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Newsletter of the Oceanic Engineering Society

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Members are encouraged to submit copy highlighting 1) Chapter Events, 2) People & Company News, 3) Student & Young Professional News, 4) Technology Updates, or 5) other material of broad interest to the OES. Please send to Beacon Editor-in-Chief, Harumi Sugimatsu <harumis@iis.u-tokyo.ac.jp>. Word format, 1-1/2 space; Photos (always encouraged): jpg, 300 dpi preferred. Material becomes property of IEEE-OES. Please send e-mail or physical address corrections or updates to the EIC.

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Member Benefits—Did You Know?

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From the OES BEACON Editors

Harumi Sugimatsu and Robert Wernli

Welcome to the March 2026 issue of the Beacon. As you'll see in this issue, OES continues to be very active. And this activity is at various levels, from those of us who have been active members for many decades to our YP, WIE and younger members who are carrying our technology into the future. Accordingly, refer to the Table of Contents for a listing of the many activities that OES has been involved in this year and next and the many new names of those helping run OES.

Reports from our Executive Committee highlight recent and upcoming activities of the society and what we can expect this year and next. Our society President gives us her latest on the society and our Executive VP gives us the latest on the structure of our committees along with the latest on upcoming changes to our constitution. Our new VP for Workshops and Symposia provides a list of the 13 W&S that will keep the society active around the world this upcoming year. Three recent workshops, symposia and conferences (MARIS 2025, SYMPOL 2025 and MARIS AI) that OES was involved in are reported in this issue.

Our VP for OCEANS provides the latest on the OCEANS conferences. This year's events include OCEANS conferences scheduled for Sanya, China, and Monterey, California. Upcoming year's approved OCEANS conference will be held in Aberdeen and Anchorage followed by Adelaid, Australia, and San Diego in 2028.

This issue includes the call for OES Award nominations for next year, and AdCom candidates nominations for next term (2027–2029).

The VP for Technical Activities reports on the status and future plans for our OES Technical Committees and Chapter Chairs. There is also lots of activity ongoing as described in the articles by one of our Distinguished Lecturers and from chapters in Hong Kong, Japan, Malasia, the UKRI and University of Zagreb (SBC) that are reported in this issue. A lot of robotic competitions are ongoing.

Our new VP for Professional Activities gives us the latest on activities including those of our YP and WIE members. In addition, an article introducing 4 of our YP and WIE Representatives and Ambassadors is provided as mentioned previously, our younger professionals are the future of the society.

And don't miss this issue's report on one of our outstanding members in this issue's Who's Who in IEEE OES.

Upcoming workshops and symposia are listed in the Conference Calendar and the Journal EIC again provides a list of recently released papers that are available to our members.

Have you done something exciting lately? Received an award or professional recognition? Be sure to contact your editors about submitting an article.

Harumi with Tamaki and Yoichi Oda at OFFSHORE TECH 2026.

Bear with us! ... It's been 16 years since the OCEANS conference was in Sydney, Australia, in 2010. We will be returning to Australia for the OCEANS Asia-Pacific conference that will be held in Adelaide, April 2028.

There is a wealth of other information and articles in this issue that we hope you enjoy. And, as always, we'll close by inviting you to participate in your society. Submit articles and material for the Beacon. Or... volunteer for other society activities as a participant or an elected officer. It's your society and it is here to help you reach your professional goals. Enjoy.

From the President

Elizabeth Creed, President, president@ieeeoes.org

I'd like to welcome two new members to the OES AdCom, Amelia Ritger and Ye Li. Amelia recently completed her PhD in the Hoffman Lab in Ecology, Evolution, and Marine Biology at UC Santa Barbara, and was recently selected as a Knauss Fellow. Ye Li is an OES Distinguished Lecturer, serves on the Renewable Energy Committee for OTC Asia, and is the Chair of the OES Energy Technology Committee.

Although it is only the end of February, the OES ExCom and AdCom are in the initial stages of developing the Society's 2027 activities budget, and we need your input. If you have an idea for a standalone workshop or symposium, contact the OES VP for Workshops and Symposia, Bharath Kalyan (vp-workshops-symposia@ieeeoes.org). If you are interested in developing a town hall or panel session at a 2027 or 2028 OES OCEANS Conference, contact the VP for OCEANS, Venu Pallayil (vp-oceans@ieeeoes.org). If you are interested in organizing an event local to your OES chapter or Student Branch Chapter, contact Maurizio Migliaccio, maurizio.migliaccio@uniparthenope.it, the OES Chapter Coordinator. Activities focusing on Autonomous Maritime Systems, Data Analytics and AI, Energy, Living Resources, Moorings and Structures, Optics and Imaging, Oceanography and Meteorology, Remote Sensing, Metrology and Instrumentation, Underwater Acoustics, Underwater Communication and Positioning, Standards, and general ocean education for the layperson are of interest. Program ideas should be brought to the respective lead listed above by April 15, 2026, so that motions can be prepared for presentation to the AdCom at the in-person AdCom Meeting in Sanya, China.

Executive VP Report—REVISION OF OES BYLAWS

Mal Heron, Executive VP

Every couple of years the Society's Bylaws need to be revised. The current update being considered for adoption in April 2026 is on Bylaws adopted by AdCom in 2022. So, some changes are rather overdue.

Some changes are mandated by IEEE TAB. For example, an IEEE-wide decision to grant Graduate Students the same rights and privileges of Members. And there are many minor changes to wording.

The most significant operational changes in the Bylaws relate to a restructure of Standing Committees. The establishment and closure of Standing Committees have become messy in the administration of the Society. In practice it is easy to manage the discontinuation of a Standing Committee because it just becomes inactive after AdCom makes its decision. However, when a new Standing Committee is to be established it needs to be listed in the Bylaws before it becomes operational without challenge. This is where the problems start. For example, decisions by AdCom to discontinue the Joint OCEANS Administrative Board and the OCEANS Reconnaissance Committees, following our partnership with MTS for OCEANS, were not implemented in the Bylaws. The subsequent decision of AdCom to establish an OCEANS Central Coordination Committee, after the discontinuation of the MOU with MTS, has had to wait for the present revision before being implemented. This is not a good process because for the total duration of the partnership with MTS our Bylaws were out-of-date. The revised Bylaws will create a category of Operational Committees, which can be managed by AdCom, and still retain Standing Committees that have an ongoing governance role – like the Finance Committee and the Governance Committee. The restructure of Standing Committees will look like the Table1 (with Oversight Officers noted).

The Standing Committees that are being disestablished will be transferred or adapted into new Operational Committees that will not appear in the Bylaws but will be established in the Policies and Procedures documents of the Society. At this moment, designated Oversight Officers are busy planning the establishment of a new raft of Operational Committees with commissions, charters, chairs and membership lists. I hope that I will be able to list the new Operational Committees in the next issue of Beacon. These committees form the backbone of the Society's operation and I encourage you to be involved. For detailed information please contact the relevant Oversight Officers listed in the Table 1.

Table1. Standing Committees to remain (L) and to be disestablished (R)

Standing Committees to remain		Standing Committees to be disestablished	
Finance Committee	Treas	Membership Committee	VPPA
Nominations and Appointments	PP	Student Activities Committee	VPPA
Governance Committee	EVP	Promotion Committee	VPPA
Strategic Planning Committee	EVP	Reconnaissance Committee	VPO
Fellow Evaluation Committee	P	Joint Administrative Board	VPO
Standards Committee	P	Awards Committee	PP
[P = President		Workshop and Symposia Committee	VPWS
PP= Past President		Offshore Technology Conference Committee	PP
VPPA= VP for Professional Activities		Global Earth Observations Committee	VPTA
VPO = VP for OCEANS		Distinguished Lecturer Committee	VPTA
VPTA= VP for Technical Activities			
EVP = Executive VP			
Treas = Treasurer]			

VPTA Column

Shyam Madhusudhana, VP for Technical Activities

As we move further into 2026, I'm pleased to share the latest updates from the Technical Activities portfolio, while also reflecting on an important personal milestone.

This year marks my final year as Vice President for Technical Activities, as I complete my term and prepare to hand over the reins. It has been both an honor and a privilege to serve the Society in this role, and I remain fully committed to ensuring a smooth transition and continued momentum across our programs.

I am also delighted to announce that Atmanand M A has been re-appointed as Technology Committees (TC) Coordinator for a second term, spanning 2026 to 2028. His continued leadership will be invaluable as we further strengthen the role and impact of our TCs.

Our first TC Chairs meeting of the year was held on February 16 and was chaired by Atmanand. The meeting was well attended, with 11 representatives from different TCs, although not all committees were able to participate. The discussions were constructive and forward-looking, with a particular emphasis on organizing special sessions at and TC-driven workshops alongside our OCEANS conferences. I'm pleased to note that a couple of TCs have already expressed interest and have begun planning such activities.

Our Chapters continue to be a cornerstone of member engagement and technical outreach. The first Chapter Chairs meeting of the year is scheduled for February 26, and I look forward to productive discussions and strong participation. Looking ahead, Maurizio Migliaccio's term as Chapters Coordinator will conclude in December 2026. We will soon begin considering candidates for the next term (2027–2029). Members who are interested in being considered for this important leadership role are encouraged to contact me directly.

Preparations are currently underway for the upcoming OES Summer School to be held in conjunction with Sanya OCEANS. Building on the success of the pilot edition at Singapore OCEANS, the organizing team is working to deliver a high-quality program that will once again provide students and early-career professionals with valuable technical exposure and networking opportunities.

As I cruise through my final year as VPTA, I would like to express my sincere appreciation to all our TC Chairs and co-Chairs, Distinguished Lecturers, Chapter leaders, and volunteers for their dedication and service. Your collective efforts continue to drive the success of our technical activities and strengthen our global community.

From the VP for Professional Activities—March 2026

Jacqueline Nichols, Vice President for Professional Activities

It is a privilege to begin serving the IEEE Oceanic Engineering Society as Vice President for Professional Activities. The OES continues to thrive through the dedication of its global volunteer community, whose technical contributions and leadership sustain the Society's growth. Professional Activities supports this community by strengthening engagement, encouraging professional development, and creating opportunities for meaningful participation across all career stages.

Students

In the coming year, a key priority will be strengthening OES engagement pathways, which starts with students. The future of oceanic engineering depends on attracting and supporting new talent, and the OES has an important role to play. This includes connecting students with experienced professionals, technical communities, and real-world applications of ocean technology. This year's first edition of the student newsletter is scheduled to be out in April, to continue highlighting opportunities and activities specific to students and young professionals.

Student Branch Chapters remain central to this effort, providing leadership experience, technical exchange, and early involvement in the global OES network. If you are considering starting a branch, please reach out for information.

Community Engagement & Membership

Strengthening community engagement and membership development will remain an ongoing focus. Efforts will emphasize increasing awareness of volunteer opportunities, encouraging participation in committees, and supporting local activities that connect members more closely with OES programs and resources.

Expect to see an announcement for upcoming volunteer opportunities soon!

Young Professionals & Women in Engineering

Early-career engineers often navigate rapidly changing professional environments, and OES can provide continuity through mentorship, professional development, and opportunities for technical and volunteer engagement. Collaboration with Young Professionals (YP) and Women in Engineering (WIE) initiatives will continue to promote inclusive participation while fostering leadership development across regions and disciplines.

This new YP and WIE Ambassadors were selected at the end of 2025 from a very strong set of applicants. I am pleased to announce Yang Weng as the YP Ambassador and Vijaya Lakshmi Thiagarajan as the WIE Ambassador of 2026/2027! Further information on our new YP & WIE Ambassadors and Representatives is included later in this issue. Applications for next year's ambassadors will be open later in the year – keep an eye out and consider applying.

Event planning is currently underway for YP & WIE members at the upcoming OCEANS 2026 Sanya. Check the website for upcoming information on how to register and attend.

Thank you for your continued support and engagement with the IEEE Oceanic Engineering Society.

From the Vice President for Workshops & Symposia

Bharath Kalyan, Vice President for Workshops & Symposia

Hello everyone,

I'm Bharath Kalyan, and I'm pleased to be stepping into the role of Vice President for Workshops and Symposia at IEEE OES. I'm looking forward to working with all of you and continuing the good work that has been built up over the years in this space.

First, I want to thank my predecessor, Gerardo "Gerry" Acosta, for his years of service in this role. Gerry did a wonderful job growing our workshops and symposia program and keeping the community connected across the globe. I wish him all the best as he takes some well-deserved time to focus on his professional commitments and I have no doubt we'll see him back before long.

With that, here's a quick look at what's coming up. We have a solid lineup of workshops, symposia, conferences, and competitions planned. The table below has the details and I'd encourage you to take a look and see what interests you.

A quick note: RAMI 2026 (Robotics for Asset Maintenance and Inspection) has been postponed to 2027. We'll share more details once they're confirmed.

There's a good mix of events this year, covering everything from AI and marine robotics to underwater communications

Upcoming OES Workshops, Symposia, Conferences & Competitions

#	Type	Event Name	Date	Location
1	*Workshop*	**MARIS-AI – Marine AI and Robotics for Innovation and Sustainability**	Jan 21–22, 2026 (Completed)	Abu Dhabi, UAE
2	*Workshop*	**UNWiS 2026 – 4th Winter School on Underwater Network Simulation**	Feb 2–6, 2026 (Completed)	Padova, Italy
3	*Workshop*	**WIO Futures 2026 – Western Indian Ocean Futures**	May 18–19, 2026	Mauritius
4	*Competition*	**SAUVC – Singapore AUV Challenge 2026**	May 28–31, 2026	Sanya, China
5	*Symposium*	**CAOS – 1st IEEE Canadian Atlantic Ocean Symposium 2026**	Jul 20–22, 2026	Halifax, Canada
6	*Symposium*	**AUV – 2026 IEEE OES AUV Symposium**	Sep 1–3, 2026	Southampton, UK
7	*Conference*	**Ucomms 2026**	Sep 1–3, 2026	La Spezia, Italy
8	*Conference*	**MetroSea – Metrology for Sea 2026**	Oct 5–7, 2026	Šibenik, Croatia
9	*Competition*	**Underwater Robot Challenge 2026**	Oct 9–11, 2026	Pahang, Malaysia
10	*Conference*	**USYS – International Conference on Underwater Systems Technology**	Oct 16–18, 2026	Shanghai, China
11	*Symposium*	**UT – IEEE International Symposium on Underwater Technology 2027**	Feb 28–Mar 3, 2027	Tokyo, Japan
12	*Symposium*	**Breaking the Surface 2026**	TBA	TBA
13	*Competition*	**RAMI 2026 (Postponed to 2027)**	Postponed	Postponed
14	*Workshop*	**Hands-on ROV Workshop**	TBA	TBA

and student competitions. Whether you're looking to present your work, learn something new, or simply connect with others in the field, there should be something here for you.

New Charter & Call for Volunteers

I am currently working on a new charter for the Workshops and Symposia Advisory Committee. The goal is to set up a clearer structure for how we plan and support events, so that things run more smoothly for organizers and participants alike.

Along those lines, consider this an ***unofficial call for volunteers*** to join this operational committee once the charter is approved. If you're interested in helping shape how OES events are organized and supported, I'd be glad to hear from you.

