

Message from Editor-in-Chief

Greetings!

Welcome to the November issue of the APSIPA newsletter!

One of the most important upcoming events is the APSIPA ASC 2024, which will be held in Macau from Dec. 3- 6. The organizing committee is working very hard to finalize the program and will release it soon in the website <http://www.apsipa2024.org/>. A tentative program is also provided in this newsletter, so that we can have a quick look at this wonderful conference. You can also find some useful information regarding the hotel and transportation to the conference venue. We look forward to seeing you all in Macau!

Another exciting news that I would like to share with you is: The 8th APSIPA Sadaoki Furui Prize Paper Award was awarded to Fenxiao (Jessica) Chen, Yun-Cheng Wang, Bin Wang and C.-C. Jay Kuo (2020), for their works “Graph representation learning: a survey” published in APSIPA Transactions on Signal and Information Processing. Congratulations to all the authors! Jessica will be giving a presentation after the opening ceremony of APSIPA ASC 24 on Dec. 4.

There are also many interesting activities in our local chapters as well, jointly with IEEE Signal Processing Society , IEEE Consumer Technology Society, IEEE Industrial Electronics Society, IEEE Systems, Man, and Cybernetics Society, and Chinese Society of Image and Graphics, etc. Please refer to this newsletter for the details on these activities and some nice photos.

Last but not the least, I shall remind you that APSIPA ASC 25 will be held in Singapore from Oct. 22-24. The submission deadline is June 7, 2025. A Call-for-Paper is included in this newsletter for your reference. Our APSIPA members are highly encouraged to submit papers to support APSIPA ASC 25.

Please enjoy reading this issue!

Jiantao Zhou



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Message from the APSIPA President

I hope you had a good summer, and I also hope many of you get your paper accepted for presentation in APSIPA ASC 2024 in December. In the last Board of Governors (BoG) meeting, we agreed to set up a travel grant scheme for participants from developing countries in this region to promote inclusivity and foster collaboration within the APSIPA community. It is implemented for this ASC. To be eligible for the travel grant, the following conditions are required:

- The applicant must be a resident of an ASEAN country (excluding Singapore), Bangladesh, or India.
- The applicant must have paper(s) accepted for presentation at APSIPA ASC. (one applicant is allowed for one paper)
- The applicant must attend the APSIPA ASC in person to present the paper.

The selected applicants will be provided with USD 400, and we have secured a budget to cover 25 grants, which is USD 10,000 in total. The travel grant was advertised on the ASC 2024 website, and we received 27 applications, among which 21 satisfied the above condition. So, we awarded the grant to all of them. I greatly appreciate VP- Conferences, Bonnie N.F. Law, for her prompt work in setting up the portal and handling applications. The travel grant scheme will continue in the following years, and I hope it will boost attendance from developing countries.

Another announcement is to split Speech, Language, and Audio (SLA) TC to form new TCs:

- Speech and Language Processing (SLP) TC
- Audio and Acoustic (AA) TC

The SLA TC has been the most active, attracting the largest number of papers, so review management is the most challenging. The new TCs will form during ASC 2024 and officially start in 2025.

Finally, we have also conducted voting for the new logo of APSIPA. I will announce the result at the opening ceremony of ASC 2024. See you in Macao on December 3-6.

Best Regards

Tatsuya Kawahara

APSIPA President (2023-2024)

Email: kawahara@i.kyoto-u.ac.jp



Message from APSIPA VP for Conference

Greetings!

It is truly an honor for me to serve as the vice president of conferences for APSIPA in the term of 2024-2025. This year marks the 16th annual conference organized by APSIPA. I still remembered my initial engagement with APSIPA during the inaugural APSIPA ASC 2009 in Sapporo, Japan, where we had approximately 250 attendees.

Since the first conference in 2009, APSIPA ASC has been held in various countries and regions across Asia, ranging from Cambodia, China, Japan, Korea, Malaysia, Singapore, and Thailand to the United States and New Zealand. Over the years, APSIPA ASC has experienced remarkable growth, with attendance now exceeding 400 participants. The number of paper submissions has also increased from about 250 to over 400 in recent years. It is so gratifying to see the increasing interest and engagement within our research community. The expansion of submitted papers from sixteen to as many as twenty-seven countries has brought together researchers from the Asia-Pacific regions, creating a valuable platform for the exchange of research insights and networking opportunities. This annual gathering is a significant opportunity for researchers in this area to share their work.

As we continue our journey with APSIPA, I have had the pleasure of establishing new connections with colleagues from various regions. Looking ahead, we intend to extend our outreach to more countries in the Asia Pacific area, fostering enhanced collaboration in the signal and information processing research communities. May I extend an invitation to all of you to consider hosting APSIPA ASC 2027 in your country or region and to submit your proposals to me. We eagerly anticipate further discussions and look forward to meeting you at APSIPA ASC 2024 in Macao this December.

Warm regards

Bonnie Law

- 📍 Sapporo (2009)
- 📍 Singapore (2010)
- 📍 Xian (2011)
- 📍 Los Angeles (2012)
- 📍 Kaohsiung (2013)
- 📍 Cambodia (2014)
- 📍 Hong Kong (2015)
- 📍 Jeju (2016)
- 📍 Kuala Lumpur (2017)
- 📍 Hawaii (2018)
- 📍 Lanzhou (2019)
- 📍 Auckland (2020)
- 📍 Tokyo (2021)
- 📍 Chiang Mai (2022)
- 📍 Taipei (2023)
- 📍 Macao (2024)



APSIPA 2024

Asia Pacific Signal and Information Processing
Association Annual Summit and Conference 2024

Dec 3rd – 6th 2024 | MACAU, CHINA

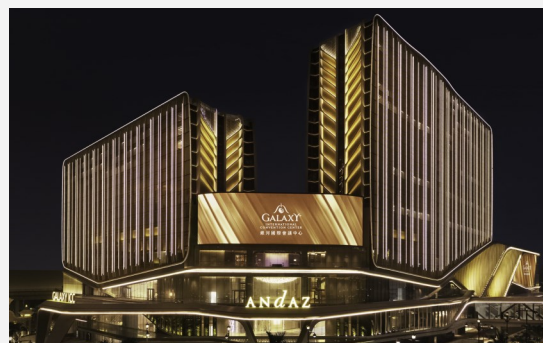
WELCOME TO APSIPA ASC 2024!

