



Welcome to the  
**2nd IEEE LCN Special Track on  
Maritime Communication and Security**

Jan Bauer

Fraunhofer FKIE  
Germany

Ulku Clark

University of North Carolina  
USA

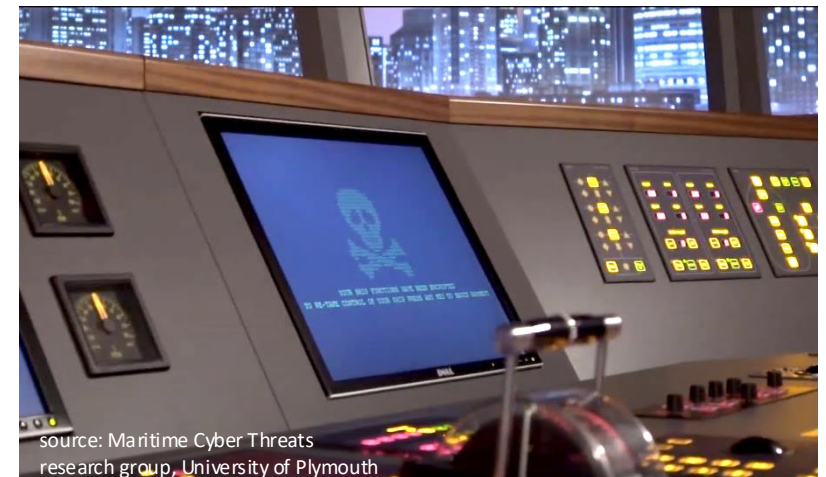
Gary C. Kessler

Gary Kessler Associates  
USA

10 October 2024

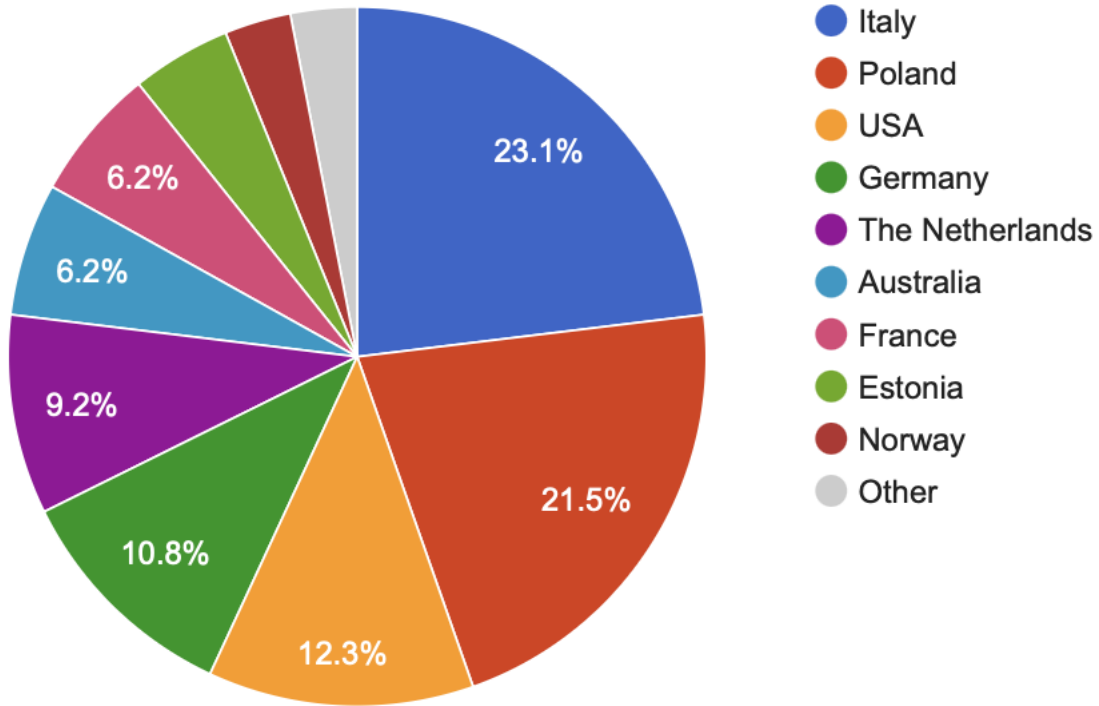
# Motivation & Scope

- Importance of the maritime domain
    - maritime transportation system
    - critical maritime infrastructures