Get in Touch

If you wish to get involved in any of these events, propose a new workshop or symposium, or volunteer for the advisory committee, please do not hesitate to reach out to me at vp-workshops-symposia@ieeeoes.org. As a reminder, OES offers both technical and financial sponsorship and co-sponsorship, as well as patronage with grants for students and young professionals. To be considered for the following year's budget, please submit your support requests by April 15th. You can find a detailed guide for these submissions on our website at https://ieeeoes.org/conferences/workshops-and-symposia/.

I'm looking forward to working with this community.

VP OCEANS Report

Venugopalan Pallayil, Vice President for OCEANS (VPO)

Dear OES Colleagues,

I shall keep this report very brief. OCEANS 2026 Sanya is finally picking up some momentum. We are running a bit late on sending acceptance letters to authors and as well as opening the registration portal due to some unexpected policy issues. This OCEANS has seen a significant increase in the number of abstracts received. We have received close to 700 abstracts, including 30 posters. However, we have been facing a hard time to get the reviews done on time. May I request all the IEEE and OES Members to help on the review of OCEANS abstracts? I will be working with IEEE to generate a new list of reviewers where I invite all of you to sign up, even if you have signed up before. Lately, I have been receiving some responses where the reviewers have changed their jobs and their official email ID with which they have signed up for review has also changed and this was not updated on our reviewer database.

OCEANS 2026 Monterey is in good shape. We have more than 30 exhibitors signed up already with some taking up the gold, silver and bronze sponsorships. Please note that for OCEANS Monterey onwards we are moving onto a new abstract management system. The LOC is working at their best to reduce the inconveniences to authors and reviewers due to this switch. If you hit some 'bugs' while using this system, please bring them up to the notice of the Technical Program Committee Chair. The call for abstract submission will be out on 23 Feb. Please look for the details of other important features of the Monterey technical programme. The website is here: https://monterey26.oceansconference.org.

As you may be aware our 2027 OCEANS conferences are in Aberdeen and Anchorage during the months of June and September 2027. OCEANS 2028 Asia Pacific conference will be held in Adelaide during April 2028, and the North American OCEANS will be held in San Diego September 2028. We have received a letter of interest from Hawaii for the North American 2030 OCEANS conference. Letters of interest have been received from Japan and Abu Dhabi to host OCEANS 2030 and from India for OCEANS during 2032. Please send your interest to host OCEANS 2029 in Europe and North America. We shall send a call for letter of interest for all future OCEANS up to 2034 towards the end of this year.

I would like to make an important announcement here arising from the cessation of our joint agreement with Marine Technology Society (MTS). As part of this agreement MTS holds the IP rights to all odd North American OCEANS Conference Proceedings, which have been hosted on IEEE Xplore. In the light of termination of the joint agreement, IEEE must find a way to host those papers on IEEE Xplore from 2026 onwards to better serve our authors and research community. IEEE OES has hence decided to enter into an agreement which would guarantee a perpetual non-exclusive license to IEEE OES to continue to host these historical papers on IEEE Xplore. OES and MTS are currently working on the licensing agreement, which is expected to be completed by early March 2026.

Another OCEANS-related matter I would like to bring to the attention of our members is that the OCEANS Central Coordination Committee (OCCC) will be established as an Operational Committee. This is arising from some changes in our Bylaws and at the recommendation of IEEE.

I will be back with more updates on OCEANS in the next edition of Beacon Newsletter. Note that OCEANS is your conference and we would like to hear your feedback on how we have been doing and how can we better serve our members and our ocean scientific and engineering community. Write your comments to vp-oceans@ieeeoes.org.

From the Journal Editor's Desk

Karl von Ellenrieder, Journal Editor-in-Chief

Congratulations to the authors of our most recently approved papers. The following papers were published as Early Access papers on IEEE Xplore and will appear in a regular quarterly issue of the Journal soon. You'll find these papers online now:

- Tim R. Hammond, Three Fundamental Decisions in the Evaluation of Autonomous Naval Mine Hunting Operations.
  https://doi.org/10.1109/JOE.2026.3657919
- Sheng Feng, Shuqing Ma, Xiaoqian Zhu, Graph Embedding With Mel-Spectrograms for Underwater Acoustic Target Recognition.
  https://doi.org/10.1109/JOE.2025.3619314
- Silvia Matt, Hongyang Shi, Austin Thombs, Weilin Hou, Thassyo Pinto, Xiaobo Tan, Toward Dolphin-Inspired Frictional Drag Reduction: A Novel Actuator Device for Boundary Layer Modulation.
  https://doi.org/10.1109/JOE.2025.3617982
- Haifan Su, Ziwen Yang, Shanying Zhu, chenggang wang, Cailian Chen, Xinping Guan, Formation Maneuver Control of Marine Vehicles Using Bearing Measurements: A Cooperative Extended State Observer-Based Approach.
  https://doi.org/10.1109/JOE.2025.3630294
- Zhewen Cui, Wei Guan, Xianku Zhang, Husheng Han, Autonomous Collision Avoidance Decision-Making Method for Multiple Marine Surface Ships Based on Deep Reinforcement Learning.
  https://doi.org/10.1109/JOE.2025.3635327
- ZhengJun Li, DeHao Zhao, YuChen Cao, Research on Coupled Bionic Design and Validation of Autonomous Underwater Vehicle Based on Mako Shark Morphological Characteristics.
  https://doi.org/10.1109/JOE.2025.3635365
- Dariush Kari, Hari Vishnu, Andrew C. Singer, Joint Source-Environment Adaptation of Data-Driven Underwater Acoustic Source Ranging Based on Model Uncertainty.
  https://doi.org/10.1109/JOE.2025.3638518
- Ajša Hadžifejzović, James Maby, Mario Tanfara, Shlomi Dahan, Marijan Vonic, Nikola Miskovic, Roee Diamant, Design of a Matching Circuit for Energy Harvesting From a Hydrophone for Internet of Underwater Things.
  https://doi.org/10.1109/JOE.2025.3632103
- Jiaming Yu, Hao Sun, Qinglin Sun, Mingwei Sun, Zengqiang Chen, Dual-Loop Controller for Underwater Snake-Like Robot Based on Dynamic Inverse Solution.
  https://doi.org/10.1109/JOE.2025.3632469
- Lakshmi Annamalai, Cris Benjamin Dutt, Faheema AGJ, PingCNN: A Low-Latent and Low-Cost Network for Mine Detection in Side Scan Sonar Signal.
  https://doi.org/10.1109/JOE.2025.3637600
- Xiaolei Li, Pengyu Wang, Wenhua Song, Yangjin Xu, Wei Gao, Normal Mode Parameters Estimation by a VLA in Single-Shooting.
  https://doi.org/10.1109/JOE.2025.3637413
- Baizhong Chen, Chonglei Wang, Chunyu Guo, Yumin Su, UIE-DDPM: Underwater Image Enhancement Based on the Integration of Physical Model and Conditional Denoising Diffusion Probabilistic Model.
  https://doi.org/10.1109/JOE.2025.3635984
- Lu Liu, Jiaxing Zhou, Jianshuo Zhang, Zhouhua Peng, Fumin Zhang, Collision-Free Cooperative Path Following of USVs Based on Concurrent Learning Switching Extended State Observers.
  https://doi.org/10.1109/JOE.2025.3637450
- Antoni Jaszcz, Dawid Połap, Natalia Wawrzyniak, Grzegorz Zaniewicz, Attention-Enhanced U-Net for Finding Drowned Victims Underwater Using Sonar Equipment.
  https://doi.org/10.1109/JOE.2025.3638526
- Ugurcan Celik, Adolfo Perrusquia, USV Pursuit–Evasion Using a Complementary Scientific Machine Learning With Control Barrier Functions Approach.
  https://doi.org/10.1109/JOE.2025.3634663
- Jing Guo, Juan Zeng, Source Localization in Shallow-Water Environments Dominated by Internal Tides.
  https://doi.org/10.1109/JOE.2025.3644598
- Martin Baerveldt, Lennart Svensson, Edmund Brekke, Combining Occupancy Grid Mapping and Extended Object Tracking With the Poisson Multi-Bernoulli Mixture Filter.
  https://doi.org/10.1109/JOE.2025.3641818
- Md Abu Bakr Siddique, Vaishnav Ramesh, Junliang Liu, Piyush Singh, Md Jahidul Islam, UStyle: Waterbody Style Transfer of Underwater Scenes by Depth-Guided Feature Synthesis.
  https://doi.org/10.1109/JOE.2025.3647814
- Roslynn B. King, Steven Constable, Jillian Maloney, Amy Gusick, CUESI: A Near Seafloor Controlled-Source Electromagnetic System for Shallow Seabed Characterization.
  https://doi.org/10.1109/JOE.2025.3647817
- Manuel Gantiva Osorio, Guillermo Bejarano, Thalia Alicia Morel Otazu, Luis Orihuela, Pablo Millan Gata, Experimental Assessment of a Cascaded Path-Following Controller for ASVs Using Extended State Estimation.
  https://doi.org/10.1109/JOE.2025.3647840
- Jonathan Lephuoc, Chenliang Zhang, David Coleman, Casey Harwood, Moble Benedict, System Identification of a Novel Amphibious Cycloidal Propeller Unmanned Underwater Vehicle.
  https://doi.org/10.1109/JOE.2026.3651186

- Eric Gaskell, Tyler Funnell, Christopher Holbrook, Darryl Hondorp, Xiaobo Tan, Single Receiver Target Localization in Mobile Marine Acoustic Telemetry.
https://doi.org/10.1109/JOE.2025.3643787

- Pengcheng Pan, Xuesong Liu, Fei Wang, Fan Zhou, Rongxin Jiang, Yaowu Chen, Mitigating Structural Fragmentation in Sonar Deconvolution: A Directional Total Variation Approach With FISTA Acceleration.
https://doi.org/10.1109/JOE.2025.3641803

Revision of the OES Constitution

Mal Heron, Executive VP

The proposed changes to the OES Constitution have been approved by IEEE-TAB for compliance and will be considered for final approval by AdCom. After that the document will go out for a ballot by all members with a 60-day period for return of ballots. There are some editorial changes with no change to content. This is an early notice with a description of significant proposed changes.

1) Graduate Student Members will now have the same rights and privileges as Members. A separate grade of membership is created because Graduate Student Members have conditions that differ from Member and Student Members.
2) The foundation statements will now include Vision and Mission to sit alongside Objectives and Purpose.

"Section I-2: Vision
The Society's vision is to be a collaborative community working towards a safe, healthy, and productive ocean."

"Section I-3 Mission
The Society's mission is to be the professional home of people passionate about ocean science, engineering, and technology."

3) Implementation of Bylaws after Amendment

Section IX-2: add "All amendments to the Bylaws shall become effective immediately after all necessary approvals and notifications, unless a later date shall have been specified at the time the vote was taken."

The amended Constitution has been endorsed by IEEE-TAB for compliance with IEEE documents and, after final adoption by AdCom it will be distributed by a ballot to all members of the Society at least 60 days before the date specified for the return of the ballots. Approval of the amendments by at least two-thirds of the ballots returned will be necessary for its enactment.

Please read the Constitution when it comes to you for your vote – and return your ballot. If you have any questions about the document or the process, please contact executive-vp@ieeeoes.org.

Request for Nominations for OES Awards 2026

IEEE OES Nominations & Appointments

Nominations for the 2026 OES awards will open 23 February 2026. Although February seems far away, now is the time to start thinking about individuals or companies/institutions who are worthy of receiving these awards. Self-nominations are allowed and letters of support for a nomination are encouraged. The nomination form will be available beginning 23 February 2026, and closing 15 May 2026 https://ieeeoes.org/menu/about-us/recognition/nominations/). The awards and criteria for determining eligibility for each award are below.

The Distinguished Service Award (DSA)

Honors one OES member for outstanding service in furthering the objectives and activities of the Society.

Eligibility

The awardee shall be an OES member in good standing of Senior Member grade or higher. Eligibility and the selection process shall comply with policies and procedures set forth in the governing documents of the Society and IEEE, particularly with IEEE Policy 4.4 on Awards Limitations*.

Criteria in the Call for Nominations

Extent and impact of the nominee's contributions to the objectives and activities of the Society, including dates of significant contributions.

The Distinguished Technical Achievement Award (DTAA)

Honors one IEEE member for an outstanding fundamental or applied technical contribution to oceanic engineering. The award recognizes a single major invention or scientific contribution, or a distinguished series of contributions over a long period of time.

Eligibility

The awardee shall be an IEEE member in good standing of Senior Member grade or higher. Eligibility and the selection process shall comply with policies and procedures set forth in the governing documents of the Society and IEEE, particularly with IEEE Policy 4.4 on Awards Limitations*.

Criteria in the Call for Nominations

Quality, originality, and significance of the nominee's technical contributions as evidenced by publications, patents, products, or other tangible items.

Company/Institution Award

Honors a corporation or institution that has provided significant contributions to the advancement of ocean engineering and/or ocean research.

Eligibility

The awardee shall be an organization actively involved in ocean engineering and/or ocean research. Eligibility and the selection process shall comply with policies and procedures set forth in the governing documents of the Society and IEEE, particularly with IEEE Policy 4.4 on Awards Limitations*.

Criteria in the Call for Nominations

Nature and extent of the contributions to the advancement of ocean engineering and/or research.

* *4.4.H – Eligibility and Process Limitations*: Individuals serving on any board or committee involved at any stage of the recipient selection or approval process for an award shall be ineligible to receive, or act as a nominator or reference for that award. This conflict-of-interest limitation shall apply to all awards given by the IEEE or any of its organizational units.

The OES Nominations and Appointment Committee looks forward to your participation in the OES awards process.

If you have any questions, please contact: past-president@ieeeoes.org

OES YP & WIE Programs—New YP & WIE Representatives and Ambassadors (2026–2027)

Jacqueline Nichols, Vice President for Professional Activities

The IEEE OES recognizes the importance of fostering a vibrant early-career, inclusive, and collaborative community within its global membership. The Young Professionals (YP) and Women in Engineering (WIE) programs serve as key platforms for enabling this engagement. Ambassadors participate in the leadership of the society by helping to promote young professionals & women engineers and scientists at the OCEANS conferences and other OES events.

I am excited to introduce the new IEEE OES YP & WIE Representatives and Ambassadors. These individuals will be joined by the current YP Ambassadors, Sridhar Krishnamoorthy, Jane Shin, and Marvin Wright and the current WIE Ambassador, Olaya Alvare-Tunon.

YP Program – YP Representative

Gaultier Real graduated from Florida Atlantic University (USA) with a Master's degree in Ocean Engineering and from Aix-Marseille University (France) with a Ph.D. in Physics, respectively in 2011 and 2015. Dr. Real has been involved with Thales Defence Mission Systems (Sophia Antipolis, France) in 2015-2016, then with the French Defence Procurement Agency (DGA Naval Systems, Toulon, France) from 2016 to 2023. He currently works as senior acoustic scientist and project leader for NATO STO Center for Maritime Research and Experimentation (CMRE), in La Spezia, Italy.

He participated to numerous sea trials in oceanography and acoustics, also as lead scientist. He was involved with the University of Toulon as a lecturer in underwater acoustics and sonar systems. His interests focus on environmental acoustics, signal processing, wave propagation in random media and sonar studies. Dr. Real is the recipient of the best paper from a young scientist, awarded at the 2014 UACE and the 2017 joint ASA/EAA Conferences. He also won the Early Career Award from NATO STO CMRE Science and Technology Committee in 2021.

