

May 22, 2025

AOC Japan Chapter EW Conference and Call for Paper Participation

Sent by: Masaaki Kobayashi, AOC Japan Chapter President, EW Research Group Chair
(In charge: Haruko Kawahigashi, AOC Japan Chapter Secretary, EW Research Group Secretary)

The AOC (Association of Old Crows) Japan Chapter has hosted the EW Research Group Conference co-sponsored by the IEICE (Institute of Electronics, Information and Communication Engineers) Japan, Technical Committee on Space, Aeronautical and Navigational Electronics (SANE) every spring since 2012, and many people have participated.

The 2025 AOC EW Conference is approaching. It will be held as a hybrid event, combining in-person and online formats. We encourage everyone to join us. **Please note that advance registration is required for both in-person and online participation.**

This year's program includes seven general presentations and five special lectures. In the EW-related sessions, there will be a message from Anthony 'Tony' Lisuzzo, President of the AOC Headquarters, to the Japanese audience; a special lecture by Mr. Tomohiko Kakuda (Air Staff), who presented at last year's EW Research Conference, on changes in his activities; and a special lecture by Erik Bamford, AOC International Region I Director and Norwegian Army officer, on the impact of the Ukraine war on European countries and EW.

As a new initiative this year, we have separated the traditional presentation sessions and will hold a poster session in a separate venue from 13:00 to 14:30, featuring 16 poster presentations. The poster displays will only be available for viewing at the venue, but the introductory lightning talks for each presentation will be streamed online.

Additionally, this year, we will conduct guided tours in parallel with the poster session, dividing participants into groups based on their preferences. Details of the guided tours and registration links are provided below.

Please note that the latest updated information for the June 5th seminar will be posted on AOC Japan Chapter homepage <<https://sites.google.com/view/aoc-japan/home>> On the Event page, so please check there for the latest details.

14th AOC EW Research Group/SANE Research Group Joint Workshop

Date: Thursday 5th June 2025

Venue: Mitsubishi Electric Corporation Information Technology R&D Center, Online Hybrid
5-1-1 Ofuna, Kamakura City, Kanagawa Prefecture

https://www.mitsubishielectric.co.jp/corporate/randd/laboratory/information_technology/index.html

(The format of the event may change due to various circumstances)

Theme: Satellite technology, space science and applications, radar, EW and general

Call for Papers: IEICE SANE Laboratory Program Site (Date: 5th June 2025)

https://ken.ieice.org/ken/program/index.php?tgs_regid=3cbfbad0e3f1faed98beae17ba85f052747f9092ff84a6b629bbf33c5a90f0c8&tgid=IEICE-SANE&lang=eng

Program

-Open from 08:40 AM. Prior registration is required.

Thu, Jun 5 AM Satellite technology, EW, and General@1F

09:00 - 10:30

(1) 09:00-09:10 Welcome Remarks, Anthony (Tony) Lisuzzo, AOC President

(2) 09:10-09:30 Oversea Technical Trends-- From AOC Conference etc. -- Haruko Kawahigashi (Mitsubishi Electric)

(3) 09:30-09:50 Track Initiation Algorithm for Hypersonic Glide Vehicles Hiroshi Kameda, Yasushi Obata, Shintaro Ebi, Yuki Takabayashi (Mitsubishi Electric Corp.)

(4) 09:50-10:10 A Study on GNSS Positioning Fingerprinting for Verifying the Authenticity of Radio Signals Kosuke Teranishi (Ritsumeikan Univ), Masaaki Kobayashi (AOC), Takeshi Kumaki (Ritsumeikan Univ)

(5) 10:10-10:30 Omnidirectional DOA Estimation for Satellites: Principle Validation Through Acoustic Experiments Yosuke Tanabe, Tsukasa Funane, Hisatoshi Kimura, Makoto Ito (Hitachi), Yasuyuki Miyazaki (JAXA), Satoshi Ikari, Shinichi Nakasuka (The University of Tokyo), Koichi Watanabe (Hitachi)

10:30-10:40 Break (10 min.)