  - Maritime practice
    - legacy Information and Operational Technology (IT/OT)
    - legacy communication protocols and technologies
    - lack of protection against cyber threats
  - Future trends
    - uncrewed, remotely operated vessels
    - underwater applications
- Reliable and secure communication is needed!

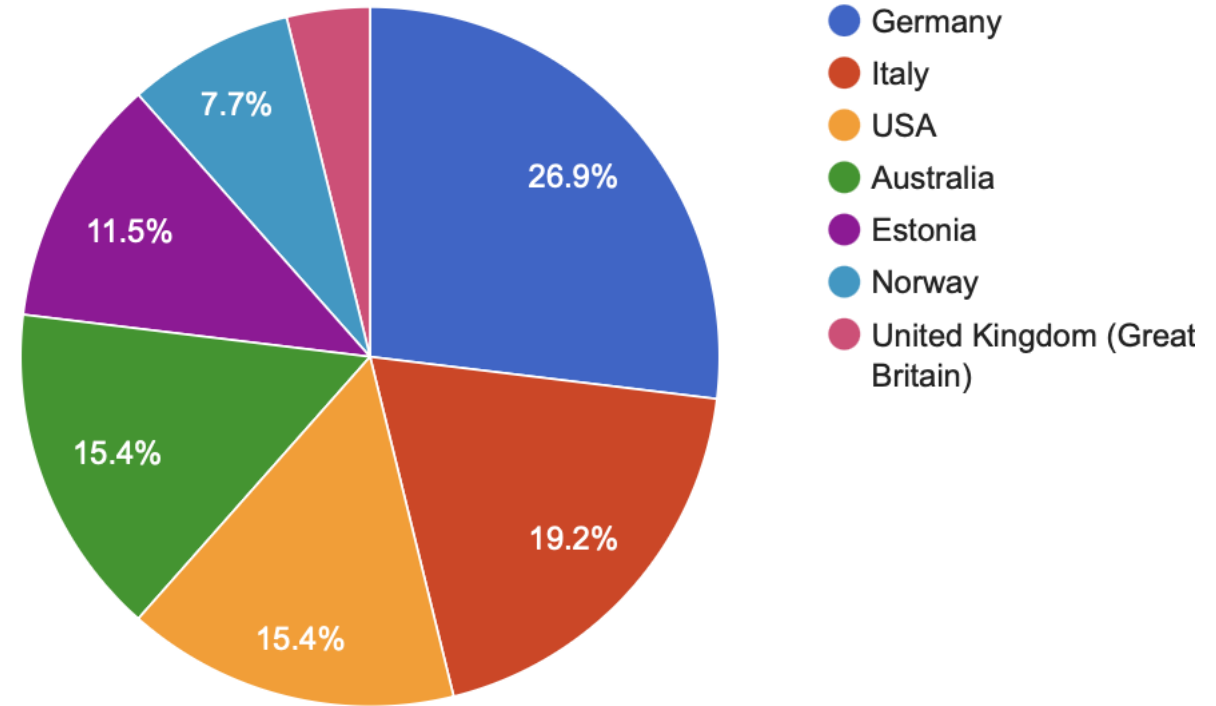


# Authors by Country

Submissions (#16)



Accepted papers (#8)