Gaultier Real served as IEEE OES YP Boost ambassador in 2024 and 2025, and serves as IEEE OES AdCom member from 2026 to 2028.

YP Program – YP Ambassador 2026/2027

Yang Weng is a Project Researcher at the Institute of Industrial Science, The University of Tokyo. He received the Ph.D. degree in Environmental Science from the Department of Ocean Technology, Policy and Environment, The University of Tokyo, in 2022. From 2018 to 2019, he was a Visiting Student with the Photonics Laboratory at King Abdullah University of Science and Technology, Saudi Arabia, and from 2019 to 2020, he was a Visiting Researcher at

the Intelligent Autonomous Systems Laboratory, TU Darmstadt, Germany. In 2025, he was a Visiting Researcher at the Robot Learning Laboratory, Aalto University, Finland.

His research interests include underwater wireless optical communication, reinforcement learning, and autonomous underwater vehicles.

WIE Program – WIE Representative

Luyuan Peng is a Research Fellow at the Acoustic Research Laboratory, National University of Singapore, where she recently completed her Ph.D. in Electrical & Computer Engineering. Her research focuses on underwater robotics, with particular emphasis on visual localization and mapping, 3D reconstruction, and enabling robust perception in challenging marine environments. Her work bridges machine learning and marine robotics to support autonomous underwater inspection and exploration.

Beyond her research, she is actively involved in the IEEE Oceanic Engineering Society. She serves as Chair of the Singapore AUV Challenge 2026 and was an IEEE OES Women in Engineering (WIE) Ambassador in 2024 and 2025, contributing to student engagement and community-building initiatives within the global ocean engineering community.

WIE Program – WIE Ambassador 2026/2027

Vijaya Lakshmi Thiagarajan is a Ph.D. scholar in Ocean Engineering at the Indian Institute of Technology Madras (IIT Madras) and a recipient of the prestigious Prime Minister's Research Fellowship (PMRF). Her interests are in marine renewable energy and ocean engineering, with a focus on applying deep learning and data-driven methods for sustainable ocean and energy applications. She is committed to promoting innovation and women's participation in ocean and marine engineering.

Chapter News

Submit Chapter News to Beacon Co-Editors and OES Chapter Coordinator

Hong Kong Chapter

HK ROV 2025 – HK CTOES Pre-University Fun and Games

Reported by Paul Hodgson, Chapter Chair

In 2025 a total of 78 students built 21 basic ROVs. This STEM ROV outreach program has been running in Hong Kong since 2006. The total number of pipe frame ROVs built since that time, including project ROVs, is 873. The number of students involved, including for ROV based projects is 3,742. ROV remains to be a popular activity for school aged students.

The ROV Challenge was carried out on the 28th of September, 2025. A total of 7 schools were represented with 12 teams showing the judges what they had built. We prefer to run a qualification where students have to show their ability with an ROV to complete some tasks. ROV grading is oriented towards design, uniqueness and agility. Tasks are scaled so that students can start with basic tasks and then move up from there. After we saw the ROVs perform, then came the most popular part of the day; the BattleBots. As with previous years, this activity was the most

It is interesting to note that even the mildest mannered, polite juvenile ROV'er becomes a totally different individual once the BattleBots start. Even the judges are fair game. This year it was decided to make things more exciting by including bouts with 3 ROVs in the ring at once. Next year, the judges will also compete with a machine to win. The comments from the students once hearing this possibility was being considered; bring it on!!!!

Workshop instructor training was carried out in Hong Kong, China and Thailand. Four instructors were certified by us. All were past student ROV'ers who had participated in past competitions or qualifications. But 2025 was for the students.

We introduced a new ROV, the "Junior," based upon 1cm diameter PVC pipe. This unit is ¾ the size of the basic ROV but

Mini-ROV built first. Every student builds one.

The larger Basic ROV next. A busy time for the workshop trainers.

Then the Basic ROV..

Five Basic ROVs at the same time.

In the pool for testing and qualification.

can run on D-sized batteries. It uses special thrusters with the same bollard power as the 500gph pump motors, but a fraction of the current. The objective of this unit is that each student can build one individually in a single workshop session and the unit is powerful enough to carry out tasks in open sea water. This design has been under evaluation since 2024.

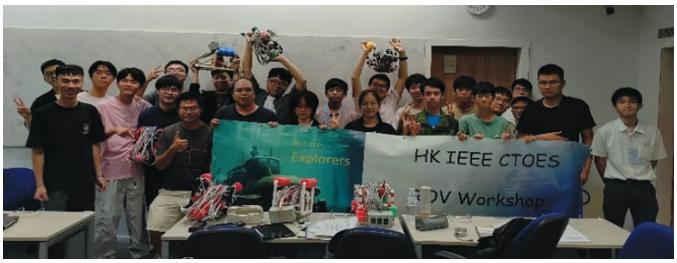
The mini-ROV was also quite popular. In 2025, students built over 80 of these cubes of fun. A new design for the Mini-ROV also became available in the training workshops. We have a mini competition for these small units. Students have to collect small coins using a magnet. Collected coins can be exchanged for 10 times the amount by the judges. A second challenge also occurs for these with several sessions of underwater jousting using Lego men as the target.

This program is very popular in Hong Kong and the PRC. We have a team of 5 experienced trainers for both the Mini-ROV and the Basic ROV.

The ROV in the pool (named The Shark) was actually predating the feet of the ROV'er sitting on the pool edge. His smile widened when the two met. Working with youngsters is always interesting.

More Mini ROV builds.

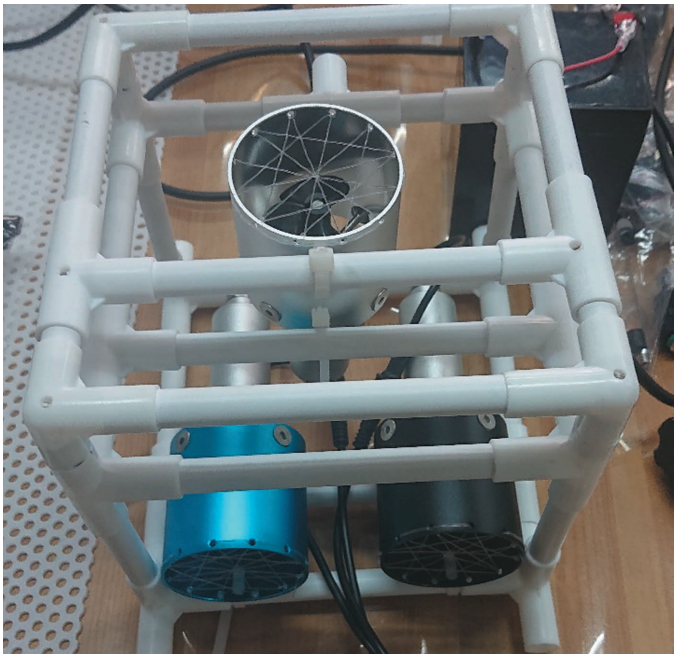
The result of a workshop held at the SFU. Nine ROVs.



The Hong Kong Saint Francis University (SFU) ROV Builders. The end of a perfect day.

Several ROV projects were also carried out in 2025. These included water and mud sampling as well as fine sediment collection in the tungsten mine known as Adit 5. The latter project could best be described as an underwater ROV Vacuum Cleaner.

More work was done in the Adit 5 in the water filled shaft. Collecting fine sediment from the shaft floor.

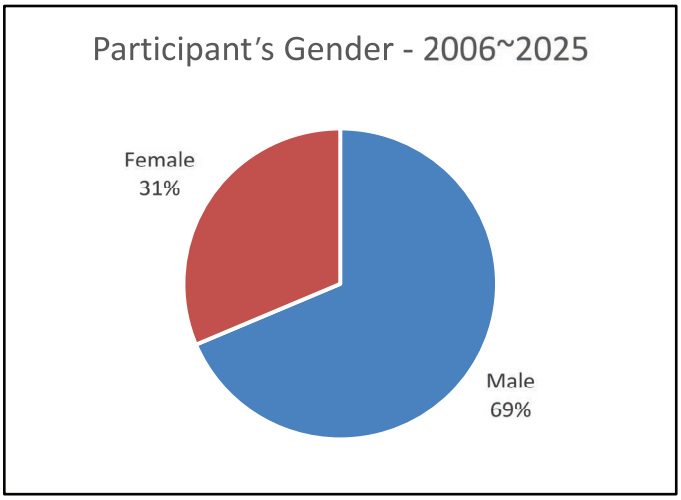


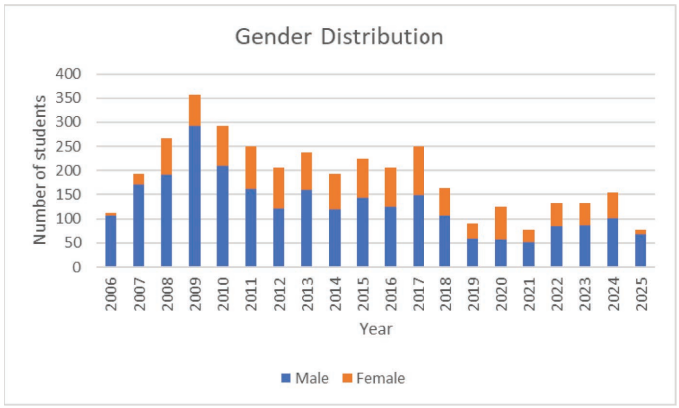
A new class of ROV- The Junior
Small size but the same power as the Basic ROV.

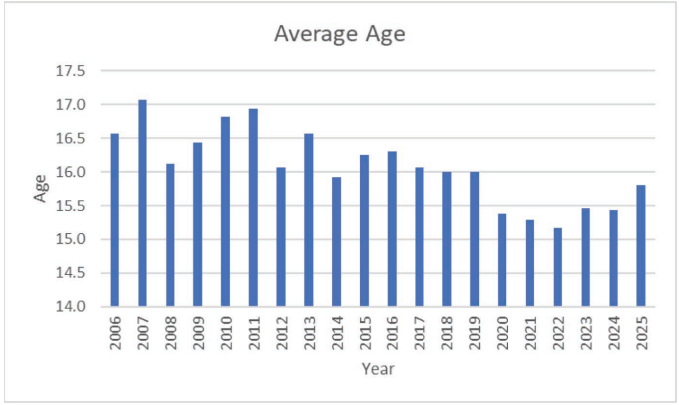
We need to thank the SFU for their help with the resources needed for the workshops carried out at the university. Prof. Anthony Chan (IEEE Fellow) for his unwavering support of the program.

We need to thank the Canadian International School of Hong Kong for allowing us access to their pool for the challenge and the ROV BattleBots. They also provided lunch. This made the whole event possible. Key supporting people were Lorenz Angelo Aguila Gonda, Sunny Wong Chun Lok and the four key CTOES ROV workshop trainers; Alex Zhang, Jerry Zhong, Lai Ho Ming and Tony Pang.

Some statistics for those interested:







We have shared these statistics to show the gender and age range of the students in our Special Administered Region(SAR) who show interest in joining ROV activities. This may help others who are considering arranging similar activities in their area.

Our next ROV qualification and BattleBot tryout is scheduled for August / September 2026.

Finally, the IEEE CT/OES Young Engineer's Conference (YE-24) is planned to be held in November 2026. It will be held in Hong Kong and we hope to see you there.

Hong Kong IEEE CTOES Joint Chapter and the Young Engineer Conference (YE-25) at the Hong Kong Saint Francis University (SFU)

Reported by Paul Hodgson and Lorenz Gonda

YE25

The HK IEEE YE-25 conference is the sixth Pre-University Student Conference held in Hong Kong since 2019. A total of 31 project posters were on display at the entrance to the presentation room. These conferences are a significant platform for young innovators and student scientists to show the project work being done that may not be part of their current studies. This was the sixth year for the conference and the second year it has been held at the Saint Francis University (SFU) near Tseung Kwan O in Hong Kong and it was well attended by students, lecturers, teachers and parents.

The main "first" for this event was the special appearance of one of the most advanced androids in this region, the Unitree G1 humanoid Robot. The android was fitted with a special SFU developed voice interface / intelligence unit that allowed it to give a short 6-minute speech before officially opening the conference (this was not a recording!). The android, named ADRIC, is being considered to assist in a classroom as a simple teaching assistant of sorts at the SFU. If you are interested to know what DeepSeek AI thinks of humans, you are welcome to listen to what it said in the video posted on the website link given at the end of this article. The interesting part was that ADRIC got applause at the end of the speech. The android was quite a hit with the younger members in attendance, causing some delays to the official start of the presentations. Many photos were taken. I believe this was the first time a completely autonomous humanoid robot, without internet connection, has opened an IEEE conference with a speech.

For those not familiar with the event, these pre- university conferences provide a platform for students to receive recognition for researching a topic that interests them. Students start by researching their selected topic and then are guided through the process of producing three things; a poster, presentation, and a paper. Successful completion earns them IEEE credentials, enhancing their university applications and providing a published paper on ResearchGate. The experience helps show the help IEEE can offer them at this stage of their career development.

Conversing with an android at the conference
A powerful photograph showing where things are currently heading

The YE-25 Conference Poster

The 31 Project Posters on display.

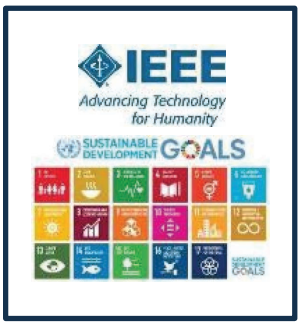
To promote innovation, students are allowed to follow any non-destructive topic they want. They are encouraged to pursue a topic that concerns with reducing the impact humans have on the planet, particularly ecosystems. There are two simple criterion we ask students to keep in mind: One, the slogan from IEEE, which is "Advancing Technology for Humanity," and two, the United Nations Sustainable Development Goals. The YE conference program has been building momentum and increasing quality projects since it was conceived. Momentum has been building in terms of the quality of the work, number of presenters and schools involved.

Students can form teams of up to five individuals or work independently. They can operate either school based or independently. The students select a topic of interest and present a Research Question and draft abstract (without results) to the conference vetting committee. Once approved, the student then works on the project. Criteria for YE-24 conference acceptance were that the project should be in-line

with the United Nations' 17 Sustainability Development Goals and the students should apply or advance technology to address the problems facing Humanity. Basically, the IEEE motto: *"Advancing Technology for Humanity."* General project help can be carried out by members of the HK CT/OES when requested or needed.

A six-minute speech about what AI thinks of humans and how AI will change the future given by an android called ADRIC.

Some of the presenters are as young as 14~15 years of age with several having attended past conferences. The event was held on November 22nd and 23rd, 2025. It was inaugurated by the HK CT/OES Chairman Paul Hodgson with a talk on the history of the Young Engineer's Conferences. Key speakers were Professor Ray Cheung, Chairman of IEEE HK Section and Professor Anthony Chan. They were followed by the android, who announced the conference was now officially open.



The Goals of these projects.

