# **Accepted Manuscript**

A coupled finite and boundary spectral element method for linear water—wave propagation problems

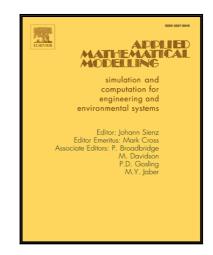
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PII: S0307-904X(17)30256-1 DOI: 10.1016/j.apm.2017.03.061

Reference: APM 11702

To appear in: Applied Mathematical Modelling

Received date: 10 June 2016 Revised date: 21 March 2017 Accepted date: 27 March 2017



Please cite this article as: Antonio Cerrato, Luis Rodríguez-Tembleque, José A. González, M.H. Ferri Aliabadi, A coupled finite and boundary spectral element method for linear water—wave propagation problems, *Applied Mathematical Modelling* (2017), doi: 10.1016/j.apm.2017.03.061

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### ACCEPTED MANUSCRIPT

## **Highlights**

- A coupled finite and boundary spectral element method for linear water-wave propagation problems is proposed.
- Boundary Spectral Element Method (BSEM) is a new technique that combines the advantages of the spectral approach and the BEM.
- BSEM has been applied to the mild-slope equation with variable bathymetry in one direction.
- A convergence study has been made for the BSEM alone and coupled with finite spectral elements.
- The proposed formulation has been validated by solving classical water-wave propagation problems.

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