CONFERENCE VENUE

GALAXY INTERNATIONAL CONVENTION CENTER

Address: Galaxy Macau Cotai Macau, Macau

Website: <https://www.galaxymacau.com/mice/gicc/meetings-conferences/>



UM GUEST HOUSE N1

Address: N-1 Building, University of Macau, Macau

Website: <https://srs.sao.um.edu.mo/um-guest-house/>



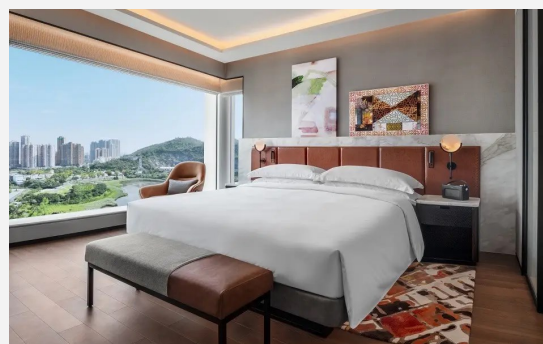
HOTEL INFO

Andaz Macau

5-Star Hotel

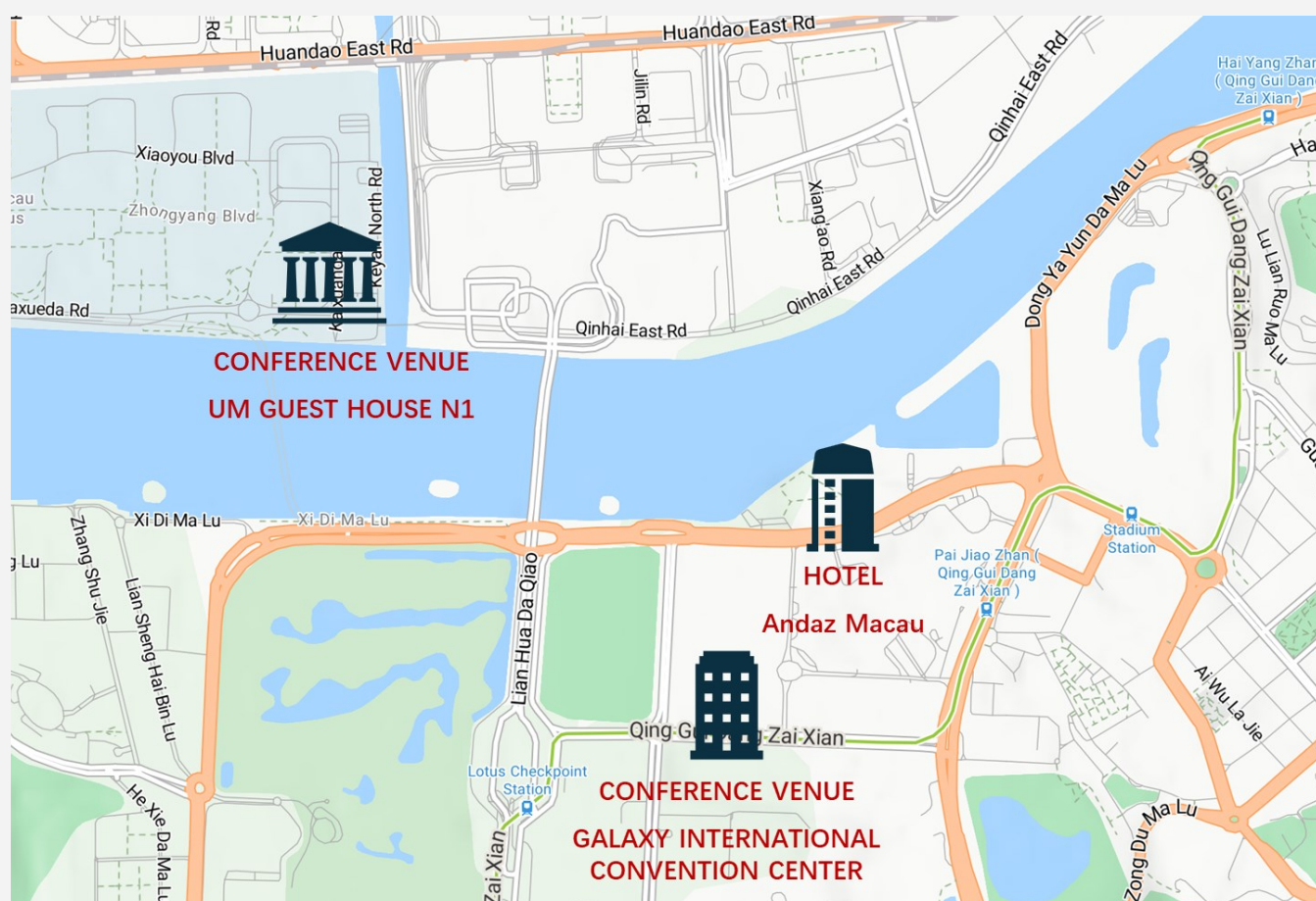
Tel: +853 2888 0888

Website: https://apsipa2024.scimeeting.cn/en/reg/dev-reg/21686?class_id=54446



TRANSPORTATION

Please visit our website for more details: <http://www.apsipa2024.org/traffic.html>



Schedule 3-Dec

3-Dec		
Time/Location	Room 1	Room 2
09:30-11:30	[T01] EEG Signal Processing and Machine Learning	[T02] From Statistical to Causal Inferences for Time-Series and Tabular Data
11:30-13:00	Lunch	
13:00-15:00	[T03] Human-Centric RF Sensing: Pose Estimation, ECG Monitoring and Self-Supervised Learning	Winter School Part 1: Overview of Neural Network AI Part 2: Hopfield Neural Network Fundamental for Machine Learning
15:00-15:30	Coffee Break	
15:30-17:30	[T04] Emerging Topics for Speech Synthesis: Versatility and Efficiency	Winter School Part 3: Deep Learning for Image forensics Part 4: Generative Modeling and Learning for Conversational AI
17:30-20:00	Welcome Reception	