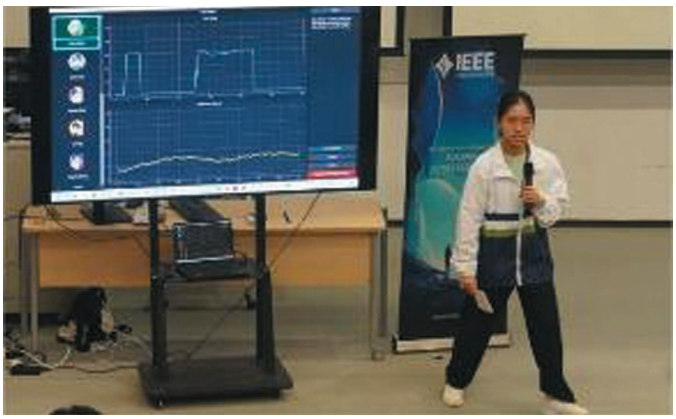
Professor Ray Cheung

Professor H. Anthony Chan

Paul Hodgson

Aedes Mosquito distribution at the CDNIS School.

Music inspired by cave noises – listening to data.



Biofeedback monitor to help stressed people.

Another caldera found in the HK super volcano system.

Students hanging out with the android.

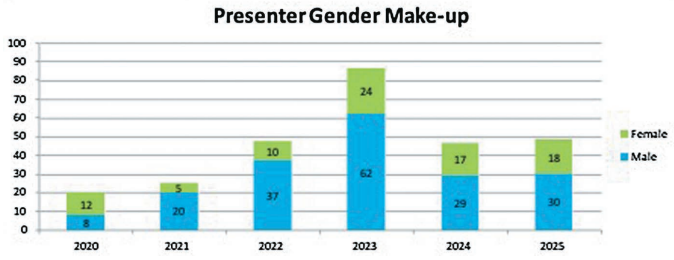
More student hanging out with the android.

The diversity of projects in YE-25 complemented what had been done during previous YE Conferences. In the past, students have presented working cubits, working CubeSats, ROVs that can work in flooded mine shafts, radar based people counters, and a myriad of environmental data collection projects. Student research has revealed that the supervolcano beneath Hong Kong is still rumbling, and that Needle Hill contains a significant deposit of uranium and thorium. The list of projects presented at the YE-25 is below:

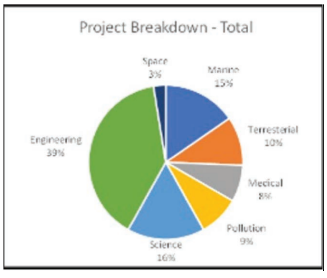
1) *Fusion Reactor*
2) *Using near infrared Spectroscopy to detect heavy metals in plants*
3) *Temperature, humidity and radiation levels in Adit 5*
4) *EMR detection and intensities*
5) *Mosquito (Aedes) detection and mapping*
6) *Chinese Traditional Medicine soap bases*
7) *JOVE Radio Telescope data*
8) *Biodiesel*
9) *Electronic soil analysis*
10) *CubeSat ionic thrusters*
11) *Using algae to absorb CO_2 in rooms*
12) *Repurposing heat from jet aircraft engines*
13) *Simple sleep inducer circuit*
14) *Mycelium protein*
15) *CubeSat Sensor - Radiation detection with photodiodes*
16) *Public transport route planning strategy using AI*
17) *Harvesting energy from human activity*
18) *MindWatch AI – Helping people in need*
19) *Landslide prediction using AI*
20) *Shrimp shells to plastic*
21) *Fail safe and recovery*
22) *Hong Kong Super volcano's earthquakes- locating the 4th Caldera*
23) *Encouraging people to walk*
24) *The acoustic soundscape of Adit 5 – Cave music*
25) *Generating power using multilayer piezo elements*
26) *LED Pixel art-board*
27) *Minibus waiting time calculator*
28) *Using AI to survey dolphins*
29) *Hoi Ha Wan Gruff Head Coral Survey*
30) *Hoi Ha Wan Corak Status (analysis of 10 years of data)*
31) *Acid Rain In Hong Kong*

There was a tie result for the best project with the Mosquito (Aedes) detection and mapping receiving the same score as the acoustic soundscape of Adit 5 – Cave music. Both students will receive the IEEE Section award for their work on these projects.

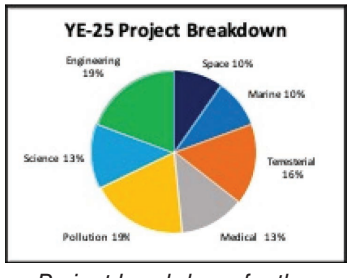
YE-25 Participant make-up is shown below.



Gender makeup for all YE conferences to date.



YE19~YE24 breakdown total.



Project breakdown for the YE-25

The YE conferences show students, teachers and their parents a key benefit of the IEEE on career paths. For most of the students, this is the first time they have presented their work to the public. The follow up certificate and publication is a significant lesson about university. This conference allows students to start pursuing their dreams and is the starting point for most presenters. It is also a key motivating activity to start them off with post adolescent study. For most of these students they seek out IEEE when they get into university. Key motivations for students include:

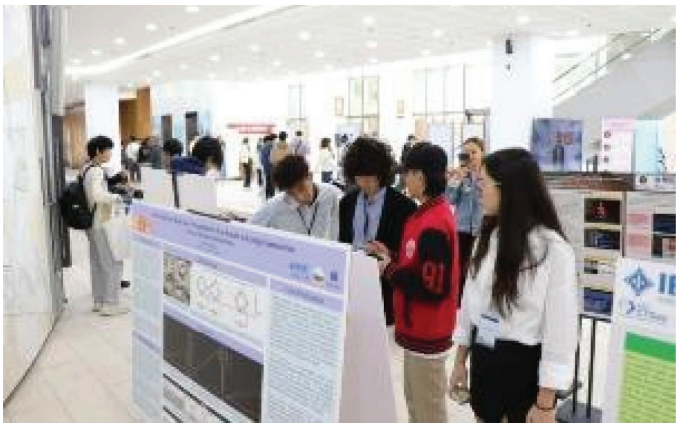
1) **IEEE Certificates**: These validate their participation and achievements, enhancing their university applications.
2) **Conference Attendance**: Participation in IEEE conferences provides networking opportunities and exposure to real-world engineering challenges.
3) **Published Papers**: Students can showcase their research, making their applications stand out, especially for engineering programs. Universities nearly always inquire about the project and the paper during admissions, emphasizing their importance.

There are several schools that support this program with dedicated teachers helping students with their projects. Mrs. Diana Ibarra of the International Schools Foundation (ISF) and Ms. Vivian Chan of the Hong Kong Canadian International School (CDNIS) help prepare students for this conference. Their help and support is highly appreciated.

The Saint Francis University was very generous by giving us free run of the two main lecture theatres as well as genuinely supporting the conference by catering for all ground logistics and allowed us to use areas we spilled into. Professor Anthony Chan (IEEE Fellow), the CIS Department Dean, gave us a blanket approval on the equipment we needed. SFU also allowed the showcasing of some of the AI the university is currently researching at the conference and arranged the G1 Unitree android for us to use at the opening. Dr Ricky Leung and Alistair Lee went out of their way to make sure the latter happened.

Special mention and thanks also need to go out to the hard-working people who made the event happen, particularly, Professor Anthony Chan, Dr. Cheung Chi Keung, William, Arokiasamy Lourdusamy, Lorenz Angelo Aguila Gonda, CHENG Chin Kuen Kenny, TSANG Chi Long Aaron, Johnathan Yung, Cheung Tsz Yee, David Irah Aguila Gonda, Kin Fung Sze, Lee Kit Chow, Tsang Ching Man, Alex Zhang, Jerry Zhong, Lai Ho Ming and Tony Pang.

YE-25 Last day group photo.



Discussing a project poster.

Looking ahead, the next conference, YE-26, is tentatively scheduled for November 21st and 22nd, 2026. Project submissions are now open; for details, visit www.hkctoes.com.

Join us in celebrating the innovation and dedication of our young engineers as they continue to explore the frontiers of technology for a sustainable future! Please support and try and extend this conference by asking students, with good project ideas, in your local area to contact us.

Japan Chapter

The 8th Workshop on Scientific Use of Submarine Cables & Related Technology

Reported by Harumi Sugimatsu

The SSC Workshop

The 8th Workshop on Scientific Use of Submarine Cables &Related Technologies (SSC) was held on the 5th of December, 2025, at the convention hall of the Institute of Industrial Science (IIS), the University of Tokyo (https://seasat.iis.u-tokyo.ac.jp/CableWS/WS20251205/index.html). The workshop has been convened annually since 2018. This year's program featured one keynote lecture, seven general presentations, and one special lecture, for a total of nine presentations, with 140 participants in attendance.

Workshop General Chair Katsuyoshi Kawaguchi delivers the Opening Address.

In the keynote lecture, Mr. Tomonori Miyamoto, Director of the Data Communications Division, Telecommunications Business Department, Telecommunications Infrastructure Bureau, Ministry of Internal Affairs and Communications (MIC), delivered a presentation titled "Watt–Bit Integration and the Regional Decentralization of Digital Infrastructure." While digital infrastructure has become indispensable to modern society, data centers and submarine cable landing stations remain concentrated in specific regions. Addressing this challenge, the MIC has been promoting the coordinated development of power infrastructure ("watts") and telecommunications infrastructure ("bits"). At the beginning of the lecture, only about 20 percent of participants were familiar with the concept of "watt–bit integration," but by the end, the term had clearly gained broad recognition.

The general sessions covered a wide range of topics, including the social application of ocean observation data for forecasting earthquakes, tsunamis, and volcanic activity; an urgent report on emergency submarine seismic observations during the 2025 swarm earthquake activity near the Tokara Islands; proposals for global optical fiber sensing; and improvements in cable-laying methods. Building on last year's presentation, "The 2024 Noto Peninsula Earthquake and Submarine Cable Failures," which highlighted the importance of infrastructure resilience, Dr. Tetsuo No, Associate Deputy Director at the Japan Agency for Marine-Earth Science and Technology (JAMSTEC), delivered an ambitious lecture examining the geoscientific aspects of the Noto Peninsula earthquake and related submarine cable failures.

In the special lecture, Professor Emeritus Tamaki Ura of The University of Tokyo (IEEE fellow and life member) presented "The History of Submarine Cable-Laying Vessels Beginning with the Okinawa Maru and Ogasawara Maru." The cable-laying vessel Okinawa Maru, built in the United Kingdom in 1896 (Meiji 29), was introduced to Japan, and a decade later the Ogasawara Maru was constructed domestically. These developments demonstrate that the strategic importance of communications technology was already well recognized at that time. He emphasized the broader mission of the university, noting that universities must be places where we reflect on the present while learning from the past—understanding history allows us to relativize the present and open pathways to the future.

Tamaki Ura gives a special lecture.

The IEEE OES Japan Chapter Young Researcher Award 2024 Ceremony

The workshop concluded with the award ceremony for the IEEE OES Japan Chapter Young Researcher Award 2025, presented by the IEEE Oceanic Engineering Society (OES) Japan Chapter, a supporting academic society of the workshop. The award recognizes outstanding paper presentations by young researchers at international conferences organized by OES and serves to encourage their continued achievements. We look forward to the further success of Dr. NEETTIYATH Umesh, Project Researcher at IIS, The University of Tokyo, who received this year's award. Congratulations!

Neettiyath Umesh (R) received the young researcher award from OES Japan Chapter Chair Masanao Shinohara (L).

Malaysia Chapter

Underwater Robot Challenge (URC) 2025

Reported by Zainah Md. Zain, Saifudin Razali & Mohd Syakirin Ramli

On 11 October 2025, the IEEE Oceanic Engineering Society (OES) Malaysia Chapter, in collaboration with the Faculty of Electrical and Electronics Engineering Technology (FTKEE), Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA), successfully organized the Underwater Robot Challenge (URC) 2025 at the UMPSA Pekan Campus.

The competition featured two categories: Primary School and Secondary School, to cultivate early interest in Science, Technology, Engineering, and Mathematics (STEM) through hands-on exposure to underwater robotics. Participants were required to design, build, and operate underwater robots based on specific tasks and missions defined for URC 2025, challenging them to meet mission objectives within a controlled aquatic environment. This mission-based approach encouraged students to apply engineering concepts in a practical setting while fostering creativity, teamwork, and problem-solving skills,

alongside introducing fundamental principles of ocean engineering, robotics, and underwater systems.

URC serves as a dedicated platform for students to explore underwater robotic technologies, aligning with IEEE OES's mission to promote ocean engineering education and awareness among younger generations. URC 2025 marked the fourth consecutive year the competition has been jointly organized by the IEEE OES Malaysia Chapter and FTKEE UMPSA. The program has gained national recognition and is officially acknowledged by the Ministry of Education Malaysia as an approved co-curricular activity for school students. This year's competition attracted enthusiastic participation, involving 12 primary school teams and 19 secondary school teams, with a total of 104 students and 42 accompanying teachers from various regions across Malaysia.

URC 2025 Competition Results

Primary School Category

- 1st Place: SK Pelak, Pekan, Pahang
- 2nd Place: SK Desa Jaya, Maran, Pahang
- 3rd Third Place: SK Seri Biram, Pekan, Pahang

Primary School Category

- 1st Place: SMK Paloh Hinai, Pekan, Pahang
- 2nd Place: MRSM Tun Abdul Razak, Pekan, Pahang
- 3rd Place: SMK Badang, Kota Bharu, Kelantan

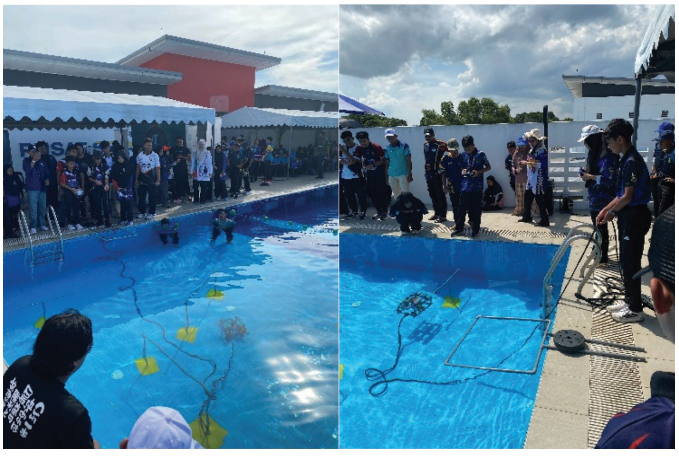
The strong participation and positive feedback from both students and teachers reflect the growing interest in applied STEM learning and underwater technology at the school level. Through URC, students are not only introduced to engineering concepts but are also inspired to consider future pathways in ocean engineering and related fields.

Looking Ahead: Underwater Robot Challenge 2026

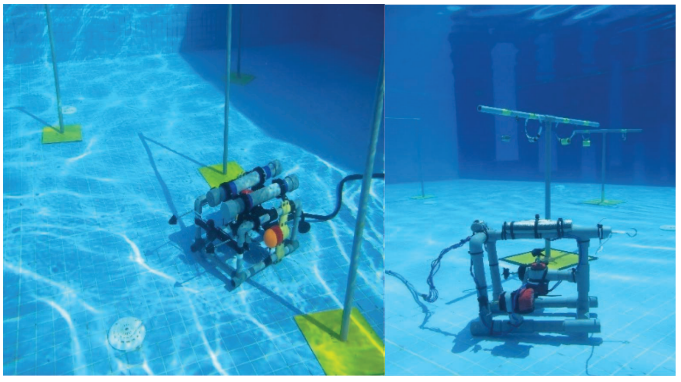
Building on the continued success of URC 2025, the organizing committee has announced that the Underwater Robot Challenge 2026 will be held from 9–11 October 2026. In line with IEEE OES's commitment to global engagement and collaboration, URC 2026 will be open to international participation, welcoming schools from outside Malaysia. This expansion aims to promote cross-border collaboration, cultural exchange, and global awareness in ocean engineering education, further strengthening URC as a regional and international platform for nurturing the next generation of ocean engineers.

