

Abstract Submitted  
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**Pattern selection in a horizontally vibrated container**<sup>1</sup> JEFF PORTER, IGNACIO TINAO, ANA LAVERON-SIMAVILLA, E.T.S.I. Aeronauticos, Universidad Politecnica de Madrid — We investigate the dynamics and pattern formation properties of a fluid interface whose supporting container is subjected to horizontal vibrations. Experimental results demonstrate the prevalence of so-called subharmonic cross-waves beyond the linear stability limit of directly forced synchronous surface waves, and reveal several new and interesting properties of these subharmonic waves in large aspect ratio systems, including a preferred orientation other than 90 degrees, a tendency to form domains of distinct patterns, and a variety of low-frequency modulations.

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Jeff Porter  
E.T.S.I. Aeronauticos, Universidad Politecnica de Madrid

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