Schedule 4-Dec

4-Dec										
Time/Location	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Room 7	Room 8	Room 9	Room 10
09:00-09:40	Opening Ceremony & Invited Talk for the APSIPA Sadaoki Furui Prize Paper Award									
09:40-10:40	Keynote Speech I									
10:40 - 11:00	Coffee Break									
11:00-12:20 (4 Speakers) (Total: 36 papers)	Audio Processing (50, 84, 111, 115)	Biomedical Signal Processing and Systems (77, 107, 130, 136)	Machine Learning and Data Analytics (17, 57, 62, 125)	Machine Learning and Data Analytics (171, 209, 211, 56)	Machine Learning and Data Analytics (240, 323, 385, 386)	Image, Video, and Multimedia (44, 53, 58, 66)	Signal and Information Processing & Systems (51, 74, 86, 88)	Speech and Language Processing (26, 29, 37, 54)	Speech and Language Processing (55, 78, 79)	Poster (25, 32, 39, 229, 59, 63, 68, 65, 75, 83, 189, 195)
12:20-14:00	[TC1] TC Meeting (SPS)	[TC2] TC Meeting (MSF)	[TC3] TC Meeting (BioSIPS)	[TC4] TC Meeting (SLP)	[TC5] TC Meeting (AA)	[TC6] TC Meeting (WCN)	[TC7] TC Meeting (IVM)	Lunch		
14:00-16:00 (6 Speakers) (Total: 42 papers)	Audio Processing (116, 145, 153, 203, 212, 218)	Biomedical Signal Processing and Systems (140, 161, 221, 255, 302, 339)	Best Paper Competition	Industrial Forum	Multimedia Security and Forensics (34, 48, 49, 172, 186, 315)	Image, Video, and Multimedia (90, 122, 131, 138, 495, 192)	Signal and Information Processing & Systems (100, 109, 124, 133, 143, 159)	Speech and Language Processing (80, 82, 85, 97, 110, 120)	Speech and Language Processing (126, 146, 147, 162, 163, 181)	Poster (89, 98, 99, 102, 108, 112, 113, 117, 204, 137, 144, 206, 150, 157)
16:00-16:20	Coffee Break									
16:20-18:00 (5 Speakers) (Total: 35 papers)	Audio Processing (230, 235, 243, 246, 277)	Biomedical Signal Processing and Systems (370, 398, 466, 431, 456)	Best Paper Competition	APSIPA / IEEE SPS Journal Session	Multimedia Security and Forensics (359, 360, 417, 434, 505)	Image, Video, and Multimedia (193, 219, 238, 247)	Signal and Information Processing & Systems (170, 173, 149, 217, 225)	Speech and Language Processing (184, 190, 200, 118, 237)	Speech and Language Processing (239, 244, 249, 274, 301)	Poster (160, 164, 167, 177, 188, 194, 214, 216, 222)
18:00-20:00	BoG Meeting									

5-Dec							
Room 3	Room 4	Room 5	Room 6	Room 7	Room 8	Room 9	Room 10
Keynote Speech II							
Coffee Break							
Engineering Applications Of Processing Computer on 47, 95, 6)	Advanced Topics on Sound Event and Scene Analysis (52, 158, 380, 406, 424)	Recent Advances in Multimedia Enrichment and Security (123, 198, 202, 207, 208)	Image, Video, and Multimedia (252, 253, 269, 271, 295)	Signal and Information Processing & Systems (226, 231, 260, 273, 307)	Speech and Language Processing (320, 326, 342, 350, 361)	Advanced Signal Processing for Information Collection and Data Analysis in Wireless Environmental Sensing (105, 142, 199, 279, 303)	Poster (228, 248, 245, 262, 265, 266, 272, 283, 286)
	TC Chair Meeting	Lunch					
Performance and Video Engineering and Applications (5, 258, 0)	New Frontiers in Biometric Authentication (220, 453, 317, 409)	Recent Advances in Multimedia Enrichment and Security (210, 227, 233, 251)	Image, Video, and Multimedia (297, 300, 305, 330)	Signal and Information Processing & Systems (318, 328, 340, 376)	Speech and Language Processing (388, 402, 404, 407)	Advancements in Biosignal Decoding and Neuromodulation for Human Function Enhancement (72, 178, 256, 259)	Poster (287, 291, 298, 308, 314, 319, 321, 324, 329, 334)
Coffee Break							
Keynote Speech III							
Performance and Video Engineering and Applications (9, 368, 0)	Wireless Communications and Networking (27, 344, 381)	Recent Advances in Multimedia Enrichment and Security (257, 263, 267, 336)	Image, Video, and Multimedia (337, 337, 341, 364)	Signal and Information Processing & Systems (382, 397, 414, 442)	Speech and Language Processing (415, 433, 435, 438)	Advancements in Biosignal Decoding and Neuromodulation for Human Function Enhancement (270, 365, 373)	Poster (352, 353, 366, 396, 389, 391, 393, 401, 338, 413)
Banquet							

6-Dec										
Time/Location	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Room 7	Room 8	Room 9	Room 10
9:00-10:20 (4 Speakers) (Total: 32 papers)	Signal Processing for Drone Audition & Recent Advances in Intelligent Signal Processing (128, 180, 278, 292, 294, 387)	Converging AI and Computer Vision: Innovations and Potential (104, 175, 205, 254)	AI-Driven Innovations in Cybersecurity Advanced Applications in Signal Processing, Multimedia Security, and Privacy (106, 241, 261, 327)	Embedded and Real-Time Systems for AI and Signal Processing Applications (71, 165, 304, 311)	Selected Papers from APSIPA Workshop on Advanced Signal and Information Processing (41, 42, 43, 94)	Image, Video, and Multimedia (372, 410, 428, 451)	Acoustic Scene Analysis and Signal Enhancement Based on Advanced Signal Processing and Machine Learning (127, 155, 168, 355)	Speech and Language Processing (441, 444, 449, 452)	Overview Session	Poster (427, 432, 436, 437, 439, 443, 445, 450, 223)
10:20-10:40	Coffee Break									
10:40-12:00 (4 Speakers) (Total: 36 papers)	Signal Processing for Drone Audition & Recent Advances in Intelligent Signal Processing (411, 430, 457)	Converging AI and Computer Vision: Innovations and Potential (282, 354, 357, 371)	Multimedia Processing Systems in the AI Era (291, 293, 374, 405)	Embedded and Real-Time Systems for AI and Signal Processing Applications (312, 343, 375, 394)	Selected Papers from APSIPA Workshop on Advanced Signal and Information Processing (121, 132, 134, 135)	Image, Video, and Multimedia (455, 462, 496)	Advanced Topics for Automatic Speakers Recognition (67, 332, 467)	Speech and Language Processing (460, 468, 483, 485)	Few-shot Vision, Language, and Multimedia Processing under LLMs (176, 448, 465, 492)	Poster (458, 461, 429, 469, 471, 473, 476, 464, 481, 489, 490, 493)
12:10-13:30	APSIPA General Assembly & Closing Ceremony									

Singapore Chapter Activities in 2024

The APSIPA Singapore Chapter has an exciting and eventful year in 2024!