Group photo of URC 2025 participants and organizers.

Winners of the Primary School Category and Secondary School Category during the award presentation.



Participants operating underwater robots during URC 2025.

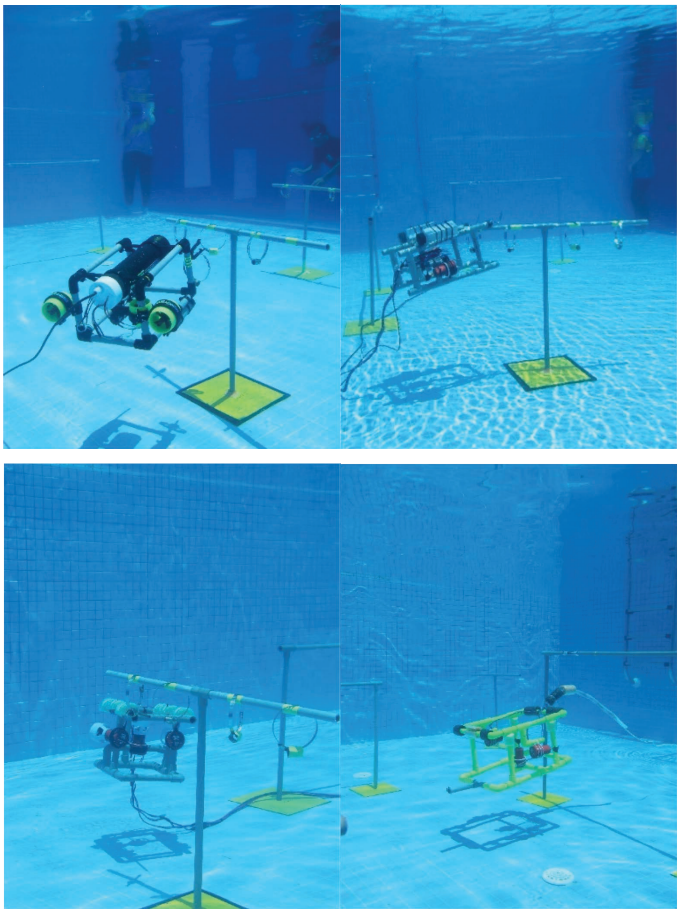


SciTech 4U: MOSTI STEM CAMP (ROV) 2025

Reported by Zainah Md. Zain & Maziyah Mat Nohl

The IEEE Oceanic Engineering Society (OES) Malaysia Chapter organized the Remotely Operated Vehicle (ROV) STEM Camp 2025 on 9 December 2025 at UniKL MIMET, Lumut, Perak, under the SciTech 4U: MOSTI STEM Camp 2025 initiative. The program was funded by the Ministry of Science, Technology and Innovation (MOSTI), Malaysia, and supported by the Manjung District Education Office (PPD Manjung).

The camp aimed to inspire students' interest in STEM, particularly in marine robotics and oceanic engineering. A total of 117 students and 38 teachers from 25 primary and secondary schools across Perak participated in the program. Students took



ROV performing its mission in the pool.

Group photo of participants and organizers.

Team members posing with their ROV.

Photos of volunteers from FTKEE UMPSA.

Photos during the event.

part in hands-on activities involving the design, construction, and operation of small-scale ROVs, allowing them to explore real-world applications of underwater technology in marine exploration and conservation. The workshop was conducted by IEEE OES Malaysia Chapter members, assisted by student volunteers from Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA). Through this initiative, the IEEE OES Malaysia Chapter continues to support STEM education and encourages young learners to pursue future careers in marine engineering, robotics, and ocean technology.

Umpsa Student Visit Institute Of Industrial Science, University of Tokyo: Exploring Cutting-Edge Underwater Robotics Research

Reported by Zainah Md. Zain

On 26 November 2025, a group of 10 students and one lecturer from the Faculty of Electrical and Electronics Engineering Technology, Universiti Malaysia Pahang Al-Sultan Abdullah (UMP SA), visited the Institute of Industrial Science (IIS), University of Tokyo, Komaba Campus under the university's academic mobility program.

The visit included a briefing on the University of Tokyo and IIS, followed by a laboratory tour led by Dr. Umesh Neettiyath (Thornton Laboratory) and Dr. Yang Weng (Maki Laboratory), with support from Yew Qi Ming, a Malaysian master's student at IIS. The laboratories are part of the Center for Integrated Underwater Observation Technology, focusing on advanced ocean engineering and underwater observation systems.

A key highlight was the introduction to the Maki Laboratory, led by Associate Professor Toshihiro Maki, which conducts cutting-edge research on autonomous underwater vehicles (AUVs) and cooperative autonomous systems for long-term and high-precision ocean observation. The laboratory has also been involved in Antarctic exploration missions in 2023, demonstrating the application of its AUV technologies in extreme underwater environments.

After the laboratory visit, the delegation met Harumi Sugimatsu, Editor-in-Chief of the *BEACON Editorial Board* and expressed their appreciation for her assistance in facilitating the visit. The program concluded with a tour of the Hongo Campus, the main campus of the University of Tokyo.

Group photo at IIS, University of Tokyo.

Photos during the visit.

Virtual AGM 2026 of TEEE OES Malaysia Chapter.

IEEE OES Malaysia Chapter 2026 Committee.

IEEE OES Malaysia Chapter Begins New Term with AGM 2026

Reported by Zainah Md. Zain & Zool Hilmi Ismail

The Annual General Meeting (AGM) 2026 of the IEEE Oceanic Engineering Society (OES) Malaysia Chapter was successfully convened on 31 January 2026 via the Google Meet online platform. The virtual format enabled members from various institutions to participate and engage effectively in the chapter's annual governance proceedings.

The meeting included a review of the chapter's activities and initiatives for the previous term, reflecting its continued efforts in promoting oceanic engineering, marine technology, and related professional and educational activities. Members were also provided with updates on the chapter's overall direction and plans for future programmes.

A key agenda of the AGM was the appointment and endorsement of the new committee line-up for the 2026 term. The following members were officially appointed to lead the chapter:

Chair
Assoc Prof. Ir. Dr Zool Hilmi Ismail (UTM)
Vice Chair
Dr. Mohd Ikhwan Hadi Yaacob (UPSI)
Secretary
Ts. Dr. Zainah Md Zain (UMPSA)

Treasurer
Dr Nurafande Ali Hussein (STRIDE)
Ex-Comm
Assoc. Prof. Ts. Dr Sathiabama T. Thirugnana (UTM)
Assoc. Prof. Ir. Dr Zulkifli Zainal Abidin (IIUM)
Assoc. Prof. Ir. Dr Rosmiwati Mokhtar (USM)
Dr. Mohd Shakirin Ramli (UMPSA)
Auditor
Ir. Dr. Lee Kee Quen (UTM)
Dr. Saifudin Razali (UMPSA)

The AGM also served as a platform for members to share views and suggestions, with discussions focusing on strengthening member engagement, enhancing technical and outreach activities, and fostering collaborations with academic, industrial, and international partners.

The IEEE OES Malaysia Chapter expresses its appreciation to all members for their participation and support. With the newly appointed committee in place, the chapter looks forward to a productive term ahead in advancing professional excellence and innovation within the oceanic engineering community.

UKRI Chapter

Exhibition at Subsea Expo in Aberdeen on 4&5 February, 2026

Reported by Brian Horsburgh, Member, UKRI Chapter Committee, Exhibits Co Chair, OCEANS 2027 Aberdeen

The Subsea EXPO, featuring participation from numerous UK and European Subsea companies, was held in Aberdeen from February 4 to 5, 2026. There, we set up a booth for Future OCEANS PR activities, including Oceans Sanya, Oceans Monterey and Oceans 27 Aberdeen, UK. The stand was manned by Zonghua Liu, Technical Chair for Oceans 27, Professor Prabhu Radhakrishna, Co-Chair for Oceans 27 Aberdeen, and myself. A number of new member enquiries were taken as well as interest from several individuals and companies in the upcoming conferences.

Brian at the Subsea EXPO booth.

Professor Prabu (L) and Zonghua Liu (R).

IEEE TRANSPORTATION ELECTRIFICATION COUNCIL

JOIN THE IEEE TRANSPORTATION ELECTRIFICATION COUNCIL (TEC) FOR FREE!

As a member of the **Oceanic Engineering Society**, there is no fee to join the Council.

The **IEEE Transportation Electrification Council (TEC)** is a Technical Council within the IEEE that serves as "one voice" for Transportation Electrification and coordinates broad and deep activities in the growing electrification revolution across transportation domains. These domains include advances in electric and hybrid cars, more-electric ships and aircraft, rail systems, personal transport, and the motive, storage, power grid, electronic intelligence, and control technologies that make them possible.

Individuals can join the Transportation Electrification Council as a Participant and through the Council's sponsored activities, including well-recognized conferences and peer-reviewed publications. Participants have the opportunity to publish and collaborate on research, network with colleagues, stay current on news and events, develop standards, and participate in educational activities.

TEC also offers the IEEE Electrification Magazine, which is a quarterly magazine dedicated to disseminating information on all matters related to electrification in vehicles, ships, trains, planes and spacecraft, and off-grid applications including microgrids.

Join the TEC and be a part of the growing electrification revolution! Connect with industry colleagues, practitioners, researchers, students, and all those interested in advancing the field of electric transportation. Participation in the Council is **free** to all members of sponsoring societies.

Join today for FREE!

IEEE OES Distinguished Lecturers on Underwater Navigation

Itzik Klein, IEEE OES Distinguished Lecturer (2024–2026)

The IEEE OES Distinguished Lecturer Program (DLP) serves as a premier platform connecting lecturers to OES chapters or universities fostering a global exchange of technical advancements and emerging research as well as forging connections, and furthering the development of the OES community.

As part of my 2025 Distinguished Lecturer schedule, I was honored to be invited by Prof. Dusan Nemec from the Faculty of Electrical Engineering and Information Technology, University of Zilina, Zilina, Slovakia. It was a privilege to present my latest research on AI-Powered Autonomous Navigation in Challenging Environments to a highly engaged audience of researchers and students (Figure 1).

The visit provided a wonderful opportunity for a deep dive into the technical challenges and emerging trends within autonomous underwater vehicle navigation. Specifically, the talk addressed the challenges of navigating in DVL-denied scenarios and how neural networks can assist. It also presented a hybrid approach for adaptive nonlinear estimation between DVL and inertial sensors for accurate and robust navigation in challenging environments. I was particularly impressed by the insightful dialogue during the talk, which underscored the vibrant engineering community present in Zilina. My sincere thanks to Prof. Dusan Nemec for the gracious hospitality and perfect organization.

In January, I was privileged to give an IEEE OES DLP talk at a meetup organized by the IEEE Israel OES student branch (Figure 2). My talk on Neural Navigation: Redefining Sensor Fusion and Positioning for Autonomous Underwater Vehicles focused on the intersection of neural networks with model-based navigation and sensor fusion algorithms to create seamless navigation methods (Figure 3). It was a pleasure talking to students and bridging the gap between theoretical classroom learning and real-world application by exposing them to state of the art research. These interactions provide rare networking opportunities that can lead to mentorship, internships, or research collaborations, effectively integrating students into the OES professional community.

I am convinced that the Distinguished Lecturer Program is a powerful platform for strengthening OES chapter communications and advancing international partnerships in ocean engineering and related fields. Looking forward to my next scheduled talks in 2026.

Figure 1. AI-Powered Autonomous Navigation in Challenging Environments, University of Zilina, Slovakia.

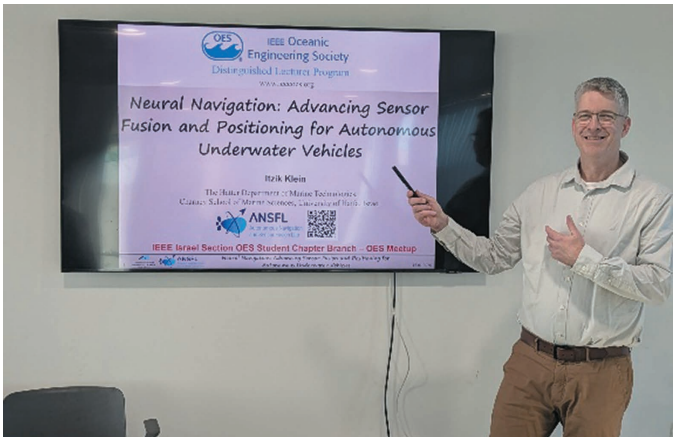


Figure 2. Neural Navigation: Redefining Sensor Fusion and Positioning for Autonomous Underwater Vehicles, IEEE Israel OES student branch, Israel.

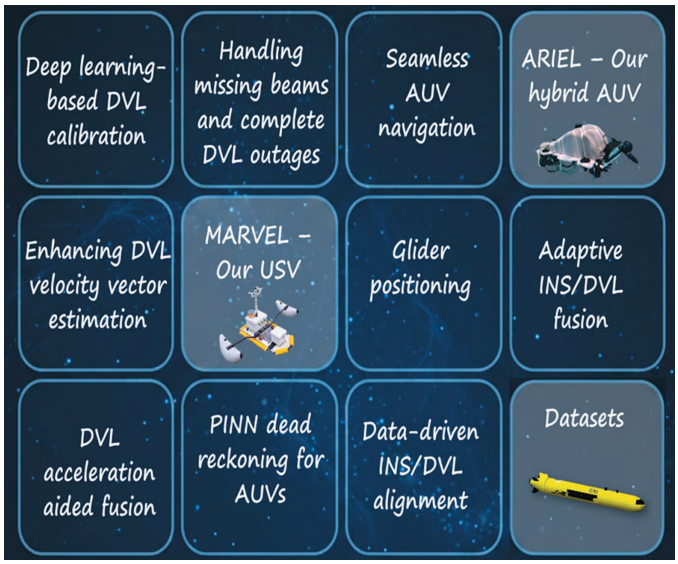


Figure 3. Selected topics of our research in underwater navigation and marine robotics.

OES Conference Calendar

Contact BEACON Editors, OES VPWS and VPTA

OCEANS

OCEANS 2026 Sanya
May 25–28, 2026
Sanya, China
https://sanya26.oceansconference.org

OCEANS 2026 Monterey
September 21–24, 2026
Monterey, USA
https://monterey26.oceansconference.org

OTC

OTC Asia 2026
March 31–April 2, 2026
Kuala Lumpur, Malaysia
https://www.otcasia.org

OTC 2026
May 4–7, 2026
Houston, USA
https://2026.otcnet.org

OES Sponsored (financial or technical)

Western Indian Ocean Futures (WIO Futures) 2026
May 18–19, 2026
Port Louis, Mauritius
Webpage opens soon.

SAUVC 2026
May 28–31, Sanya, China
https://sauvc.org

CAOS 2026
July 20–22, 2026
Halifax, Canada
https://www.ieee-caos.org

UComms 2026
August/September, 2026
Italy
https://www.ucomms.net
More information will be updates soon.

