Americas Conference on Information Systems (AMCIS),
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https://amcis2022.aisconferences.org/

Mini-Track Title: Maritime Informatics and Sustainability
Track: Green IS and Sustainability (SIG Green)

Mini-Track description

Maritime Informatics studies the application of information systems to increasing the efficiency, safety, and ecological sustainability of the world's shipping industry. According to the International Maritime Organization (IMO), international shipping moves about 90 per cent of global trade and is the most efficient and cost-effective method for the international transportation of most goods. Hence, shipping is critical to future sustainable global economic growth.

The industry can be characterized as many independent actors who engage in episodic tight coupling. It has, however, been a late starter to digitization, possibly because of the long history of autonomy and the lack of inexpensive high bandwidth communication when on the ocean. A lack of information sharing impedes collaboration and reduces efficiency and safety. As a result, there are many opportunities to apply information systems theory and knowledge to a critical global industry.

Call for papers

Maritime Informatics studies the application of information systems to increasing the efficiency, safety, and ecological sustainability of the world's shipping industry. According to the International Maritime Organization (IMO), international shipping moves about 90 per cent of global trade and is the most efficient and cost-effective method for the international

transportation of most goods. Because of its efficiency, shipping is critical to future sustainable global economic growth. Thus, the advancement of sustainable shipping and maritime development is a major priority for IMO, which is the UN agency responsible for global shipping standards, safety, security, and environmental impact.

Shipping is an old industry, starting with river trading on the Euphrates at the beginning of agricultural development. A ship's captain has considerable autonomy, and the industry can be characterized as many independent actors (e.g., ship captain, port authority, terminal operator, tug master, pilot, and shipping agent) who engage in episodic tight coupling (e.g., a pilot meeting a boat and guiding it into harbor) for mutual benefit. The shipping industry has been a late starter to digitization, possibly because of the long history of high autonomy and the lack of inexpensive high bandwidth communication when on the ocean. The lack of information sharing impedes collaboration and reduces efficiency, safety, and ecological sustainability.

The mini-track seeks submissions that address some of the following topics or others related to the general notion of Maritime Informatics as defined in this call:

- Design of an information sharing system for the shipping industry that enhances coordination and planning
- Design of an information sharing system for an ecosystem constrained by a culture of limited cooperation
- Design of an information sharing system for the shipping industry that enhances efficiency, safety, and ecological sustainability
- Appropriate standards for data sharing within the shipping ecosystems
- The role of real-time digital data streams in enhancing shipping efficiency
- The role of information systems in increasing the efficiency of episodic tight coupling
- The digitization by the shipping industry of its natural, human, and economic capital to improve efficiency, safety, and ecological sustainability
- The contribution of information systems to effective sea traffic management
- Theoretical basis for informing Maritime Informatics
- Prior research for accelerating the development of Maritime Informatics
- Application of information systems in other domains for inspiring the adoption of digitization in the maritime sector
- Intelligent processing of marine Automatic Identification System (AIS) data

- Intelligent processing of environmental monitoring data from sensors (on buoys or UAVs)
- Intelligent processing of data related to the automatic tracking of cargo, machinery, and people in a smart port environment
- Extracting value and combining marine related data streams to create additional value
- Ensuring the integrity of the marine related data
- Data cleaning, validation, and reconstruction of faulty/missing marine related data
- Fusion of all the information coming from the various marine related sources
- Dealing with uncertainty and conflicting information from marine related sources
- Extracting useful information out of the marine related data based on user requirements
- Services that support organizational decision-making marine related activities (e.g., scheduling allocation of ships to port services, stowage planning)

Papers are due March 1st, 2022

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