On June 21, 2024, we host a joint seminar titled “Emerging Trends and Innovations in Machine Learning and AI” at Lecture Theatre 1, National University of Singapore. This seminar is a collaborative initiative organized by the Asia Pacific Signal and Information Processing Association (APSIPA, Singapore Chapter), in partnership with the IEEE Consumer Technology Society, IEEE Industrial Electronics Society, IEEE Systems, Man, and Cybernetics Society, and IEEE Signal Processing Society.

We are honored to feature Professor C.-C. Jay Kuo from the University of Southern California, USA, and Professor (Akihiko) Ken Sugiyama from Tokyo Metropolitan University, Japan, as keynote speakers. Alongside them, we hear from a distinguished panel of experts, including Dr. Yan Wu (I2R), Dr. Zhengguo Li (I2R), Dr. Bhan Lam, PhD (NTU), and Dr. Hexin Liu (NTU), who share their perspectives on a range of cutting-edge topics in the fields of machine learning and artificial intelligence.

Sign up here

APSIPA SG CHAPTER / IEEE CTSOC / IEEE SMC / IEEE SPS / IEEE IES
JOINT SEMINAR ON

EMERGING TRENDS AND INNOVATIONS IN MACHINE LEARNING AND AI

21st Jun 2024 @ Lecture Theatre 1 (Block E2, Level 1), NUS

13:15 Opening Remarks
Prof. Woon-Seng Gan

13:30 Keynote I: "Toward Interpretable and Sustainable AI/ML"
Prof. Jay Kuo | University of Southern California, USA

14:15 Talk I: "Touch, on the Robot Physical Intelligence"
Dr. Wu Yan | A*STAR Institute for Infocomm Research

14:45 Talk II: "Redefining Quiet: Developing and Deploying an AI-enabled Soundscape Intervention"
Dr. Bhan Lam | Nanyang Technological University

15:15 Tea Break

15:45 Keynote II: "Unveil the Principle behind a Problem-Solution Pair with the Toyota Production System"
Prof. Ken Sugiyama | Damas.cus Corporation/Tokyo Metropolitan University

16:30 Talk III: "High Dynamic Range Imaging: from Physics-Driven to Neural Augmentation"
Dr. Li Zhengguo | A*STAR Institute for Infocomm Research

17:00 Talk IV: "Automatic Speech Recognition with Large Language Models"
Dr. Hexin Liu | Nanyang Technological University

ORGANISED BY

IEEE CTSOC
CONSUMER TECHNOLOGY SOCIETY

IEEE Industrial Electronics Society

IEEE Signal Processing Society

NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

NUS
National University of Singapore

IEEE SMC
Systems, Man, and Cybernetics Society

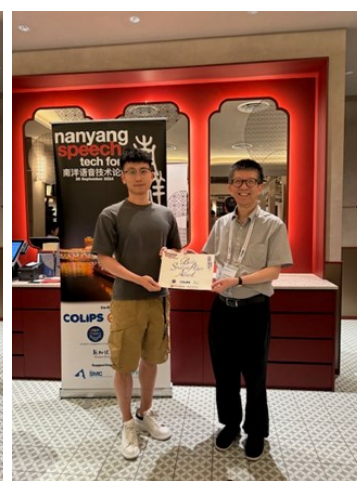
We are grateful to the various IEEE Singapore chapters: Consumer Technology Society (CTS), Industrial Electronic Society (IES), Signal Processing Society (SPS), System, Man and Cybernetic (SMC) Society and Asia Pacific Signal and Information Processing Association (APSIPA) for supporting this joint event.

A wonderful turn out of audience members who took photos with our speakers:



On September 23, 2024, we co-organized the Nanyang Speech Tech Forum in collaboration with COLIPS and the IEEE Signal Processing Chapter. The forum featured a keynote address by Professor Ngai-Man Cheung, who spoke on the topic of Model Inversion in Deep Neural Networks.

In addition to the keynote, we hosted a student competition aimed at encouraging young researchers to showcase their published work. We were pleased to receive 12 student presentations, with the forum culminating in the presentation of the Best Student Paper Award and an Honourable Mention Award to two outstanding students.



APSIPA ASC 2025

The APSIPA Singapore Chapter is excited to announce that preparations are underway to host the APSIPA ASC 2025 in Singapore. Singapore is honored to be the first city to host the ASC twice, and we are committed to delivering an exceptional experience for next year's conference.

We have selected the prestigious Shangri-La Singapore as the venue, known for its beauty and world-class facilities. The organizing committee is working diligently to ensure that APSIPA ASC 2025 introduces fresh, engaging events designed to enhance the experience for all attendees.

We look forward to receiving your outstanding paper submissions. Below are some important links to guide you through the process:

- APSIPA ASC website: <https://www.apsipa2025.org>
- Conference Dates: 22-24 October 2025
- Submission of Paper: 7th June 2025



APSIPA ASC 2025
17th Asia Pacific Signal and Information Processing Association Annual Summit and Conference 2025
October 22nd – 24th 2025 | Singapore
CALL FOR PAPERS

Signal and Information Processing in the Era of Multimodal AI

IMPORTANT DATES

Submission Site Open	Submission Deadline of Workshop Forum, Panel, Tutorial, Special Session Proposals and Grand Challenge Proposal	Notification of acceptance for proposals	Submission Deadline of Regular Paper	Notification of Paper Acceptance	APSIPA Transaction Presentation Request	Submission Deadline of Camera Ready Paper	Deadline of Early Bird Registration
1 st March 2025	30 th April 2025	15 th May 2025	7 th June 2025	22 nd July 2025	31 st July 2025	7 th August 2025	7 th June 2025

INTRODUCTION

Founded in 2009, APSIPA organization (www.apsipa.org) aims to promote research and education in signal processing, information technology, and communications. The annual summit and conferences (ASC) have been held previously in Macau (2024), Taipei (2023), Chiang Mai (2022), Tokyo (2021), Auckland (2020), Lanzhou (2019), Hawaii (2018), Kuala Lumpur (2017), Jeju (2016), Hong Kong (2015), Sam Reay (2014), Kaohsiung (2013), Los Angeles (2012), Xi'an (2011), Biopolis (2010), and Sapporo (2009).

