



2nd IEEE LCN Special Track on Maritime Communication and Security (MarCaS 2024) Call for Papers

The ongoing digital transformation of the worldwide maritime transportation system (MTS) is moving from previously isolated legacy systems to fully interconnected, globally available, and remotely controllable maritime systems. This transformation has a huge impact on most global supply chains that depend existentially upon maritime. Ultimately, it has also the potential to pave the way for autonomous, smart, and green shipping, improving the efficiency and sustainability of the MTS.

However, in light of the growing threat of cyberattacks and malicious electromagnetic activities, protecting our maritime transportation and communication systems must be a top priority not only from an economic view, but also from a social and political perspective. The Ever Given's Suez Canal obstruction in March 2021 has made the world community noticeably aware of how fragile and vulnerable our global supply chains are. But even beyond merchant ships and shipping lanes, port facilities and cargo terminals, as well as many other infrastructures such as oil and gas platforms, offshore wind farms, and subsea pipelines and cables, must be secured, especially in view of the current geopolitical conflicts. The recent attacks on gas pipelines in the Baltic Sea and the attacks on merchant ships off the Yemeni coast in the Red Sea by the Houthi militia further demonstrate the need for more networked surveillance systems in this respect.



The LCN's **MarCaS 2024 Special Track** is the continuation of the successful MarCaS workshop from the previous year. Its scope are innovations from research necessary for the digital transformation, focusing on maritime information technology (IT) and operational technology (OT) on board vessels and maritime industrial control systems, but also on shore at ports, terminals, and other maritime infrastructures. Maritime communication, satellite navigation, radio-based situational awareness systems, and maritime cloud services are of particular interest of MarCaS, combined with novel cybersecurity approaches for a safer and more resilient MTS.

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** ([Contact us](#) if you need more pages),
- 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: **April 26, 2024**
- Paper submission: **May 03, 2024**
- Acceptance notification: **June 28, 2024**
- Camera-ready paper due: **July 25, 2024**

MarCaS 2024 will be a special track of the 49th 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 2024.

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