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4th IEEE LCN Special Track on Maritime Communication and Security (MarCaS 2026) Call for Papers

The ongoing digital transformation in the maritime transportation system (MTS) has the potential to eventually pave the way for autonomous, smart, and sustainable shipping and to further increase its efficiency. The connection of ships to the Internet, ship-to-shore communication required by fleet operation centers, satellite navigation and radio-based situational awareness systems, shipboard communications, and maritime cloud services are of particular interest of the planned special track.

However, given the importance of MTS on the one hand, and the growing threat of cyberattacks and malicious electromagnetic activity on the other, protecting our MTS and its communication systems must be a top priority not only from an economic view, but also from a social and political perspective. Backlogs at ports during the pandemic in 2020, EVER GIVEN's Suez Canal obstruction in March 2021, and attacks on merchant ships off the Yemeni coast in the Red Sea by Houthi rebels starting in October 2024 have made the world community acutely aware of how vulnerable our global supply chains are. In addition to merchant ships and shipping lanes, physical infrastructure that needs to be secured also includes port facilities, and passenger and cargo terminals, as well as related infrastructures that include oil and gas platforms, offshore wind farms, and subsea pipelines and cables. Moreover, fueled by the current geopolitical situation, increased state-level and military-directed attacks from cyber and electromagnetic space have been observed, raising concerns and forcing responsible authorities to act. Finally, the attacks on gas pipelines in the Baltic Sea, which occurred in September 2022, highlight the need for more networked monitoring and surveillance systems, both on the surface and underwater.



The **MarCaS special track** at LCN will help bring together research groups working at the intersection of maritime applications, communications technologies, and protocols, as well as information technology and network security, to share and discuss ideas, novel solutions, challenges, and recent developments. The special track organizers solicit high quality and previously unpublished work in the maritime domain and the research field of the LCN to stimulate novel approaches for a safer and more resilient shipping.

https://garykessler.net/lcn_marcas/

The **topics of interest** include, but are not limited to:

- Maritime IT/OT systems, architectures, and communication technologies
- Multi-sensor networks and Cyber-Physical Systems
- Underwater communication, networks, and surveillance
- On-shore and intermodal communication systems
- Maritime cybersecurity and vulnerability analysis
- Safe and secure navigation, GPS interference technique, and GNSS-independent localization
- AIS and radar protocol security
- Security assessments, threat analyses, and cyber risk management
- (Open source) test and simulation environments and maritime datasets
- Autonomous systems and shipping
- Smart ships, smart ports, and maritime IoT technologies
- Maritime (security) education and training
- Machine learning / artificial intelligence
- Maritime blockchain use cases

Submission guidelines:

- Paper submissions may be up to **six (6) pages** **excluding bibliography**,
- formatted in **two-column, 10pt font IEEE format**,
- must be prepared for a **double-blind** review process,
- and must describe original, previously unpublished research and developments, not currently under review by another conference, workshop, or journal.
- Detailed instructions can be found on the [webpage](#).

Important dates:

- Paper registration: **May 25, June 15, 2026** (AoE)
- Paper submission: **June 01, June 15, 2026** (AoE)
- Acceptance notification: **August 10, 2026** (AoE)
- Camera-ready paper due: **September 07, 2026** (AoE)

MarCaS 2026 will be a special track of the 51st Annual IEEE Conference on Local Computer Networks (IEEE LCN).

Accepted papers will be included in the conference proceeding published in the IEEE Xplore Digital Library, showing their affiliation with IEEE LCN 2026.

