

SOME STABILITY PROBLEMS IN INTERFACIAL FLUID MECHANICS

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Interfacial problems in fluid mechanics are ubiquitous in nature, appearing at a huge range of scales and in a multitude of physical configurations. As such, the stability of these problems is of significant interest. In this talk I will present recent results on the nonlinear stability instability of three distinct problems: the viscous surface wave problem, the viscous surface-internal wave problem, and the viscous gaseous star problem.