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

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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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