AUV 2026
September 1–3, 2026
Southampton, UK
https://www.auv2026-southampton.com

USYS 2026
October 16–18, 2026
Shanghai, China
More information will be updates soon.

MetroSea 2026
October 5–7, 2026
Sibenik, Croatia
https://metrosea.org

UT27
February 28–March 3, 2027
Tokyo, Japan
http://ut27.org

OES Patronaged

BtS2026
September/October, 2026
Croatia
More information will be updates soon.

Non-OES but OES members are involved in

Non

Please contact us if you have any information about non-OES events that OES members are involved in.

IEEE Symposium on Maritime Informatics & Robotics

Dimitris Zissis, Chair of MARIS 2025

The IEEE Symposium on Maritime Informatics and Robotics (MARIS 2025) (https://maritimesymposium.eu/symposium-supporters/) and the 3rd Aegean Roboat Race were held in Syros, Greece, on 26–27 June 2025, organised by the University of the Aegean, the University of Porto and the University of Piraeus with the support of the IEEE Oceanic Engineering Society (OES), IEEE Computer Science Society, EIT Digital (now 24Digital) and many more supporters (such as the University of Zagreb, CMMI, ICCS and more). This two-day event brought together researchers, students, engineers, and maritime industry actors for an integrated scientific and experimental programme. It combined a focused, peer-reviewed symposium with an intensive field-based autonomous vessel competition, reflecting the successful dual format seen in international marine robotics activities.

Day 1 – MARIS Symposium

The first day was devoted to the Symposium, highlighting recent advances in maritime informatics, autonomous vessels, sensing systems, and marine robotics. The Symposium featured invited lectures, peer-reviewed presentations, and discussions on the future of autonomous operations in the maritime domain.

A total of **27 research papers** were presented, covering a wide spectrum of topics including anomaly detection and predictive analytics in maritime data streams, cooperative autonomy for surface vehicles, multimodal sensor fusion architectures, digital twins of port environments, robust navigation under uncertainty, and real-time perception algorithms for complex coastal environments. All papers were reviewed by an international scientific committee and were included in the **MARIS 2025 Proceedings**, published under IEEE support. https://ieeexplore.ieee.org/servlet/opac?punumber=11139133

An important feature of the Symposium was the participation of several **EU-funded research projects**, which demonstrated their technological achievements and shared ongoing research challenges. Project teams presented autonomous surface vessel prototypes, real mission data sets, edge-AI processing pipelines, and integrated sensing platforms for maritime situational awareness. These demonstrations provided concrete evidence of how European R&D initiatives translate into operational capabilities, enriching the scientific programme and strengthening links between academic research, field experimentation, and industrial application.

Professor Dimitris Zissis (chair) together with the two keynote speakers of the event, Dr. Angelos Amditis (ICCS) and Prof. Evi Nomikou (NTUA).

MARIS was hosted in the iconic Apollon Theatre in the heart of Hermoupolis, Syros.

The members of the program committee and the keynote speakers. From Left to right: Alex Troupiotis (University of the Aegean)), Christos Keleshi (CMMI), Elias Xidias (University of the Aegean)), Fausto Ferreira (University of Zagreb), Dimitris Pados (Florida Atlantic University), Renato Mendes (University of Porto), Georgios Sklivanitis (Florida Atlantic University), Angelos Amditis (ICCS), Dimitris Zissis (University of the Aegean), Evi Nomikou (NKUA) and Giannis Kanellopoulos (ICCS).

Day 2 – The Aegean Roboat Race

The second day featured the **3rd edition of the Aegean Roboat Race**, a competition designed to promote hands-on learning and encourage students and young researchers to engage directly with autonomous marine systems. Held in the port of Ermoupolis, the event required teams to deploy small autonomous boats capable of navigating real missions under natural environmental conditions.

Teams were challenged with missions involving waypoint navigation, dynamic obstacle avoidance, station keeping, trajectory tracking, and adaptive mission updates. The coastal environment introduced real-world disturbances such as wave reflections, currents, wind variations, and external interference —factors that cannot be replicated in laboratory settings. In this respect, the Race followed the same experiential philosophy observed in other international marine robotics events, where students engage directly with field conditions and sensor behaviour.

As the Race has now completed its third edition, its value is increasingly evident. Students not only deploy their platforms

Teams pushing to the limit as they race for the finish line.

Two robotics vessels during warm up session. The robot sailing vessel from the sailing team TU Darmstadt and the one from the Merchant Academy of Thessaloniki Greece.

but also gain practical experience in system debugging, sensor calibration, controller tuning, and mission planning under time constraints. The event serves as an accelerated learning environment, and many teams expressed interest in returning with more advanced vessels and improved autonomy algorithms.

The presence of local schools and community members added a public-engagement dimension, giving younger students an opportunity to interact with real robotic systems and gain exposure to STEM pathways.

Support

In total, more than **120 participants** took part in the symposium and the race. Representatives from industry presented their technologies and engaged with researchers and students, while various EU research projects demonstrated concrete outcomes, including autonomous vessel prototypes, advanced software for data fusion, and novel sensing platforms for coastal observation.

The combination of a focused scientific symposium with a practical, field-based competition helped to reinforce the unique identity of MARIS and the Aegean Roboat Race as complementary activities that merge scientific excellence, educational value, and real-world experimentation.

Scientific and Educational Impact: A Need for More European Field-Robotics Events

The combined format of MARIS and the Aegean Roboat Race highlights a broader need in Europe for **regular, structured field-robotics events** dedicated specifically to autonomous maritime systems. While the continent has a strong tradition in marine research, opportunities for early-stage researchers and students to test their systems in real conditions remain limited. The Syros event demonstrates the benefits of integrating a scientific symposium with an applied, field-based competition:

- Researchers gain a venue for presenting and validating methodologies.
- Students develop practical skills that complement theoretical training.

- Industry gains insight into emerging talent and prototype technologies.
- EU projects achieve visibility and can demonstrate deliverables publicly.
- Local communities engage with science and technology in an accessible way.

These events are essential for cultivating the next generation of engineers and scientists in autonomous marine systems and for positioning Europe as a leader in ocean robotics innovation.

Conclusion and Invitation for Future Participation

Preparations for the 2027 edition are already underway. Teams from universities, research groups, companies, and independent makers are warmly encouraged to participate. The combination of rigorous scientific presentations and real-sea experimentation makes MARIS and the Aegean Roboat Race an ideal setting for students seeking foundational experience, researchers aiming to validate their systems, and institutions wishing to demonstrate innovation in maritime robotics.

Syros will remain a place where the next generation of marine roboticists can test, learn, collaborate, and help shape the future of autonomous systems in Europe.

If you would like to join the team in Syros earlier there is a yearly summer school organised with EIT Digital. More here: https://summerschool.eitdigital.eu/maritime-informatics-robotics

Student members and volunteers of the SMART MOVE team at the University of the Aegean following the successful completion of the event.

Here you can find a short clip of last year's summer school https://www.youtube.com/watch?v=DpL6dmWGB2E

Find out more by visiting smartmove.aegean.gr

2025 International Symposium on Ocean Technology (SYMPOL 2025)

Supriya M.H., Chairperson, SYMPOL 2025
Arun A. Balakrishnan, Coordinator, SYMPOL 2025

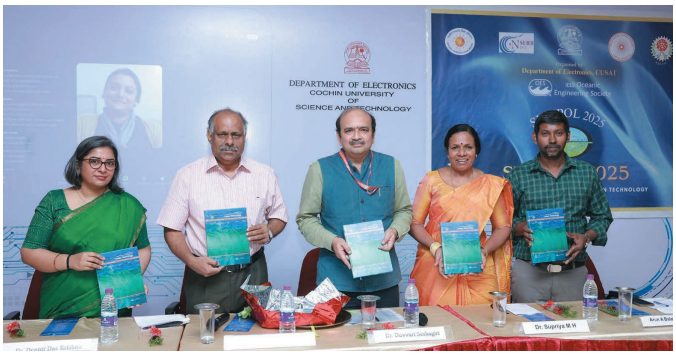
Introduction

The 2025 International Symposium on Ocean Technology (SYMPOL 2025), addressing the Technologies for Sustainable Oceans, organized by the Department of Electronics of the Cochin University of Science and Technology, Kochi, with the technical co-sponsorship of IEEE-OES, was held during 10-12 December 2025. SYMPOL is being organized as a biennial program and the first symposium of the series was held in the Cochin University of Science and Technology, during 18-20 December 1991 to highlight the formal opening of the Center for Ocean Electronics established in the Department of Electronics as a joint venture of the University Grants Commission and Ministry of Human Resource Development, Government of India.

Inaugural Function

The three-day symposium was inaugurated on 11th December 2025 by Dr. Duvvuri Seshagiri, Director of Naval Physical & Oceanographic Laboratory (NPOL) at the Auditorium, Department of Electronics, CUSAT Main Campus in a function presided over by Dr. M. Junaid Bushiri, Vice-Chancellor, Cochin University of Science and Technology. Dr. Deepti Das Krishna, Head of the Department, welcomed the gathering. Dr. Supriya

Dr. Duvvuri Seshagiri inaugurates SYMPOL 2025 by lighting the lamp. Vice Chancellor Dr. M Junaid Bushiri, Dr. Supriya M. H., Dr. Gopu R. Potty, Dr. Deepti Das Krishna and Mr. Arun A. Balakrishnan are also seen.

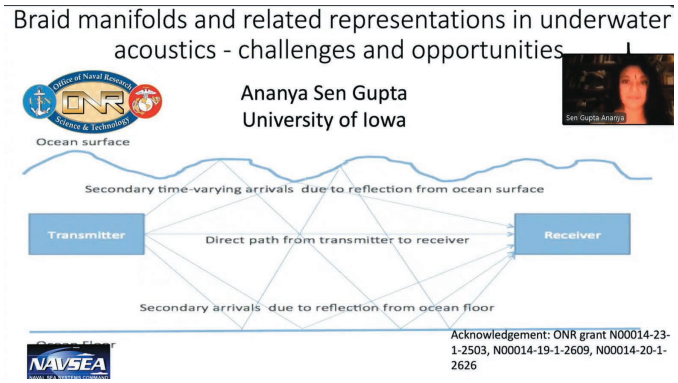


Release of Proceedings (online) of SYMPOL 2025 by Dr. Ananya Sen Gupta, Professor, University of Iowa, USA.

M. H., Chairperson, SYMPOL 2025, provided an overview of the previous SYMPOL conferences and Arun A. Balakrishnan, Coordinator, SYMPOL 2025, proposed the vote of thanks.

Technical Program

The technical program of SYMPOL 2025 commenced with keynote address on "Braid manifolds and related representation in underwater acoustics - challenges and opportunities" by Dr. Ananya Sen Gupta, Professor, University of Iowa, USA. The keynote addresses were followed by an invited talk titled "Seabed Characterization Experiment: A comprehensive Field Study in the New England Mud Patch" by Dr. Gopu R. Potty, Professor, Department of Ocean Engineering, University of Rhode Island, USA. Dr. D. D. Ebenezer, Adjunct Faculty, Department



Inaugural address by Duvvuri Seshagiri, (top) and Keynote Address (online) by Dr. Ananya Sen Gupta (bottom).

Invited talk by Dr. Gopu R. Potty, Professor, Department of Ocean Engineering, University of Rhode Island, USA.

Invited talk by Anupama Jims, Assistant Professor at Chinmaya Vishwa Vidhyapeeth.

Invited talk by Dr. D. D. Ebenezer, Adjunct Faculty, Department of Ship Technology, Cochin University of Science & Technology.

of Ship Technology, Cochin University of Science & Technology delivered a talk on "Optimisation of ship resistance using computational Hydrodynamics." Dr. Felix M. Philip, Associate Professor at Jain (Deemed to be University) and Anupama Jims, Assistant Professor at Chinmaya Vishwa Vidhyapeeth delivered a talk on "AI for Arctic biodiversity monitoring."

Out of the 26 manuscripts submitted for evaluation, 21 papers were accepted for oral presentation and 20 of them were eventually presented. These presentations were organised in the following technical sessions covering a broad-spectrum of topics of interest to the SYMPOL community.

Delegate receiving the presentation certificate from the session chairs.

Conducted workshop on "Underwater Inspection Challenge – Training Program & ROV Competition."

Participants of the Workshop on "Underwater Inspection Challenge – Training Program & ROV Competition."

- Ocean Acoustics
- Artificial Intelligence for Ocean Exploration
- Signal Processing
- Navigation, Communication, Instrumentation & Localization
- SONAR Technology

While the research sessions of SYMPOL spanned two days, the first day was dedicated to a workshop entitled "*Underwater Inspection Challenge – Training Program & ROV Competition*," conducted by Mr. Sunil Paul, Co-Founder and CEO Shristi Robotics and IEEE OES Kerala Chapter.

Announcement

The nineteenth biennial Symposium on Ocean Technology (SYMPOL 2027) is scheduled to be held in the Department of Electronics of the Cochin University of Science and Technology, Kochi, during 08–10 December 2027.

Symposium "Marine AI and Robotics for Innovation and Sustainability" in Abu Dhabi January 21–22

Giulia De Masi, Symposium General Chair, OES AdCom member, IEEE-OES Distinguished Lecturer

The "Marine AI and Robotics for Innovation and Sustainability" (MARIS-AI) has been held at Sorbonne University Abu Dhabi on 21 and 22 January 2026, co-sponsored with IEEE Oceanic Engineering Society supporting the travel of the invited keynote speakers. The symposium was convened as a premier multidisciplinary platform addressing the intersection of artificial intelligence, robotics, and marine conservation. Recognized as an official United Nations Ocean Decade Activity, the event underscored the global imperative for technologically driven solutions in the sustainable management of marine ecosystems.

Organized by Giulia De Masi (General Chair), Francesco Maurelli (Program Chair), Beatriz Garcia (Sustainability Chair), Gérard Biau (Advisor) and Adrian Navarro Moya (Local Chair), the symposium covered a wide range of topics, including Machine Learning and Artificial Intelligence, edge

Francesco Maurelli, the three poster winners (Mohamed El Hanbaly, Mahmoud Said ElMezain, Vahagn Grigoryan), Giulia De Masi and Beatriz Garcia.

AI for real-time monitoring, Autonomous Underwater Vehicles (AUVs), Bio-Inspired Robotics, Soft Robotics, Swarm Robotics, biodiversity assessment, and predictive meteoceanographic modeling. By bridging the gap between engineering innovation and environmental policy, the event successfully established a dialogue on how AI can address critical challenges in ocean health and climate resilience.

The symposium attracted a diverse cohort of around 100 attendees, comprising researchers, local authorities, students, and industry experts. The technical program featured eight keynote addresses from distinguished international experts, three contributed technical talks, and eight students-led research posters. The discussions were further enriched by three thematic panels designed to foster interdisciplinary exchange.

The opening day focused on the state-of-the-art in marine robotics and the integration of scientific data into conservation policy. Keynote addresses were delivered by prominent figures including Prof. Cesare Stefanini, Prof. Fumin Zhang, IEEE-OES Distinguished Lecturer, Prof. Francesco Maurelli, and Prof. Giulia De Masi. The day concluded with a high-level panel discussion titled "Aligning Strategies: Policy, Innovation, and Conservation for a Sustainable Ocean."

