The 50th IEEE Conference on Local Computer Networks (LCN)
October 14-16, 2025, Sydney, Australia

3rd IEEE LCN Special Track on Maritime Communication and Security (MarCaS 2025)
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 sabotage of gas pipelines in the Baltic Sea in 2022, the attacks on merchant ships off the Yemeni coast in the Red Sea by the Houthi militia in 2023 and the recent and increasing destruction of submarine cables clearly highlight the need for more networked surveillance systems.

MarCaS

The **LCN's MarCaS 2025 Special Track** is the continuation of the successful MarCaS workshop from the previous years. 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.

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: ~~**April 20, 2025**~~ **May 11, 2025** (AoE)
- Paper submission: ~~**April 27, 2025**~~ **May 18, 2025** (AoE)
- Acceptance notification: **July 1, 2025** (AoE)
- Camera-ready paper due: **August 1, 2025** (AoE)

MarCaS 2025 will be a special track of the 50th 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 2025.