CALL FOR PAPERS

A Special Issue on ‘Engineering Informatics in Port Operations and Logistics’

Serving as a multi-modal hub between the sea and land transportations, sea-ports have secured a crucial position in global trading and international business. Generally speaking, a port has multiple operational objectives. Owing to the intensifying competition amongst geographically-distributed ports, the pressure of improving quality of service, reducing the service cost and increasing the cargo throughput keeps on growing. Therefore, a port should strive to minimize the vessel turnaround time and hence to maximize the terminal throughput. Basically, this can be achieved by efficient scheduling of cranes, rational allocation of storage space and berth, and effective reduction of terminal traffic jam rate, etc.

Port operations comprise an intricate set of container or cargo handling processes. Each node in the container or cargo handling cycle is of vital importance and the efficacy of the cycle depends largely on how well relevant logistics system is formed, i.e. how effectively the different sub-systems link with one another. Ultimately, what really matter is the overall performance of the entire operational system, rather than the behaviors of the individual sub-systems. On the one hand, due to the complexity and scale of operations, it is extremely difficult if not impossible to establish a mathematical model for analytical optimization of the whole port operations, even though such models do exist for single perspective of one sub-system of a port. On the other hand, state-of-the-art technologies in the realm of engineering informatics have been frequently employed in port operations. For example, knowledge-intensive methods for dealing with mostly NP hard problems encountered in port operations.

This special issue focuses on the theoretical and methodological development to construct a knowledge foundation for building effective knowledge and information based approaches in port operational practices. In addition to quality, originality and applicability, the two major selection criteria are: 1) proposed methods are relevant to engineering informatics and/or describe knowledge aspects, and 2) they are applicable and highly related to port operations and logistics.

Relevant topics may include, but are not limited to, the following:

- Information systems of port production, planning, control and management
- Integration of advanced technologies for port machinery monitoring and/or remote control
- Theoretical, computational and simulation modeling of port operation and scheduling
- Heuristic and informatics approaches to evaluation and decision-support for port operations and logistics
- Decision-support systems/methodologies for strategic, economical and efficient port operations
- Emergency management methods in port operations
- Massive data mining and management for port operations and logistics
- Knowledge and requirements acquisition, representation and organization methodologies in port operations
- Knowledge-based methodologies/systems for port operations and logistics
Schedule

Full Paper Due : 30 April 2010
Notification of Acceptance : 31 October 2010
Final Version of Paper Due : 31 December 2010
Special Issue : April 2011

Submission of Paper

Manuscripts should be prepared in accordance with the format and guidelines found at http://www.elsevier.com/wps/find/journaldescription.cws_home/622240/authorinstructions. Submitted papers should not have been previously published nor be currently under consideration for publication elsewhere.

Manuscripts should be submitted via the journal’s e-submission website at http://ees.elsevier.com/advei/ by the above due date.

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