The second day shifted focus toward long-term sustainability frameworks and the ethical dimensions of AI. Keynote lectures presented advanced research perspectives from Prof. Jorge Dias, Prof. Federico Renda, Dr. Enrica Zereik, and Prof. Kostas Kyriakopoulos. Two critical panel discussions anchored the afternoon sessions: "AI & Sustainability: A Mid-Decade Assessment" and "Women in AI and Robotics: Challenges and Perspectives."

Looking forward to the next edition!

Group photo from Day 1.

Group photo from Day 2.

WIO Futures 2026

Building a Resilient Ocean Economy through Science, Policy, & Community

18–19 May 2026 | Mauritius

Organized by the Charles Telfair Centre and the Centre of Ocean and Earth Science & Technology (Curtin Mauritius) with support from IEEE-OES.

WIO Futures 2026 brings together researchers, policymakers, and communities to strengthen a resilient and inclusive ocean economy in the ***Western Indian Ocean***.

The conference builds on its successful 2024 edition, focusing on low-cost innovation, capacity development, and sustainable governance aligned with the UN Decade of Ocean Science.

Core Themes

- Ocean Science for Decision-Making
- Effective Governance
- Community-Driven Management

Featuring Distinguished Speakers

Prof. Christine Erbe (Curtin University),
Prof. Christian Bueger (University of Copenhagen),
ECOSUD, Reef Conservation, and more...

For more info visit https://tinyurl.com/wio-futures-2026

AUV 2026, Southampton, UK

1-3, September 2026

Every two years, the IEEE OES AUV Symposium brings the marine robotics community together to share ideas, exchange lessons learned and foster future research and collaboration.

Our focus is on the technologies and applications of autonomous underwater vehicles (AUVs), autonomous surface vessels (ASVs), underwater gliders, and Lagrangian floats, with with most papers centered on field robotics or data collected from real-world deployments.

Contact auv2026@soton.ac.uk

TENCON 2026

Call For Papers

2026 IEEE Region 10 Conference (TENCON)

10 - 13 October | Bali, Indonesia

About

IEEE TENCON is the premier flagship conference of IEEE Region 10 (R10), encompassing 63 Sections, 41 Sub-sections, 918 Chapters, and 115 Affinity Groups across the Asia–Pacific region. The theme for TENCON 2026 is

"Intelligent Systems for a Resilient and Sustainable Society"

This theme underscores the pivotal role of advanced intelligent systems—such as artificial intelligence, the Internet of Things (IoT), and cyber-physical systems—in creating adaptive, efficient, and sustainable infrastructures that support all sectors of society, from urban development to environmental protection and social inclusion.

Full Paper Submission	17 March 2026
Notification of Acceptance	27 June 2026
Final Manuscript Submission	27 July 2026
Early Bird Registration	27 July 2026
Normal Registration	31 August 2026

OES welcomes Ocean-Related Papers for a Special Area on Ocean Technologies in TENCON2026.

ORGANISED BY
THE OES CHAPTERS OF REGION 10

Official Web: https://tencon2026.ieee.id

Organized by: IEEE Indonesia Section | IEEE Region 10

Contact Us tencon2026@ieee.id | tencon2026@gmail.com

International Symposium on Underwater Technology 2027

The University of Tokyo is delighted to welcome international experts for the International Symposium on Underwater Technology (UT27). UT27 will provide you with a thematic umbrella under which attendees will discuss the problems and potential long-term solutions that concern not only the Pacific Rim countries, but the world in general.

Important Dates

Abstracts submission page open: June 1, 2026
Deadline for Abstract Submission: September 18, 2026
Notification of Acceptance: October 23, 2026
Deadline for Full Paper Submission: December 28, 2026
Deadline for Early Registration: January 31, 2027
Symposium Dates: February 28 - March 3, 2027

Organizers

Sponsors:
IEEE Oceanic Engineering Society
IEEE OES Japan Chapter
Institute of Industrial Science (IIS), the University of Tokyo

Technical Co-Sponsors
Earthquake Research Institute, the University of Tokyo
JAMSTEC

For more information about UT27
please contact: UT27 Secretariat: ut27@conferences.jp

A Blast From the Past! . . . Back to Normal . . . Fun Again!

Bob Wernli – Beacon Co-Editor-in-Chief and Photographers Stan Chamberlain & Manu Ignatius

Advancing oceans technology isn't the only key aspect of an OCEANS conference. Friendship and networking keeps us all enthusiastic. COVID was a major impact on that, but as shown before and after below, we're back to "normal."

OCEANS 2018 Kobe

OCEANS 2018 Charleston

OCEANS 2019 Marseille

OCEANS 2019 Seattle

OCEANS 2024 Singapore

OCEANS 2024 Halifax

OCEANS 2025 Brest

OCEANS 2025 Great Lakes

Welcome to
OCEANS 2026 Sanya

"To the Sea, to the Deep"

IEEE Oceanic Engineering Society

May 25-28, 2026 Sanya China

The OCEANS 2026 Sanya conference is for global maritime professionals to learn, innovate and lead in the protection and utilization of the world's largest natural resource – our OCEANS.

VENUE:

Sanya Bay Mangrove Tree Convention Center

IMPORTANT DATES:

- Abstract Submission opens: October 01, 2025
- Deadline for Abstract submission: December 22, 2025
- Call for Tutorials: October 01, 2025
- Tutorials Close: December 15, 2025
- Notification for Authors: February 15, 2026
- Final Paper Submission: March 22, 2026

Join us May 2026 in Sanya, China—where the world's leading experts in marine science, technology, and innovation will gather to explore the conference theme: ***"Deep-Sea Technology, Marine Energy, and Ocean AI."***

For further information please contact the OCEANS 2026 Sanya Technical Program Committee at TechnicalChair@sanya26.oceansconference.org .

IEEE Oceanic Engineering Society

SUMMER SCHOOL

An initiative poised to enrich the academic and professional journey of graduate students and early-career professionals in the realm of oceanic engineering

When: May 18-19, 2026 (Immediately before Sanya OCEANS)

Where: TBA (In the vicinity of the OCEANS conference)

REGISTER AT:
https://tinyurl.com/oes-summer-school-2026

FREE

Stay informed and mark your calendars with our important dates to remember, ensuring you don't miss out on any key events or deadlines.

Abstract Submission Opens: February 23, 2026
Workshop and Tutorials Submission Opens: February 23, 2026
Town Hall Submissions Open: February 23, 2026
Deadline for Abstract Submission: April 20, 2026
Workshop and Tutorials Close: May 11, 2026
Notification for Authors: July 1, 2026
Town Hall Submissions Close: July 20, 2026
Final Paper Submission: August 24, 2026

Visit monterey26.oceansconference.org for more information

IEEE Oceanic Engineering Society

Who's Who in the IEEE OES

Author Maurizio Migliaccio, IEEE Fellow & AdCom-elected member

I was born in 1962 in Napoli, Italy. A city on the sea, see Fig.1

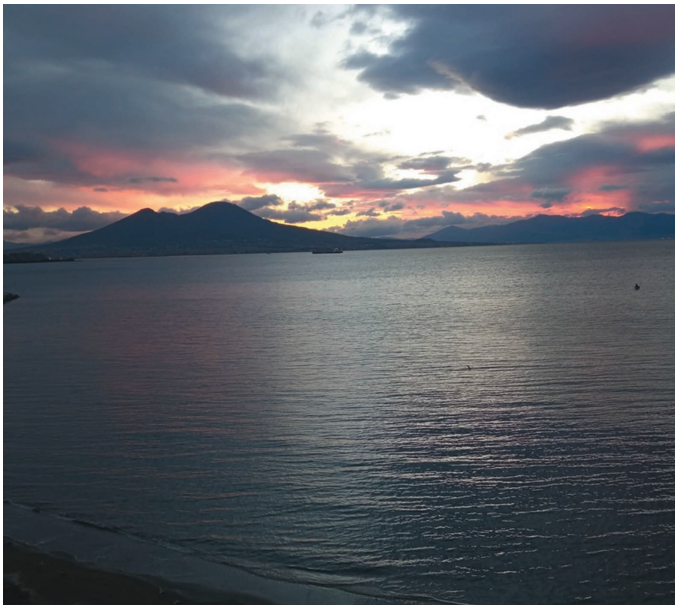


Figure 1. The Bay of Napoli with the Vesuvius on the background.

But actually, my family originates from an island in front of Napoli, Ischia (Fig.2). Pithekoussai, or in Greek Πιθηκοῦσσαι, is the first name of Ischia. In fact, it was founded in 775 B.C. by the Greek and it was among the first Greek colonies in Italy.

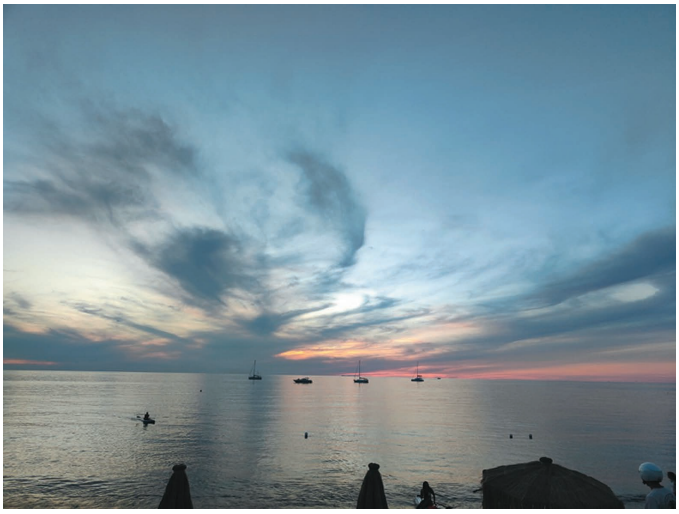


Figure 2. The sea view from Forio in the island of Ischia.

Hence, the true homeland is the island and very marginally the city of Napoli, even because I did not live in Napoli until the University age, but for passion for the Napoli soccer team inherited by an uncle that, when in Ischia, talked to me about the nature, the stars and the mysteries of the nature and of the men. A recent picture of Napoli during the celebration of the fourth national title is shown in Fig.3.

Figure 3. Napoli celebrating the fourth national title of its history.

Of course, blue is the color of the Napoli jersey, namely HEX Color: #003c82; RGB: (0 60 130).

In the early years of 70's the oil company Shell produced 16 commemorative coins to celebrate the success of Apollo 11 in 1969. Even in Italy all kids of my age were allowed to stay awake late at night to see the moon landing and therefore such coins were very popular. They marked different moments of the man in flight, from air to space, including also the Sputnik 1 in 1957.

Although in Europe they were mainly distributed in Shell service stations across countries Belgium, France, the Netherlands, Germany, and the UK. Because of a large US community in the area where I lived, such coins were also available to me, see Fig.4. Such coins were prophetic in my life!

Figure 4. The Shell token about the Apollo 11.

In 1987 I graduated in Electronic Engineering at Università di Napoli Federico II and I had to chance to meet a professor very much involved with NASA-JPL Caltech and that was initiating a new research activity regarding satellite Synthetic Aperture Radar (SAR) remote sensing. His name is Prof. Giorgio Franceschetti and he was the first student of Prof. Gaetano Latmiral, see Fig.5, that spent almost all his academic life at Istituto Universitario Navale (IUN). Prof. Latmiral was the founder of the electromagnetic school in the south of Italy after his radar contributes for marine surveillance during military life. Prof. Latmiral was also a profound support of a scientific culture accompanied by humanistic culture.

Figure 5. Prof. Gaetano Latmiral (left) and myself at national electromagnetic Conference Rinem'90 in Capri.

After the World War II the IUN was a special Academia that collected non-local Professors to promote new interdisciplinary studies for the sea understanding, electromagnetism and radar were among them.

In 1990 I was the winner of a University researcher position at IUN within the electromagnetic group directed by Prof. Paolo Corona, the follower of Latmiral at IUN, and I had to move from SAR models focused to volcanic applications to marine applications.

In 1998 I was a position of Associate Professor at Università di Cagliari. During these years I carried on my interests in satellite microwave remote sensing broadening my studies to large-scale sensors such as scatterometer and microwave radiometers. Within these years I was Principal Investigator of an Italian Space Agency (ASI) two-year project regarding electromagnetic modelling of wind-roughened marine scenarios, marine wind field estimation by scatterometer measurements, and their impact in oceanographic circulation modelling.

Such three-units scientific projects were highly appreciated by ASI and were also the chance to personally establish a long-term relation with the Agency.

Few years later big changes occurred; I moved back to Napoli to the Università di Napoli Parthenope and the ASI changed President that decided that SAR was the only sensor of interest and marine applications were no more supported expect oil spill monitoring (a much longer list was made about land hazards).

Although it was a very critical moment for research fundings I came across important new studies about SAR polarimetry and started some first experiments about using NASA SIR-C costly data. At the same time, I scientifically lead an ASI proposal for a study about SAR oil spill monitoring and transportation forecast in 2004. The proposal was ranked as second, so not supported by ASI, with a difference in evaluation with the winner of 3/100 points!

However, the proposal had the benefit to promote important partnerships, also international, and to sketch new ideas. The most relevant one was about the use of polarimetric SAR measurements. It is important saying that at that time very few civil missions had the polarimetric SAR mode.

Although we did not get any funding, I decided to carry on such a study and some first papers were published on SAR oil spill observation.

Along with my two talented Ph.D students, Attilio Gambardella, Ph.D student at Università di Cagliari and Ferdinando Nunziata, Ph.D student at Università di Napoli Parthenope, I was able to present at ESA-ESRIN Frascati no-fee SeaSAR 2006 Conference the paper entitled "Oil Spill Observation by Means of Polarimetric SAR Data." It was a great success that was backed by Yves Desnos at ESA and Tony Freeman at NASA-JPL.

The study was unsupported by a project, and the corresponding journal paper was submitted to a journal with no publication fee that was famous also for its long delays in publication! In 2009 the paper "On the Co-Polarized Phase Difference for Oil Spill Observation," was published on *International Journal of Remote Sensing*. Because of this, chronologically, it is not the first SAR oil spill full paper that was published by me, but it was the first study that clearly demonstrated the superiority of the physical approach for SAR oil spill monitoring!

Because of this study, and other studies regarding the monitoring of man-made structures at sea, I met NOAA people that in 2010, after the Deepwater Horizon accident in the Gulf of Mexico, asked for support.

The real operational issue was two-fold, apparently only C-band SAR were useful in oil spill monitoring, this was confirmed in our study published on *International Journal of Remote Sensing,* and the classical contrast – morphological detection approaches were useless since the oil spill was larger than the SAR image frame!

At that time, we had done some brand new studies with the Japanese Space Agency showing that also L-band SAR is useful once that proper measurement quality is preserved, so we asked NOAA to take benefit of NASA-JPL UAVSAR measurements to monitor the Deepwater Horizon oil spill. We not only demonstrated that such measurements were useful, but since the data quality was much better than a SAR satellite sensor, also a fine oil classification was possible.

In 2010-12 I was invited to lecture about at NASA-JPL, NOAA-STAR, and NOVA Southeastern University in Fort Lauderdale, FL, USA within the inauguration ceremony of the

Figure 6. Myself lecturing about SAR remote sensing of the oceans.

federal funded Oceanographic Center and I had the chance to meet and talk with Al Gore.

In the years, I was invited to have keynotes about, see Fig. 6 for a recent event., in Europe, Asia and America.

