

Two-Crested Stokes Waves and Their Stability

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The study of surface gravity waves is crucial for understanding the formation of rogue waves and whitecaps in ocean swell. Waves originating from the epicenter of a storm can often be approximated as unidirectional. In this presentation, we explore periodic traveling waves on the free surface of an ideal two-dimensional fluid. We focus on surface waves of permanent shape, and present new families of Stokes waves and discuss their stability.