

Journées de Modélisation des Vagues à Phases Résolues

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Titre: Inviscid Water-Waves and interface modeling.
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Résumé: We present a rigorous mathematical analysis of the modeling of inviscid water waves. The free-surface is described as a parameterized curve. We present a numerically stable algorithm which accounts for its evolution with time. The method is shown to converge using approximate solutions, such as Stokes waves and Green-Naghdi solitary waves. It is finally tested on a wave breaking problem, for which an odd-even coupling suffices to achieve numerical convergence up to the splash without the need for additional filtering.