, Germany)

Publication Chairs Kenneth Lam (HKPU, HK SAR, China) Berrak Sisman (SUTD, Singapore) Yan Sun (URI, USA)

Local Arrangement Chairs Minghui Dong (I2R, A*STAR, Singapore) Kong Aik Lee (I2R, A*STAR, Singapore) Siqi Cai (NUS, Singapore)

Show and Tell Chairs Nancy Chen (I2R, A*STAR, Singapore) Tomi Kinnunen (UEF, Finland) Rong Tong (COLIPS, Singapore)

Student and Education Activities Chairs Rongshan Yu (XMU, China) Kenan Emir Ak (I2R, A*STAR, Singapore)

Sponsorship Chairs Zhizheng Wu (Facebook, USA) Lei Xie (NWPU, China)

Publicity Chair Eliathamby Ambikairajah (UNSW, Australia)

Grand Challenge Chairs Andy Khong (NTU, Singapore) Wee Peng Tay (NTU, Singapore)

Industry & Exhibits Chairs Fa-Long Luo (Micron, USA) Wei Lu (SUTD, Singapore) Soujanya Poria (SUTD, Singapore)

Women's Activities Chair Dorien Herremans (SUTD, Singapore)

Social Media Chair Chitralekha Gupta (NUS, Singapor

American Liaison Jane Wang (UBC, Canada) Roxana Saint-Norm (UADE, Argentina)

Singapore Chapter Liaison

Ngai-Man (Man) Cheung (SUTD, Singapore,

The International Conference on Acoustics, Speech, & Signal Processing (ICASSP), is the IEEE Signal Processing Society's flagship conference on signal processing and its applications. The 47th edition of ICASSP will be held in Singapore. The programme will include keynotes by pre-eminent international speakers, cutting-edge tutorial topics, and forward-looking special sessions. ICASSP also provides a great networking opportunity with a wide range of like-minded professionals from academia.

CONFERENCE TOPICS

- Applied Signal Processing Systems
- Audio & Acoustic Signal Processing
- Bio Imaging & Signal Processing
- Compressive Sensing, Sampling
- & Dictionary Learning

 Computational Imaging
- Computer Vision Financial Signal Processing
- Deep Learning/Machine Learning
 for Circuit Discourses
- for Signal Processing

 Image, Video & Multidimensional
- Signal Processing

 Industrial Signal Processing
- Information Forensics & Security
- Internet of Things
- Internet of Things

- Multimedia Signal Processing
 Quantum Signal Processing
- Remote Sensing and Signal
 Processing
- Sensor Array & Multichannel
 Signal Processing
- Signal Processing for Big Data
- Signal Processing for Communication & Networking
- Signal Processing for Cyber Security
- Signal Processing for Education
- Signal Processing Over Graphs
 - Signal Processing Theory & Methods
- Speech & Language Processing

Call for Tutorials: Tutorials at ICASSP form an important part of the program, giving attendees the opportunity to learn about current research areas that are of growing interest to the signal processing community. Therefore, the tutorials should be prepared and presented to a wide audience. Prospective presenters may discuss their proposals with the tutorials chair before the submission.

Call for Special Sessions: The program for ICASSP 2022 will include Special Sessions that complement the main program, in line with the technical scope of the conference. Please refer to the conference webpage for information about Special Session proposals and submissions.

Call for Exhibitors and Sponsors: ICASSP offers exhibitors and companies an opportunity to showcase their products and innovative solutions, as well as recruitment and networking opportunities. Please check the conference webpage for information about signing up to become an exhibitor or sponsor at ICASSP 2022.

SP Society Journal Paper Presentations: Authors of papers in the journals of the IEEE Signal Processing Society will have the opportunity to present their work at ICASSP 2022, subject to space availability and approval by the Technical Program Chairs. Only papers published between October 20, 2020 and October 19, 2021 are eligible for presentation at ICASSP 2022. The papers presented at ICASSP will neither be reviewed nor included in the proceedings for the IEEE Xplore Digital Library.

