Innovations to improve the efficiency of inland waterway transport

Scope:
In order to achieve successful intermodal transport operations, all forms of transport need to be coordinated so that transport capacity is utilized more effectively and the decisions are adapted to changing network conditions more easily.

Inland waterway transport (IWT) represents a critical alternative in the case of hinterland transport for sustainability of the transport networks. If part of the freight load can be transferred to waterways, congestion and other externalities can be targeted easier. In order to better make use of waterways, the attractiveness of inland waterways among other modes needs to be improved. Therefore, different (international) research projects are working on innovations related to new logistical concepts, intelligent transport systems, technological developments, coordination and collaboration mechanisms. This special issue is addressing those innovations and the topics include but not limited to:

- Autonomous IWT vessel developments
- new vessel types
- innovative navigation techniques
- data-driven techniques for efficient IWT operations
- collaborative platforms to improve transport operations
- information sharing platforms for coordination of transport operations
- optimization and control models for coordination of transport operations within inland waterways (e.g., coordination of locks and bridges) as well as across different modes
- intermodal/synchromodal transportation models where inland waterways are part of the network
- innovations to overcome congestion at deep-sea terminals
- innovative logistical concepts (e.g. mobile terminals, cargo consolidation)

This special issue is organized in association with IAME 2021 such that selected full papers submitted to IAME 2021 will be recommended to be submitted to this special issue. This submission needs to have sufficient extensions and/or elaborations with respect to the conference paper and will go through an independent review. Please check the IAME 2021 call for papers regarding the deadline for full paper submissions.

Timeline: After the IAME 2021 conference, the transfer of the selected papers will take place to the journal and the revision process is expected to be between July-October 2021 and the accepted papers will be published upon acceptance as early access.

Submission link:
https://mc.manuscriptcentral.com/oj-its (choose manuscript type INIWT)

Note that, the standard conditions of IEEE OJ-ITS apply to this special issue, see https://www.ieee-itss.org/oj-its
Guest Editors:

**Bilge Atasoy** *(b atasoy@tudelft.nl)* is an Assistant Professor in Transport Engineering and Logistics within the Department of Maritime and Transport Technology at TU Delft, Netherlands. Her research interests lie at the intersection of optimization and behavioral models with applications to transportation systems. More specifically she is interested in improving the efficiency, robustness and sustainability of transportation and logistics by developing predictive models that incorporate the preferences of decision makers. Example applications include on-demand transportation, intermodal freight transportation and transportation over water.

**Edwin van Hassel** *(edwin.vanhassel@uantwerpen.be)* is an assistant professor at the Faculty of Transport and Regional economics, Antwerp University where he is also teaching three courses. He has an engineering degree in naval architecture and he has a PhD in applied economics. His main research interest and expertise is in inland navigation, port hinterland transport, ship design and transport modelling. He holds a PhD with a topic in the field of inland waterway transport. More recently the scope of his work has been extended to maritime cost chain modelling. He also is involved in several research ranging from logistics projects to infrastructure cost benefit analysis and transport modelling projects.