

Journées de Modélisation des Vagues à Phases Résolues

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Titre: Dirichlet to Neumann operator for the infinite harbor problem.
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Résumé: Assume one considers a harbor (that is a model of a harbor of points $\{(x, z), x \leq 0, -h_0(x) \leq z \leq 0\}$ where $h_0(x)$ is a function such that h'_0 in $C_0^\infty(\mathcal{R})$, h_0 strictly positive everywhere. and there exists $L_0 > 0$ such that $\text{supp} h'_0 \cap (-\infty, -L_0) = \emptyset$. The Dirichlet to Neumann operator associated with a solution of the potential equation with Neumann boundary conditions on $z = -h_0(x)$ and on $x = 0$ is closely related to the interaction of an Airy wave with the harbor, in the sense that if ϕ_λ is a pseudomode of this DTN map, associated with an element of the continuous spectrum of the DTN λ , then the interaction of an Airy wave, of time frequency ω can be expressed through ϕ_λ . Our aim is to obtain representations of ϕ_λ .