I cannot avoid mentioning another important mentor that stimulated, supported and nominated me to the IEEE Fellow grade, Prof. Wolfgang-Martin Boerner at University of Illinois at Chicago, who passed away just one year after I was elevated, resulting the last IEEE Fellow nominated by him.

On 22 June 2017 I received the Fellow Award "For contributions to marine and maritime polarimetric synthetic aperture radar" during IEEE OES OCEANS'17 in Aberdeen, Scotland, UK, the city that first hosted James Clerk Maxwell in his academic career.

To end this contribute I take benefit of an ancient Greek prophecy that must not be forgotten: When, on his way to Thebes, Oedipius encountered the Sphinx, his answer to its riddle was: Man. That simple word destroyed the monster. We have many monsters to destroy. Let us think of the answer of Oedipius (adapted by the George Seferis, Nobel laureate speech).

NOMINATE Candidates for Election to OES AdCom

for the 3-year Term 2027 January 1–2029 December 31

IEEE OES Nominations and Appointments Committee

The IEEE OCEANIC ENGINEERING SOCIETY (IEEE OES) is governed by an Administrative Committee (AdCom) of 18 members. As specified in the Bylaws of the Society, 1/3 of the AdCom is renewed each year, hence six members will be elected this year to serve a 3-year term (1/1/2027–12/31/2029).

Any OES Member in good standing may self-nominate or nominate an eligible OES Member who will be able and willing to serve if elected. AdCom members who have completed one term are eligible to run for a second 3-year term, but may not serve more than 2 consecutive terms. They become eligible again after a 1-year gap.

Each year, the OES Nominations and Appointments Committee prepares a slate of up to twelve qualified candidates from all the nominations received. The six candidates who receive the highest number of votes cast by the entire OES membership will serve their 3-year term on AdCom starting on January 1, 2027.

Per IEEE Policy 13.7, the nomination Packet should include a Letter of Nomination accompanied by the candidate's biographical sketch, position statement, and photograph taken within the last 2 years. The biography (up to 350 words) should describe the nominee's relevant volunteering experience with emphasis on OES and/or IEEE activities and responsibilities. The position statement (150-200 words) should describe the nominee's plans to contribute to OES activities and to help run the Society if elected.

Elected AdCom members should expect:

- To represent the OES membership by attending AdCom meetings, reviewing and accepting reports, and making decisions on Society policy and financial matters
- To participate in administrative activities required to run the society (tasks will be assigned, including active participation in standing, operational, and ad hoc committees)
- To spend two or more hours per week on average on communications (email, phone, virtual meetings) which may not be evenly distributed throughout the year
- To attend four to six teleconferences, and travel to at least one or two in person AdCom meeting per year. In-person meetings are typically two days in duration. Travel expenses incurred to attend in person meetings are reimbursed by OES.

Each candidate must agree to adhere to the IEEE Policies and guidelines (specifically Policies 9.28, 13, 14). Therefore. while preparing their nomination packets, candidates are encouraged to become familiar with the IEEE and OES governing documents available at (https://www.ieee.org/about/corporate/governance), and (https://ieeeoes.org/for-volunteers/).

OES AdCom Meeting 2025 September.

Exceptionally for the 2026 AdCom nominations, AdCom has approved an extension of the deadlines specified in the OES Bylaws to the following schedule:

- General nominations will close on April 30, 2026
- Initial slate of 12 candidates completed by May 15, 2026
- Nominations by petition will close on May 31, 2026.
- Final slate of 12 candidates completed by June 15, 2026.

Please submit your nomination packets via email by April 30, 2026, to the Chair of the Nominations and Appointment Committee (past-president@ieeeoes.org).

The final slate of 12 candidates will be vetted by the IEEE Legal & Compliance team, and the elections will be conducted by IEEE staff.

AdCom Commitment

- Debate and vote on OES matters during AdCom meetings (online and in person)
- Participate actively in work to run the Society (2h+ per week on average)
- 4-6 Teleconferences, 1-2 in-person meetings per year

Welcome New and Reinstated Members

From 7 November 2025 through 12 February
Total: 135 (incl 70 student: 32 graduate & 38 student)

Australia
Yixuan Xie

Brazil
Sarah Ramos Marques de Almeida
Lara Melo Castro
Jamilli da Silva Fernandes
Luiz Henrique Damazio Leite
Mauro Goncalves Bueno

Canada
Ahmed Wagdy Shaban
Chan-Wang Park

Chile
Marco Antonio Acosta
Maximiliano Vega

China
Xunbin Deng
Yingbo Huang
Jing Liu
Jiapan Wei
Weikai Xu
Chenyang Xue
Geng Suo
Yuexin Wang
Zhiquan Liu
Xunbin Deng
Yining Liu
Jianping Li
Songzuo Liu
Lu Ma
Jianguo Huang

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Karen Torres Sanchez
Raul Alfonso Bayter Lara
Mario Jose Celedon Vergara
Jesus Cordero
Juandavid Iriarte

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Athira Ajay
M Abdul Akbar
Abhijith Arun
Anaswar B R
Ajeesh C
Dhanathraj C R
Stalin ES
Shanmukha Rao Ganta
Kiran Govind
Nivetha K
Sreelakshmi K V
Sreejith Kunnamkulangara
Karthka M
Sona Monichen
Fousal N M
Muhammaed Raiyan Najeem
Sreeharsh Nandakumar
Rubin Jose Peter
Dhanyamol Pottammal
Nitin Prakash
Rahul Radhakrishnan
Divya Shashikumar
Della Thomas
Dishant Das
Nabajyoti Nath
Roland Singh
Velusudha N T
Janani Nandhakumar Nandhakumar
Balaji P
Roshan Prabhakaran
Prabha R
Sriram R
Thirumalai Vaasan R
Harini S
Subash S
Diana Earshia V
Hariharan V
Ananda Ramadass Gidugu
Mohammed Ashick R
Lincy Jancy S

Rajesh Siva
Nidhi Varshney
Bishwajit Chakraborty

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Ayu Laksmi Padmadewi
Muhammad I Akbar

Israel
Michal Levin
Arup Kumar Sahoo
Gershon Ben Arie

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Benedetto Allotta
Mauro Biagi

Japan
Shin Aoi
Akihisa Ushirokawa

Malaysia
Aimi Shazwani Ghazali

Mexico
Jose Hermilo Ceron Guerrero

Netherlands
Zacharias Panagiotis Oikonomou

Norway
Cathryn Primrose-Mathisen

Pakistan
Daim Ali
Muhammad Ibrar-ul-Haque
Moona Kanwal
Tauseef Mubeen
Effa Siddiqui

Philippines
Jason Garaygay Khaw

Poland
Michal Cichowicz
Andrzej Gab
Mariusz Specht

Saudi Arabia
Hamada Ahmed Hamada Esmaiel

Singapore
Nurul Aqeelah Mohd Faisal

Switzerland
Carlo Guarnieri

Tunisia
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Although digital versions of the Beacon newsletter are available on the OES website (https://ieeeoes.org/publications/oes-beacon/) and IEEE Resource Center, only OES members can receive printed copies of each Beacon.

Here is how to get your paper copies of the OES Beacon in the future. Introduction is also on the above OES website.

1) OES members need to contact the IEEE Contact Center at 1-800-678-4333 or 1-732-562-6785- Monday thru Friday- 8:00 AM–4:30 PM EST (https://www.ieee.org/about/contact)
2) Or . . . send the IEEE Contact Center an email at contactcenter@ieee.org with your name, IEEE member number and your request to receive your paper copy of the OES Beacon.

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UNIZG SBC Activities Report

Juraj Obradović, Igor Kvasić, Vladimir Slošić, Luka Mandić, Matko Batoš, Dorian Možnik

LABUST at the 17th Breaking the Surface Workshop in Limassol

Members of the Laboratory for Underwater Systems and Technologies (LABUST), University of Zagreb Faculty of Electrical Engineering and Computing (UNIZG-FER), actively participated in the **17th International Interdisciplinary Field Workshop of Maritime Robotics and Applications – Breaking the Surface (BtS)**, held from 9–16 November 2025 in Limassol, Cyprus.

The workshop was organized by University of Zagreb Faculty of Electrical Engineering and Computing (UNIZG-FER, LABUST) in cooperation with Cyprus Marine and Maritime Institute (CMMI), and supported by the projects CoE MARBLE, UWIN-LABUST, SeaTecHub, uBlueTec, and the IEEE OES UNIZG Student Branch Chapter.

BtS once again provided a dynamic platform for collaboration between academia, industry, and research institutions in the field of maritime robotics. The 2025 edition featured a rich and technically diverse program consisting of 16 lectures, 8 live demonstrations, and 7 hands-on tutorials, covering topics such as underwater sensing, autonomous systems, marine perception, acoustic communication, and multi-domain robotic operations.

LABUST members actively contributed to discussions, technical exchanges, and field activities, engaging with international participants in both theoretical and practical sessions.

A highlight of this year's program was the Detection of Underwater Acoustic Signals Challenge, which was organized for the fourth consecutive year, following successful editions in 2022, 2023, and 2024. The challenge once again attracted strong interest and enthusiastic participation. Attendees described it as both technically demanding and highly engaging, emphasizing its value in bridging theoretical signal processing concepts with realistic underwater operational constraints.

Opening ceremony of the 17th International Interdisciplinary Field Workshop Breaking the Surface (BtS 2025) in Limassol, Cyprus.

Over five days, participants attended presentations from various research groups and companies showcasing their latest developments and applications in maritime robotics.

The program also included live demonstrations and hands-on tutorials, providing participants with practical insight into maritime robotic systems and technologies.

The 2025 BtS workshop reaffirmed its role as an important meeting point for researchers, engineers, and students working in marine and underwater technologies. Beyond the formal program, the event fostered networking, idea exchange, and new collaborations within the international maritime robotics community.

LABUST members are already looking forward to the next edition of Breaking the Surface, which will take place in Croatia in 2026, continuing the tradition of advancing innovation and cooperation in maritime robotics and applications.

St. Nicholas Day Celebration at LABUST

On **Saturday, 6 December, 2025—St. Nicholas Day**, a cherished holiday in Croatia honoring the patron saint of children with traditions of gift-giving and joy—employees from LABUST and CoE MARBLE (Centre of Excellence in Maritime Robotics and Technologies for Sustainable Blue Economy) came together for a heartwarming team-building event at the LABUST lab.

St. Nicholas day at LABUST.

The gathering blended holiday cheer with close-knit community fostered by these organizations.

Employees' childern had a lot of fun with lab equipment - pool area was transformed into a splash zone of learning and play, the event being the perfect blend of tradition and tech—St. Nicholas would approve! :)

Winter Field Experiment in the Šibenik Area: Deep-Sea Testing at 30 m

On 10 December 2025, part of our team conducted a field experiment in the Šibenik area to evaluate an underwater sensing setup under real sea conditions. The primary objective was to test system integration, deployment procedures, and operational reliability at depth. Field conditions were demanding: the sea temperature was approximately 8 °C, and the experiment required a dive to around 30 m.

Despite the winter environment and limited bottom time due to temperature constraints, the mission was successfully completed and all planned objectives were achieved. During the dive, the team carefully deployed the underwater instrument package (shown in the photos), verified its mechanical stability, confirmed proper positioning, and assessed sensor performance in situ. Particular attention was given to communication links, power stability, and data acquisition to ensure consistent operation at depth.

Winter Field Experiment in the Šibenik Area: Deep-Sea Testing at 30 m.

Following retrieval, preliminary checks confirmed that the system operated as expected throughout the deployment, validating both the hardware configuration and the deployment procedure. The results demonstrate the setup's readiness for future experimental campaigns and extended sea trials. While the winter conditions provided a rigorous stress test for the system, the team is hopeful that the next experiment will take place under slightly less demanding weather and sea conditions.

LABUST at the Summer School on Robust Model Predictive Control

LABUST member Luka Mandić attended the workshop entitled "Summer School on Robust Model Predictive Control with CasADi," held from 15–19 September 2025 in Freiburg, Germany. The five-day intensive program focused on both the theoretical foundations and state-of-the-art developments in linear and nonlinear robust Model Predictive Control (MPC).

The program combined lectures with hands-on coding sessions, enabling participants to translate theoretical concepts into working implementations. Through structured exercises and guided examples, attendees developed and tested robust MPC schemes for dynamic systems, gaining insight into computational challenges, real-time feasibility, and controller tuning.

Participation in this summer school provided valuable knowledge directly applicable to advanced control problems in marine and robotic systems, further strengthening LABUST's expertise in robust control and optimization-based autonomy.

Summer School on Robust Model Predictive Control.

LABUST Contributions to CAMS 2025 and International Summer School in Wuhan

Asst. Prof. Đula Nađ participated in the 16th IFAC Conference on Control Applications in Marine Systems, Robotics and Vehicles (CAMS 2025), held in Wuhan, China, August 25–28, 2025. In the conference, he presented two papers:

International Summer School in Wuhan, team.

1) System Architecture and Implementation of a Path-Planning Module for Autonomous Vessels (I), with collaborators Enio Krizman and Nadir Kapetanović.
2) Design and Development of a Boat-Mountable Sensor Rack for Maritime Perception and Data Acquisition, co-authored with Juraj Obradović, Matej Fabijanić, Josip Lovrić, Nadir Kapetanović, Fausto Ferreira, and Nikola Mišković.

By showcasing these contributions, he highlighted ongoing advances in path-planning and maritime perception technologies, reinforcing UNIZG-FER's strong presence in the international marine robotics research community. He also held a lecture on Underwater human-robot interaction at the international summer school on Marine Robotics held as part of HUST Global summer school 2025 event.

SECOND edition for the IEEE OES Ocean Challenge

Francesco Maurelli and Giulia De Masi, OES AdCom member

SECOND edition for the IEEE OES Ocean Challenge!!!
Submit your proposal by 2026/03/20!!

Are you a student or young professional passionate about ocean conservation and innovation?

Join us in shaping the future of our planet by participating in the IEEE OES Ocean Challenge. Let's work together to develop groundbreaking solutions to address the UN Decade of Ocean Science goals.

Visit https://oceanchallenge.xyz/ to learn more and submit your ideas!

This is a challenge dedicated to teams of students and young professionals to take on new innovative ideas and technical solutions to address at least one of the ten OD challenges (oceandecade.org).

The "Ocean Challenge" will be modelled as a two-stage global competition.

1) In the first phase, teams will present their ideas in a written report and a video. A panel of experts from Academia and Industry, including the OES Technical Committees, will evaluate the proposals and select 5 teams for the second phase.
2) The seed funding will be used to implement the proposed solution.

Representatives of the winning team will then be invited to present their solution to the IEEE OES OCEANS 2026 Sanya conference!

Timeline:

- FIRST PHASE: teams will submit written proposals and videos outlining their innovative solutions. SUBMIT YOUR PROPOSAL BY 2026/03/20!!!
- A panel of industry and academic experts, including OES Technical Committees, will select the top five teams to advance to the second phase. Communication by 2026/03/30
- The 5 finalists will receive seed funding to implement a portion of their proposed solution and move to the second phase
- SECOND PHASE: realize your product and prepare a video and a presentation of your innovative solution. SUBMIT YOUR FINAL PRODUCT by 2026/04/20
- The winners will present their work at the prestigious IEEE OES OCEANS 2026 Sanya conference!

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