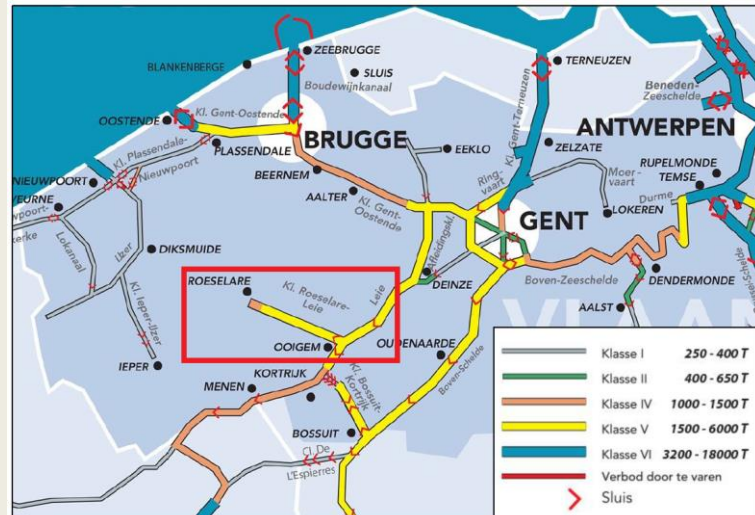


This is the 35th [newsletter](#) of the *Knowledge Centre Manoeuvring in Shallow and Confined Water*, which aims to consolidate, extend and disseminate knowledge on the behaviour of ships in shallow and confined water. In this newsletter, we give an update of the simulation study that was carried out to investigate the upgrade of the Canal Roeselare-Leie.

The Canal Roeselare-Leie connects the city of Roeselare and its region to the Seine-Scheldt axis in Ooigem. Although the canal is evaluated as a class Va (110 m x 11.45 m) waterway, only very few class Va vessels sail on this canal nowadays. In order to allow class Va vessels with a larger maximum draft (3.2 m), a study to upgrade the canal was ordered by the waterway authority [Flemish Waterway NV](#). A consortium of different companies (Tractebel Engie, IMDC and SBE) for whom [Flanders Hydraulics Research](#) also acts as subcontractor, carried out the [study](#). In a first phase, the waterway was evaluated by [IMDC](#) based on the design guidelines from different countries and then classified according to a comfort or safety level for two-way traffic of class Va.



The bottlenecks in waterway design that were identified for the canal based on the safety level criterion were further examined by a detailed design study using shiphandling simulation techniques. [Flanders Hydraulics Research](#) has executed several simulation runs with two coupled [full mission simulators](#) steered by experienced skippers. This methodology of executing a detailed study based on real time simulations is recommended by the [PIANC WG 141 - Design Guidelines for Inland Waterways](#). The Working Group also introduced the concept of safety and ease quality of a waterway which can be linked with the comfort and safety level in this project.

After finishing the first phase of simulations, the theoretical designed profile of the waterway is further evaluated through geotechnical measurements of the banks and quay walls, so that waterway design and constructional design can be combined and approved with final simulations in a second program later this year.

Thibaut Van Zwijsvoorde presented “Impact of motions of moored container vessels due to passing vessels on the safety of the container (un)loading operations” at the [Siga2 2018 Conference Maritime and Ports - The Port and Maritime Sector: Key Developments and Challenges](#), which was held in Antwerp from 2 to 4 May 2018.

Manases Tello Ruiz presented “Manoeuvring study of a container ship in shallow water waves” at the [OMAE2018 conference](#), which was held in Madrid from 17 to 22 June 2018.

Researchers associated with the Knowledge Centre attended the [34th PIANC World Congress](#), which was held in Panama from May 7 to 11, 2018. Thibaut Van Zwijsvoorde presented “[Container ships moored at the port of Antwerp : modelling response to passing vessels](#)” and the paper entitled “[Belgian Royal decree for sea-going inland vessels: a review for container and bulk cargo vessels](#)”, with Luca Donatini as first author. Evert Lataire presented “[Systematic techniques for fairway evaluation based on ship manoeuvring simulations](#)” and Jeroen Verwilligen presented “[Full-scale measurements to assess squat and vertical motions in exposed shallow water](#)”. Katrien Eloot was co-author of the paper “[Design guidelines for inland waterway dimensions](#)”.

More than 20 presentations were given by people affiliated with Belgian companies or institutions at the successful PIANC World Congress 2018 in Panama. People who were unable to attend these presentations, can attend a one-day conference in Brussels on 2 October 2018 at the [University Foundation](#), jointly organized by the Knowledge Centre and the Belgian Section of PIANC. More information of this event will follow soon on our [website](#).

On 28 May 2018, Manasés Tello Ruiz publicly defended his PhD research, entitled “Manoeuvring Model of a Container Vessel in Coastal Waves”. In this work a mathematical model in six degrees of freedom is proposed that addresses the combined effect of water waves and shallow water and is based on the extensive analysis of experiments with container ship models in coastal waves.



Dr. Lataire and Prof. Vantorre received the Institution's Medal of Distinction on 12 April 2018 from the Royal Institute of Naval Architects (R.I.N.A.) for their paper “[Hydrodynamic interaction between ships and restricted waterways](#)”, published in 2017 in the International Journal of Maritime Engineering (IJME).

A second call for papers has now been launched for the [5th MASHCON conference](#), which will be held in Ostend, Belgium, on 20 – 22 May 2019. The conference will pay special attention to manoeuvring in waves, wind and current, but all topics related to ship manoeuvring in shallow and confined water will be discussed.



Papers which focus on the comparison between the output of numerical models and [benchmark model test data](#) are particularly encouraged. Specifically for the 5th MASHCON, model test data have been made available which were obtained during the execution of seakeeping tests with the DTC container carrier in the framework of the European SHOPERA project. The benchmark data are both captive and free running model tests with the DTC at full draft in calm water and in waves. These data, or other sets of benchmark data, are available to everyone on [request](#).

Authors are invited to submit an abstract of 250 - 300 words to info@shallowwater.be before 3 September 2018. The official language of the conference is English and the abstracts will be reviewed by an international scientific committee. Once accepted, authors will be expected to write and present a full paper, which will also be reviewed by the international scientific committee. The papers that pass the review process and that are presented at the conference, will be published in a special issue of [Ocean Engineering](#). More information can be found on the [conference website](#).



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