Thu, Jun 5 PM Special Session 1@1F

10:40 - 11:50

(6) 10:40-11:15 [Special Talk] Technology Trends in Sensing and Perception Toward Computational Radar and Research Activities at Mitsubishi Electric Corporation Ryuhei Takahashi, Ryoma Yataka (MELCO), Pu(Perry) Wang, Hassan Mansour, Petros Boufounos (MERL), Kazuo Sugimoto (MELCO)

(7) 11:15-11:50 [Special Talk] Initiatives to "visualization of the underwater environment"-- Sensing technology in the Underwater Domein -- Yuji Okada (NSRC,ATLA)

11:50-13:00 Break (70 min.)

Thu, Jun 5 PM Poster Sesson @2F

13:00 - 13:20

(8) 13:00-13:20 Lighting Talks by all the poster presenters

Thu, Jun 5 PM Poster Sesson @2F

13:20 - 14:30

(9) 13:20-14:30 [Poster Presentation] A Study on Electronic Warfare in the Age of Hybrid Warfare Masaaki Kobayashi (AOC)

(10) 13:20-14:30 [Poster Presentation] Introduction to the Activities of the Electronic Warfare and Radar Research Committee, Defense Technology Foundation Yoshio Kajiwara (DTF), Takashi Urushido (NEC)

- (11) 13:20-14:30 [Poster Presentation] Interdisciplinary Educational Initiatives for the Promotion of Mission Engineering-- A Case Study on Fostering Practical Thinking in the Field of National Security -- Motonobu Fujita, Ku Miyashita, Hiroaki Kozu (Keio Univ.)
- (12) 13:20-14:30 [Poster Presentation] Identification of Jamming Sources Based on Doppler Analysis of GPS Receivers for Geostationary Satellites Moeko Hidaka, Makoto Tomitaka, Naoki Miyashita, Yu Nakajima, Toru Yamamoto (JAXA), Satoko Kawakami, Tomoaki Eda, Takahiro Shimizu, Ryo Harada, Susumu Kumagai (NECSpace)
- (13) 13:20-14:30 [Poster Presentation] Evaluation of the Phase Jump Correction Function of an Atomic Clock in a High-Stability Time Generation Circuit Tatsuya Hagiwara, Shiho Tsujimoto, Kei Akama (Mitsubishi Electric)
- (14) 13:20-14:30 [Poster Presentation] Development of Direct Digital RF Transmitter and Receiver Modules for QV-band Digital Beam Forming Antenna Yoshiaki Morino, Akihito Hirai, Yuki Tsukui, Kazutomi Mori (Mitsubishi Electric Corp.), Tomoyuki Furuichi, Satoshi Tsukamoto, Noriharu Suematsu (Tohoku Univ.), Koji Yamanaka (Mitsubishi Electric Corp.)
- (15) 13:20-14:30 [Poster Presentation] Development of a method for simultaneously estimating the position and speed of an unknown radio source Hirofumi Fukushima, Yuki Takabayashi (MitsubishiElectric)
- (16) 13:20-14:30 [Poster Presentation] A Study on Efficient Analysis Methods for RCS Analysis Data Used in SAR Image Simulation Hiroshi Suenobu, Kengo Nishimoto, Toru Takahashi (Mitsubishi Electric)
- (17) 13:20-14:30 [Poster Presentation] Millimeter-Wave Radar Perception for Building a Safe Society Ryoma Yataka (MELCO), Pu (Perry) Wang (MERL), Ryuhei Takahashi (MELCO)
- (18) 13:20-14:30 [Poster Presentation] Estimation of Non-Line-of-Sight Objects with Millimeter-Wave Radar Takayuki Nakanishi, Dai Sasakawa, Yasuhiro Nishioka, Kengo Nishimoto, Toru Takahashi (MELCO)
- (19) 13:20-14:30 [Poster Presentation] Study on the Characteristics of Wi-Fi Signal Strength Reduction by Obstacles and Its Application Kanato Nishiyama, Atsuo Ozaki (OIT)
- (20) 13:20-14:30 [Poster Presentation] Study of Estimating the Number of People in a Crowd using Wi-Fi Signal Strength Naoki Hara, Atsuo Ozaki (OIT)
- (21) 13:20-14:30 [Poster Presentation] Abnormality Detection Method for Private Restroom Users using Wi-Fi CSI Kenta Yazu, Atsuo Ozaki (Osaka Inst. of Tech.)
- (22) 13:20-14:30 [Poster Presentation] A Study on Extension of Radar Measurement Technique Using Feature Points Yuji Tanaka, Nobuyoshi Kikuma, Kunio Sakakibara (NITech)
- (23) 13:20-14:30 [Poster Presentation] Practicality consideration of DDMA-MIMO radar using a speed estimation method with divided Slow-Time received signalsYoshiki Takahashi, Tadashi Oshima (Mitsubishi Electric Corp.)
- (24) 13:20-14:30 [Poster Presentation] Reduction of Computational Load by Separately Estimating Angle and Angular Velocity for High-Speed Radar Targets Tsubasa Terada, Toshihiro Ito, Ryuhei Takahashi (MELCO)