APSIPA ASC in Singapore will be the 17th edition and we are calling for submissions in all aspects of applications. Please refer to the conference web page (www.apsipa2025.org) for full information. All accepted papers will be included in IEEE Xplore and indexed by EI, Scopus, etc. like all previous years. The technical program includes, but not limited to the following areas.

ORGANIZING COMMITTEE

Advisory Committee Chairs <i>K. J. Ray Liu</i> <i>Wan-Chi Shi</i> <i>Anthony Kish</i> <i>Takuya Kawahara</i> General Co-Chairs <i>Hachao Li</i> <i>Woon-Seng Gan</i> <i>Hibshi Aya</i> Honorary Co-Chairs <i>Wang Lei</i> Operation Co-Chairs <i>Samir Adani</i> Education/Winter School Co-Chairs <i>Dong Jang</i> <i>Ken Sugiyama</i> <i>Nipon</i>	TPC Co-Chairs <i>Yan Wu</i> <i>Han-Rui Cheng</i> <i>DongYuan Shi</i> <i>JinCheng Wang</i> <i>Zhongqun Li</i> <i>Jian Du</i> <i>Nobutaka Ono</i> <i>Koichi Fujimura</i> <i>Chang-Su Kim</i> <i>Minoru Kurobayashi</i> <i>Kazuki Adachi</i> <i>Jen-Tsang Chen</i> Pleasure Co-Chairs <i>Jay Kuo</i> <i>Sheng-Jia Luo</i> <i>ZhiJiang Wu</i> Special Sessions Co-Chairs <i>Daehyun Lee</i> <i>Haruhiko Ono</i> <i>Minghui Dong</i> <i>Eng Seng Chng</i>	Tutorial Co-Chairs <i>Toshinobu Kajimura</i> <i>Dhan Lam</i> <i>Kuo-Shen Wong</i> Publicity Co-Chairs <i>Huyyue Lin</i> <i>Trung Nam Huu</i> <i>ZhiJiang Xiong</i> Publication Co-Chairs <i>Wen Li</i> <i>Jing-Ming Guo</i> <i>Sanghoon Lee</i> Registration Co-Chairs <i>Chia-Ting Ong</i> Award Co-Chairs <i>Mahed Abdalla</i> <i>Karen Chan Menghai</i> <i>Nancy Chen</i> Grand Challenge Co-Chairs <i>Jiahao Chen</i> <i>Guoqing Fan</i> <i>Lili Lu</i>	Industrial Forum Co-Chairs <i>Chris Lee</i> <i>Falong Luo</i> <i>Hong Lu</i> <i>Stefan Winkler</i> Sponsorship and Exhibition Co-Chairs <i>Mingyue He</i> <i>Lei Xu</i> Perspective and Panel Session Co-Chairs <i>Yin-Fang Huang</i> <i>Xiao Chen</i> <i>Kong Ah Lee</i> Women in APSIPA Co-Chairs <i>Bonnie Lee</i> <i>Hong Vicky Zhao</i> <i>Sim Ying Ong</i> Local Arrangement Co-Chairs <i>Colin Cheong</i> <i>Yuan Min</i>
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TRAVELLING TO SINGAPORE
By Air: Singapore Changi Airport (direct flights to 130 cities in about 100 countries worldwide)

www.apsipa2025.org

APSIPA and CSIG Joint Lectures on Intelligent Image and Graphics Processing

APSIPA and CSIG (Chinese Society of Image and Graphics) had a joint lectures on intelligent image and graphics processing in Xi'an on May 24, 2024. The cosponsors are APSIPA Education Program, APSIPA's SIPTM (Signal and Information Proc. Theory and Methods) Technical Committee and CSIG's DCHC(Digital Cultural Heritage Committee) committee. Professor Mingyi (APSIPA VP) and Professor Zhigen Pan (Former Vice President of CSIG) delivered opening and welcoming words. The host is Prof Yuchao Dai (Vice Chair of SIPTM TC, APSIPA). The Director of DCHC, Prof Zhigen Pan, and the Chair of SIPTM tech committee, Zhengguo Li, appeared the opening ceremony.

Three APSIPA Distinguished Lecturers and two well known professors from CSIG DCHC jointly presented their lectures. The 5 lectures with the titles on “Artificial Intelligence in Metaverse”, “Benchmarking Photometric Stereo using a Broader Range of Real-world Data”, “Hyperspectral and Multispectral Remote Sensing Image Super-resolution Fusion”, “Research on Behavior and Phenotype Acquisition Based on Computer Vision” and “Single Image Dehazing- from Physics-Driven to Neural Augmentation” are presented respectively by Professor Zhigeng Pan from Nanjing Univ of Information Science and Tech, Professor Boxin Shi from Peking University, Professor Lianru Gao from Aerospace Information Research Institute of Chinese Academy of Science, Professor Meili Wang from Northwest Agriculture and Forestry Univ and Prof Zhengguo Li from A*STAR of Singapore. Over 100 participants enjoined the lectures and had active interactions with lectures.

This event is the first joint lectures after the MOU signed by APSIPA and CSIG in February 2024.