Open Preview: Open Preview allows conference proceedings to be available in the IEEE Xplore Digital Library, free of charge, to all customers, 30 days prior to the conference start date, through the conference end date.

IMPORTANT DATES

Special Session Proposal		
Special Session Acceptance	6 September 2021	
Tutorial Proposals		
Paper Submissions		
Grand Challenge Proposal	18 October 2021	
Grand Challenge Acceptance		
Tutorial Acceptance		
SPS Journal/Letters Due		
Paper Acceptance		
Final Paper		
Author Registration		
Open Preview		
Show and Tell Proposals		



Summary of Links

- APSIPA ASC 2021: <u>http://www.apsipa2021.org/</u>
- APSIPA Transaction on Signal and Information Processing: <u>http://journals.cambridge.org/sip</u>
- Paper Submission to APSIPA Transaction on Signal and Information Processing: <u>http://mc.manuscriptcentral.com/apsipa</u>
- APSIPA Industrial Activities: <u>http://www.apsipa.org/industrial.htm</u>
- APSIPA Friend's Lab: <u>http://www.apsipa.org/friendlab/FriendLabs.htm</u>
- APSIPA Membership Registration/Renewal: <u>http://www.apsipa.org/reg.asp</u>
- APSIPA Local Chapters: <u>http://www.apsipa.org/chapter/index.html</u>
- APSIPA Magazine: <u>http://www.apsipa.org/doc/magazine/apsipa_magazine2018.pdf</u>
- APSIPA Photo Gallery: <u>http://www.apsipa.org/photo/photo.htm</u>

APSIPA Who's Who

President: Anthony Kuh, University of Hawaii at Manoa, USA President-Elect: Tatsuya Kawahara, Kyoto University, Japan Past Presidents: Sadaoki Furui (2009-2012), C.C. Jay Kuo (2013-2014), Haizhou Li (2015-2016), Wan-Chi Siu (2017-2018)

Immediate Past President: Hitoshi Kiya, Tokyo Metropolitan University, Japan

VP - Conferences: Kosin Chamnongthai, King Mongkut's University of Technology Thonburi, Thailand

VP - Industrial Relations and Development: Seishi Takamura, NTT Corporation, Japan

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VP - Technical Activities: Yih-Fang Huang, University of Notre Dam, USA

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Nam Ik Cho, Seoul National University, Korea

Min Wu, University of Maryland, USA

Isao Echizen, National Institute of Informatics, Japan

Jing-Ming Guo, National Taiwan University of Science and Technology, Taiwan

> Signal and Information Processing

Bonnie Law, The Hong Kong Polytechnic University, Hong Kong

Gwo Giun (Chris) Lee, National Cheng Kung University, Taiwan Kai-Kuang Ma, Nanyang Technological University, Singapore Hiroshi Saruwatari, University of Tokyo, Japan Kazuya Takeda, Nagoya University, Japan Antonio Ortega, University of Southern California, USA Chung-Hsien Wu, National Cheng Kung University, Taiwan

Headquarters

Address:

Asia Pacific Signal and Information Processing Association, Centre for Signal Processing, Department of Electronic and Information Engineering, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong.

Officers:

Director: Wan-Chi Siu, email: <u>enwcsiu@polyu.edu.hk</u> Manager: Kin-Man Lam, Kenneth, email: <u>enkmlam@polyu.edu.hk</u> Secretary: Ngai-Fong Law, Bonnie, email: <u>ennflaw@polyu.edu.hk</u> Treasurer: Yuk-Hee Chan, Chris, email: <u>enyhchan@polyu.edu.hk</u>



APSIPA Newsletter Editorial Board Members

KokSheik Wong (Editor-in-Chief), Monash University Malaysia, Malaysia.
Sanghoon Lee (vice Editor-in-Chief), Yonsei University, Korea.
Bonnie Law (Past Editor-in-Chief), The Hong Kong Polytechnic University, Hong Kong.

Jiantao Zhou, University of Macau, Macau.

Yoshinobu Kajikawa, Kansai University, Japan.

Xie Lei, Northwestern Polytechnical University, China.

Are you an APSIPA member? If not, then register online at http://www.apsipa.org