Thu, Jun 5 PM Satellite technology, Radar, and General@1F

14:30 - 15:55

(25) 14:30-14:50 Reflected Wave Hypothesis-based Monaural Microphone Tracking using a Single Speaker Masanari Nakamura, Ibuki Yoshida (Hokkaido Univ.), Hiroaki Murakami (Univ. Tokyo), Hiromichi Hashizume (NIAD-QE), Masanori Sugimoto (Hokkaido Univ.)

(26) 14:50-15:10 Development of Microstrip Antenna for Feeder of Microsatellite onboard Full Polarimetric L Band CP-SAR Yuxuan Wang, Josaphat Tetuko Sri Sumantyo, Hisato Kashihara, Taisei Kawanami (Chiba Univ.)

(27) 15:10-15:30 Feasibility Study of the LEO Satellite Communication Systems for Aeronautical Safety Communications Naoki Kanada, Lu Xiaodong, Kazuyuki Morioka (ENRI)

(28) 15:30-15:55 [Special Talk] A completely new rendezvous docking method using self-luminous QR Code Shuri Kawaguchi (Ibaraki Univ), Takumi Yamada (IU)

15:55-16:05 Break (10 min.)

Thu, Jun 5 PM Special Session 2@1F

16:05 - 17:45

(29) 16:05-16:50 [Special Talk] The impact of the Russo-Ukraine war on European countries appreciation of EW's role in a new geopolitical reality Erik Bamford (Norwegian Armed Forces, AOC)

(30) 16:50-17:35 [Special Talk] Tomohiko Kakuta (JASDF)

(31) 17:35-17:45 Business Card Exchange

-Participation Fee (Audience): The participation fee for 2025 is as follows (same as 2024).

Member of IEICE (General) 3,300 yen (online payment)

Non-member (General) 5,500 yen (online payment)

Member of IEICE (Student) 500 yen (online payment)

Non-member (student) 1,100 yen (online payment)

For students attending as auditors (without technical reports), both members and non-members pay 0 yen

If you pay the participation fee in advance, you can download the technical report (preliminary draft) PDF for the relevant event from one week before the event.

This workshop is a hybrid event, held both on-site and online. For logistical reasons, all participants, whether attending online or on-site, must complete the registration process in advance. In the past, it was possible to participate as a walk-in participant, without making a prior application, by completing the necessary procedures at the venue on the day, but this is not possible this time. Cash payment of the participation fee on the day is also not possible. As a general rule, the registration will close three days before the event, so please complete the necessary procedures as soon as possible. The URL for the online conference, etc., will be sent to the applicant.

-Method of paying the participation fee in advance: Please pay from the program site of the

SANE Laboratory of the Institute of Electronics, Information and Communication Engineers. Please refer to the following site for details.

https://ken.ieice.org/ken/user/index.php?cmd=participation&tgs_regid=3cbfbad0e3f1faed98beae17ba85f052747f9092ff84a6b629bbf33c5a90f0c8&lang=eng

-Method of Application and important notes for on-site participation: Those who have applied to participate via the Institute of Electronics, Information and Communication Engineers system and wish to participate on-site must apply in advance using the on-site participation application form due to preparation requirements. The URL for the on-site participation application form will be sent to those who have applied to participate.

There is a limited capacity at the venue, so even if you apply, you may not be able to participate on-site. If you are unable to participate on-site, we will notify you in advance. Presenters will be given priority.

- Participants attending in person are requested to prepare their own internet connection environment. Charging facilities are limited. If you have any concerns, please consider bringing an extension cord, spare battery, or other necessary items.

-For those who apply in advance using the form, lunch boxes (900 yen, payable on site) will be available. Alternatively, you may bring your own lunch or eat at a nearby restaurant. We ask that you take any rubbish with you when you leave.