Prof M He delivered opening and welcoming word



Prof Y Dai is hosting the joint lectures



Prof Z Pan is presenting lecture



Prof L Gao is presenting lecture



Prof M Wang is presenting lecture



Prof Z Li is presenting lecture

Joint Lectures on Intelligent Image and Graphics Processing



CSIG DCH Committee and APSIPA SIPTM Tech Committee

CSIG: Chinese Society of Image and Graphics

APSIPA: Asia-Pacific Signal and Information Processing Association



8:30—12:00, May 24, 2024. Chang'an Campus Northwest University, China

Organizers SIPTM (Signal and Information Proc. Theory and Methods) Tech. Committee, APSIPA DCHC (Digital Cultural Heritage Committee), CSIG

Support APSIPA Distinguished Lecturers Program

Host Prof Yuchao Dai, Northwestern Polytech Univ, China; Vice Chair of SIPTM TC, APSIPA

8:30--8:35 (Beijing Time)		Opening Ceremony	Chaired by Prof Yuchao Dai
	Welcome speech, Prof Mingyi He, Vice President of APSIPA Welcome speech, Prof Zhigeng Pan, Former Vice President of CSIG		
8:35---10:50		Chaired by Prof Yuchao Dai	
Lecture 1	Artificial Intelligence in Metaverse		
Speaker	Professor Zhigeng Pan, Nanjing Univ of Information Science and Tech, CHINA		
Lecture 2	Benchmarking Photometric Stereo using a Broader Range of Real-world Data		
Speaker	Professor Boxin Shi, Peking University, CHINA		
Lecture 3	Hyperspectral and Multispectral Remote Sensing Image Super-resolution Fusion		
Speaker	Professor Lianru Gao, Aerospace Info Research Inst., Chinese Academy of Science, CHINA		
Lecture 4	Research on Behavior and Phenotype Acquisition Based on Computer Vision		
Speaker	Professor Meili Wang, Northwest Agriculture and Forestry Univ, CHINA		
Lecture 5	Single Image Dehazing- from Physics-Driven to Neural Augmentation		
Speaker	Prof Zhengguo Li, SIPTM TC Chair, FIEEE, Research Professor of A*STAR, Singapore		

Panel Discussion on “Diffusion Models for Image and Video Tasks” Organized by APSIPA U.S. Local Chapter

This panel brings together the world’s leading experts in computer vision to discuss “Diffusion Models for Image and Video Tasks”. Speakers are leaders from the various visual intelligence fields, ranging from generative AI: image/video generation, compositional generation, generation for compression, generation for autonomous driving, generation for security, and more. As we all know, diffusion models have emerged as a powerful tool in the field of machine learning, particularly for generating high-quality images and videos. This panel discussion brings together experts from academia and industry to explore the cutting-edge applications and future directions of diffusion models, including but not limited to, Recent breakthroughs in diffusion models, Challenges and opportunities in image and video generation, Applications in creative industries, healthcare, and entertainment, and Ethical considerations and -responsible use of AI.

Speakers:



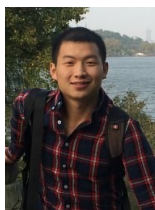
Chong Luo

Principal Researcher, Intelligent Multimedia Group (IMG)

Microsoft Research Asia, Microsoft Corporation, China

<https://www.microsoft.com/en-us/research/people/cluo>

<https://scholar.google.com/citations?user=01iBf38AAAAJ&hl=en>



Dongdong Chen

Principal Research Manager, Microsoft GenAI

Microsoft GenAI, Redmond, Washington, US

<https://scholar.google.com/citations?hl=zh-CN&user=sYKpKqEAAAAJ>



Xihui Liu

Assistant Professor, Department of Electrical and Electronic Engineering and Institute of Data Science (IDS)

University of Hong Kong, China

<https://xh-liu.github.io>



Shuai Yang

Assistant Professor, Wangxuan Institute of Computer Technology

Peking University, China

<https://williamyang1991.github.io>

**Li Yuan**

Tenure-track Assistant Professor, School of Electrical and Computer Engineering,
Shenzhen Graduate School

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**Guo Lu**

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Shanghai Jiao Tong University, China

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**Jiajun Deng**

Research Fellow, Research Fellow

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Moderator:**Xin Jin**

Assistant Professor, Director of Intelligent Media and Visual Computing Lab, College of
Information Science &
Technology

Eastern Institute of Technology (EIT), Ningbo, China

<https://www.eitech.edu.cn/?tid=40&p=teacher>

IEEEJ International Conference on Image Electronics and Visual Computing 2024 Special Session: Industry Forum with APSIPA Industry Relations and Development, IEEE Signal Processing Society, IEEE Circuits and Systems Society, IEEE Solid-State Circuits Society

March 14, 2024, Afternoon (Taiwan Time GMT+8),

Theme: AI and the Era of Smart Semiconductors

Motivation:

Niklaus Emil Wirth introduced the innovative concept of Programming = Algorithm + Data Structure. Inspired by this, we advance the concept to the next level by stating that Design = Algorithm + Architecture. As algorithms, especially those in Artificial Intelligence (AI), with high accuracy become exceedingly more complex and edge or Internet-of-Things generated data become increasingly larger, flexible parallel and reconfigurable processing are crucial in the design of lightweight systems with low complexity and low power. Furthermore, neuromorphic edge with non-von Neumann architectures witness broad applications such as in computing in memory (CIM), requiring energy-efficient design optimizations of the intelligent algorithm at the device level and possibly lower. Therefore, AI systems and smart semiconductor designs crossing levels of algorithm, system architecture, VLSI, circuit, device, etc. poses challenges which are key to the development and success of the global information technology and semiconductor community in the age of AI.

CHALLENGES BRING OPPORTUNITIES!

