Abstract Submitted
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Quasi-periodic water wave dynamics JON WILKENING, University of California, Berkeley — We present a framework for computing quasi-periodic solutions of the free-surface Euler equations with spectral accuracy. Some of the new solutions are hybrid traveling-standing waves that return to a spatial translation of their initial condition at a later time. Others are nonlinear superpositions of several standing waves with irrationally related periods. We also present a Floquet analysis of the stability of pure standing waves. When they are stable, generic perturbations appear to yield quasi-periodic solutions that remain close to nearby pure standing waves.

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