-If you are an EW Research Group participant and do not need a technical report (preliminary draft), you may attend free of charge. Both online and on-site participation require advance registration. All participants wishing to attend the EW Research Group are requested to notify the EW Research Group secretary by 29 May, one week prior to the event, using the form below. Those who have already registered using the EW Research Group participation request form do not need to register again using the form below. However, those who wish to attend in person and request a lunch box must re-register. Additionally, registration for the facility tour must be done separately. The form below includes important notes regarding participation. Please review them carefully when registering. If there are any updates to the lecture information, they will be reflected on the AOC Japan Branch Home Page. Please check the updated version of the AOC Japan Chapter HP for the latest information as the lecture approaches.



<https://forms.office.com/r/gZHkNiphMk>

Due to system constraints, the number of online participants is limited, and due to the capacity of the local venue, the number of local participants is limited. Priority will be given to presenters for local participation. If the number of applications for both online and local participation reaches the limit, there is a possibility that we will have to refuse participation. In this case, those who have paid the participation fee, members of the Institute of Electronics, Information and Communication Engineers, and AOC members will be given priority, and there is a high possibility that we will have to refuse non-members who wish to participate for free. If we have to turn down a request for participation, we will notify you in advance.

- Details and application for the tour:

The tour will be held during the poster session time at the following two locations.

1) Mitsubishi Electric Information Technology Research Laboratory Exhibition Space (Please refrain from participating if you are an employee of Mitsubishi Electric Corp.)

2) Mitsubishi Electric Information Technology Research Laboratory Ofuna Space Observatory [1], [2]

(The tour may be cancelled due to weather conditions. Equipment inside the observatory will be introduced in a section of the poster session venue.)

Each tour is expected to take approximately 30 minutes, but we will make further arrangements to allow time for viewing the poster session. Due to limited space, we will consider the tour details based on the information provided in the applications received by the deadline. Please note that we may not be able to accommodate all applicants if the number of applications exceeds the capacity.

[1] Ofuna Space Monitoring and Communications Center (OSMCR) (IEICE Technical Report, SANE2024-12(2024-06) Fig. 1)

[2] The Nikkan Kogyo Shimbun, LTD. Newswitch, 3 April 2024:
<https://newswitch.jp/p/41082>

Please apply for the tour using the form below. Deadline: 27 May at 12:00

<https://forms.office.com/r/4aFJkNGJeD?origin=lprLink>

******* Changes to the AOC Membership System and Promotion to Join AOC *******

In the past, AOC had low membership fees and also provided free webinars and other services to non-members. However, as a result of advice from an external organization during a period of financial restraint due to the cancellation of conferences caused by COVID, it was found that AOC's membership fees were too low compared to IEEE and other international academic societies, and that there were too many free services provided to non-members. As a result, last year the membership fee was increased slightly with the aim of improving the services provided to members. For example, webinars, which were previously free to attend even for non-members, are now only open to members.

In addition, in the past, if you paid to attend an AOC-hosted conference such as the AOC Annual Symposium or AOC Europe, you would be given a one-year membership. However, this was reviewed last year, and participation in AOC symposia and conferences does not automatically make you an AOC member. Instead, as a benefit of participating in the event, a discount on the first year's membership fee is now applied.

We will also be considering charging for participation in AOC Japan Chapter meetings and services, and limiting them to members only, in the future.

We would like to take this opportunity to encourage everyone who participates in AOC Headquarters symposiums and conferences, and everyone who participates in AOC Japan Chapter events, to consider joining AOC.

-The AOC (Association of Old Crows) is an international organization for professionals and organizations involved in the research and practice of EW (Electronic Warfare) in industry, government and academia. The AOC has many chapters in the United States and International Chapters all over the world. Chapters in Europe and Australia have been active over the years, and recently chapters in Asian countries have also been becoming more active. AOC Japan Chapter will hold lectures and other events in addition to the annual EW conference, to exchange information on EW.

-AOC Homepage

<https://crows.org>

-AOC Japan Chapter Homepage

<https://sites.google.com/view/aoc-japan/home>

-IEICE SANE Homepage

<http://www.ieice.org/cs/sane/eng/>

-IEICE SANE Workshop schedule

<http://www.ieice.org/cs/sane/jpn/program.html>

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