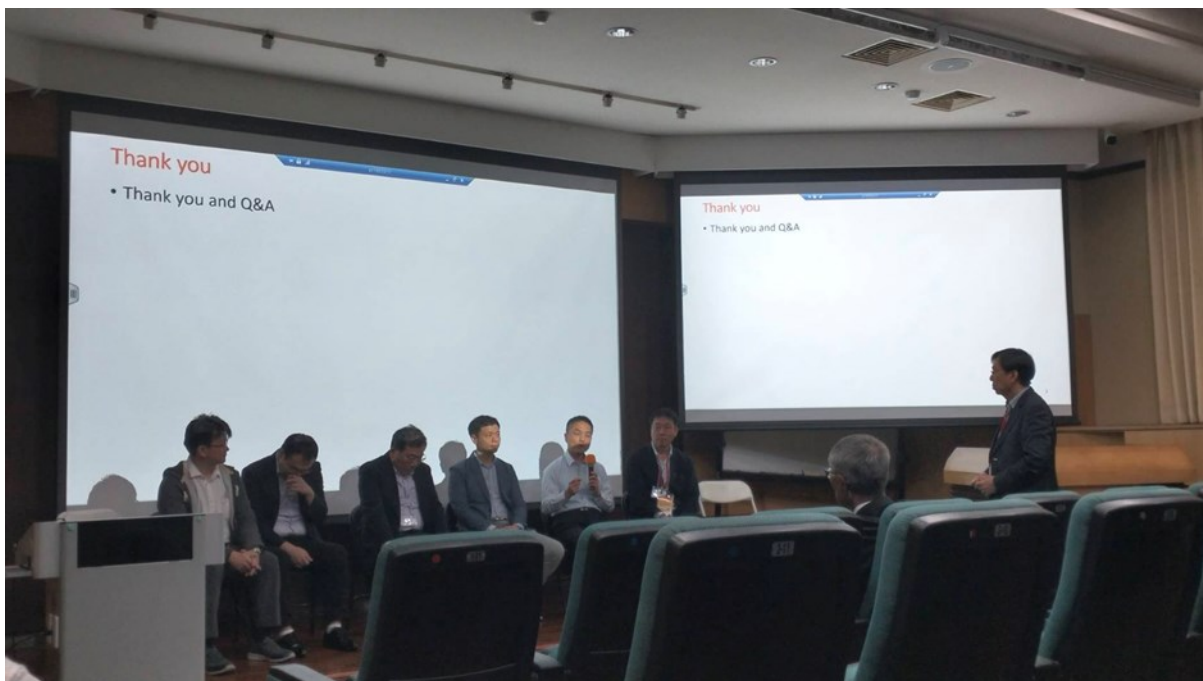
With these CHALLENGES amid current vibrant semiconductor environment, this Industry Forum (IF) provides a platform for experience sharing of new disruptive OPPORTUNITIES with yet more emphasis on AI and concurrent optimization of algorithm and architecture! This industry Forums targets students, young professionals & women-in-engineering (SYW). Industry speakers are invited to share pain spots or unmet needs with academia innovate together for solutions. This provides students with real world research topics and/or possible internship opportunities. Academia works on real world problems with research outcome required by industry! As such this IF anticipates yet more emphasis on cross pollination between academia & industry in fostering Innovation, Internship, Industrialization, and Internationalization among Taiwan, Japan, and Korea!

With the theme on “AI and the Era of Smart Semiconductors,” this IEEEJ International Conference on Image Electronics and Visual Computing 2024 Special Session: Industry Forum with APSIPA Industry Relations and Development, IEEE Signal Processing Society, IEEE Circuits and Systems Society, IEEE Solid-State Circuits Society at Tainan, Taiwan on Mar. 14th, 2024 from 1:20PM till 5:00PM as a Physical Conference in Taiwan & Virtual Internationally at International Conference Center, National Cheng Kung University by the organizers as stipulated below.

Opening Ceremony/Remarks



Organizer Speech for Opening Remarks



List of all Honorable Guests

International Workshop on HPC for AI

International Workshop on HPC for AI

2024

04.25 | Thu |

PM14:00~17:00



**Professor Dr.
Zhonghai Lu**

Dr. Zhonghai Lu's research spans from Network-on-Chip (NoC)/System-on-Chip (SoC), Embedded System, and recently to Prognostics and Health Management (PHM) of Power Electronics. His group is working on in-network processing and embedded intelligence. He has published over 200 scientific papers, and his research papers were nominated as the Best Paper Candidate at HPCA2018, and NOCS2013. He also received the Best Paper Award at NOCS2-15 and EU HIPEAC Paper Awards.

地址 國立陽明交通大學(光復校區)
工程四館108會議廳

D108, Engineering Building D, NYCU (GF Campus)



**Assistant Professor Dr.
Jonathan Balkind**

Dr. Jonathan Balkind's research interests lie at the intersection of Computer Architecture, Programming Languages, and Operating Systems. He is the Lead Architect of OpenPiton and its heterogeneous-ISA descendant, BYOC, which are productive, open-source hardware research platforms with thousands of downloads from over 70 countries worldwide. Jonathan was an Open Hardware Trailblazer Fellow and recipient of the NSF CAREER Award. Since 2021, he has served as a Director of the FOSSI Foundation.



**Assistant Dr.
Md Farhadur Reza**

Dr. Md Farhadur Reza's research interests include resource management, networks-on-chip, multi-core architectures, and machine learning/artificial intelligence. His current research projects focus on machine learning and approximate communication methods for energy-efficient and high-performance NoCs, and NoC architectures for neural networks. He was awarded the title of A. Richard Newton Young Fellow from the ACM/IEEE Design Automation Conference (DAC) in 2014.

Contact Person

蔡小姐 Ms. Tsai (03)5712121#31590

Email: yhtsai@nycu.edu.tw

<https://forms.gle/XZfPrDNHbAQbrHPeA>



敬邀踴躍參加!

April

04 • 25

14:00

15:00

15:00

16:00

16:00

17:00

Zhonghai Lu,
KTH Royal Institute of Technology -
Computational Network-on-Chip as Convolution Engine

Md Farhadur Reza,
Eastern Illinois University - Application-Architecture Mapping for Energy-
efficiency and High-Performance in Network-on-Chip-based Manycore Architectures

Jonathan Balkind,
University of California, Santa Barbara -
Exploiting HPC Techniques to Parallelise Simulation of 10B+ Transistor SoCs

/ 主辦單位 /



智慧終端裝置
晶片系統與應用聯盟

/ 協辦單位 /



國立陽明交通大學
電子研究所



亞太訊號及
信息處理協會

/ 指導單位 /



教育部資訊及
科技教育司

Workshop on Visual Data Coding, Standards, and Quality Assessment



Workshop on Visual Data Coding, Standards, and Quality Assessment

Date: June 11 (Tuesday), 2024

Time: 10:00 - 12:10 Taiwan (UTC+8)

Location: Room 329, Engineering Building 3 (工程三館), National Yang Ming Chiao Tung University, Taiwan

Organizer: Prof. Wen-Hsiao Peng, National Yang Ming Chiao Tung University, Taiwan

Program:

Time (UTC+8)	Topic	Speaker
10:00 - 10:30 (30 mins)	Green Point Cloud Quality Assessment	Prof. C.-C. Jay Kuo
10:30 - 10:50 (20 mins)	MPEG Road Map on Audio, Video, Graphics, Genome, and Systems	Prof. Joern Ostermann
10:50 - 11:10 (20 mins)	Overview on JVET exploration activities	Prof. Jens-Rainer Ohm
11:10 - 11:40 (30 mins)	MPEG Visual Quality Assessment for Emerging Video Coding Schemes	PD Mathias Wien
11:40 - 12:10 (30 mins)	Masked Conditional Residual Transformer for Learned Video Coding	Prof. Wen-Hsiao Peng



Prof. C.-C. Jay Kuo
Univ. of Southern
California, USA



Prof. Joern Ostermann
Leibniz Universität
Hannover, Germany



Prof. Jens-Rainer Ohm
RWTH Aachen Univ.
Germany



PD Mathias Wien
RWTH Aachen Univ.,
Germany



Prof. Wen-Hsiao Peng
National Yang Ming
Chiao Tung Univ.