# Papers by Topics

Communication

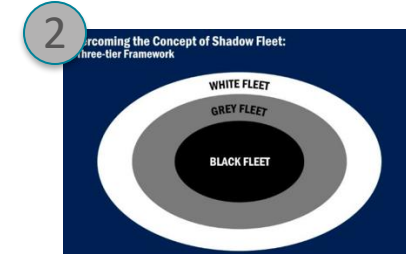
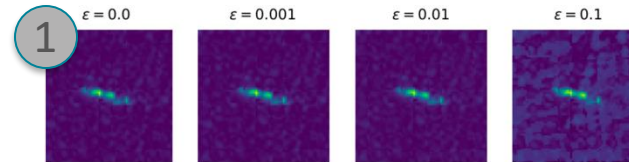
Topic	Count
Maritime IT/OT systems, architectures, and communication technologies	7
Multi-sensor networks and Cyber-Physical Systems	2
Underwater communication, networks, and surveillance	6
On-shore and intermodal communication systems	1
Maritime cybersecurity and vulnerability analysis	10
Safe and secure navigation, GPS interference technique, and GNSS-independent localization	1
AIS and radar protocol security	5
Security assessments, threat analyses, and cyber risk management	6
(Open source) test and simulation environments and maritime datasets	1
Autonomous systems and shipping	1
Smart ships, smart ports, and maritime IoT technologies	2
Maritime (security) education and training	2
Machine learning / artificial intelligence	4
Maritime blockchain use cases	0

Security

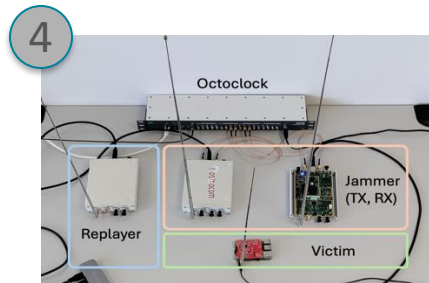
# MarCaS Program

## Session 1 (13:30-15:00)

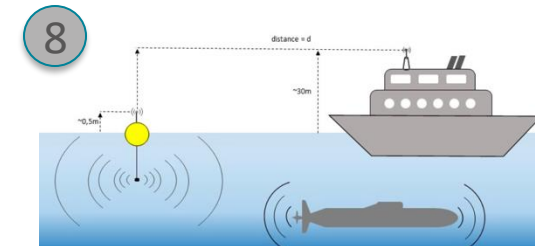
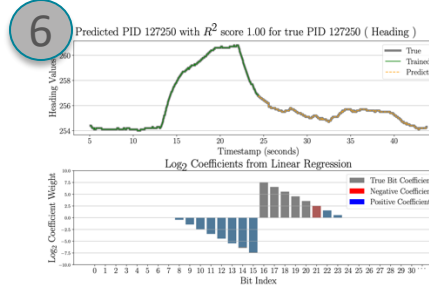
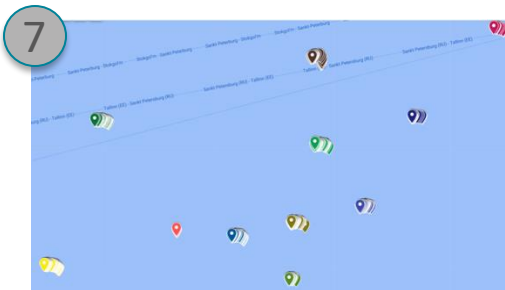
- 0 **Invited Talk: The Devil is in the Detail**  
Andrew Tierney, Pen Test Partners, UK



## Session 2 (15:30-17:00)



## Session 3 (17:15-18:00)





# Thank You!



- LCN Conference
- Special Tracks Co-Chairs
- Technical Program Committee
- MarCaS Authors
- Audience

## MarCaS TPC

- Hosam Alamleh, University of North Carolina Wilmington, USA
- Alessandro Cantelli-Forti, RaSS National Laboratory - CNIT, Italy
- Brien Croteau, U.S. Naval Academy, USA
- Bilge Karabacak, University of North Carolina Wilmington, USA
- Giacomo Longo, University of Genoa, Italy
- Stephen McCombie, NHL Stenden University, The Netherlands
- Tyson Meadors, Fathom5, USA
- Aybars Oruc, Cyber Onboard, Turkey
- Giangiuseppe Pili, James Madison University, USA and RUSI, UK
- Jeroen Pijpker, NHL Stenden University, The Netherlands
- Kimberly Tam, University of Plymouth, UK