News on APSIPA Transactions on Signal and Information Processing

Besides regular papers, APSIPA Transactions on Signal and Information Processing (ATSIP) has published 4 Special Issues this year. They are:

- Volume 13, Issue 2: Pre-trained Large Language Models for Information Processing (editorial and four papers)
- Volume 13, Issue 3: Advanced Machine Learning Techniques for Remote Sensing: Algorithms and Applications (editorial and four papers)
- Volume 13, Issue 4: Emerging Wireless Sensing Technologies for Smart Environments (editorial and five papers)
- Volume 13, Issue 5: Invited Papers from APSIPA ASC 2023 (editorial and five papers)

All papers are free to download since ATSIP is an open-access journal. The call-for-papers for the following two special issues are still open:

- Three-dimensional Point Cloud Data Modeling, Processing, and Analysis (Due 10/31/2024)
- Deepfakes, Unrestricted Adversaries, and Synthetic Realities in the Generative AI Era (Due 10/31/2024)

One unique feature of ATSIP is its fast turnaround time. Almost all accepted papers get a first decision in 2 months and appear online in 6 months.

For more information, please visit <https://www.nowpublishers.com/SIP>.

CALL FOR PROPOSALS APSIPA-ASC 2027

The APSIPA Association is now accepting proposals for the 2027 Asia Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA-ASC).

APSIPA-ASC is the premier international forum for the technological advances and research results in the fields of theoretical, experimental, and applied signal and information processing. APSIPA-ASC is the flagship conference of the APSIPA Association and attracts around 500 attendees annually. Research frontiers in fields ranging from traditional signal and information processing applications to evolving related technologies are regularly advanced by results first reported in APSIPA-ASC sessions and events. APSIPA Members are invited to submit a proposal to host APSIPA-ASC. If you are interested in submitting a proposal, please review the guideline which can be found at:

http://www.apsipa.org/doc/2023_7_19_Procedures_APSIPA_ASC_Organizer_Application_Approval.pdf

To submit a bid, please complete and submit the APSIPA-ASC Proposal Pre-Screening Form to VP-Conference (Bonnie Law; e-mail: ennflaw@polyu.edu.hk) by 15 Dec 2024. Proposal Pre-screening Forms will be assessed by the APSIPA-ASC Conferences committee to determine the final proposing teams. The final proposing teams will be invited to prepare full proposals, and if approved, asked to present them at the APSIPA-ASC Conference Committee meeting held online in the beginning of February 2025.

Summary of Links

- APSIPA ASC 2024: <http://www.apsipa2024.org/>
- APSIPA ASC 2023: <http://www.apsipa2023.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 Local Chapters: <http://www.apsipa.org/chapter/index.html>
- 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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Hong Vicky Zhao, Tsinghua University, China

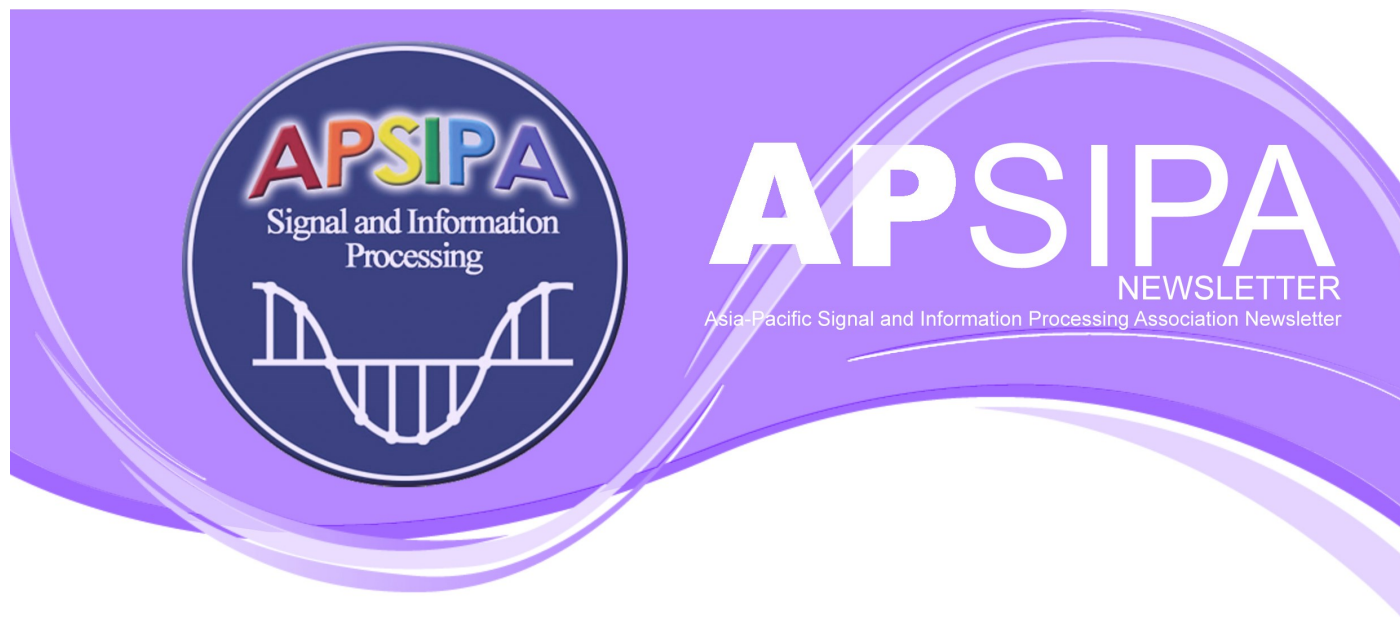
Headquarters

Address:

Asia Pacific Signal and Information Processing Association,
Centre for Signal Processing,
Department of Electronic and Information Engineering,
The Hong Kong Polytechnic University,
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email: ennflaw@polyu.edu.hk



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Xie Lei, Northwestern Polytechnical University, China.

Are you an APSIPA member?

If not, then register online at

<http://www.apsipa.org>