

Nonlinear Waves in Two-Layer Systems with Heat Release/Consumption at the Interface

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Abstract : Nonlinear convective flows developed under the joint action of buoyant and thermo-capillary effects in a two-layer system with periodic boundary conditions on the lateral walls have been investigated. The influence of an interfacial heat release on oscillatory regimes has been studied. The computational regions with different lengths have been considered. It is shown that the development of oscillatory instability can lead to the appearance of different no steady flows.

Keywords : interface, instabilities, two-layer systems, bioinformatics, biomedicine

Conference Title : ICBB 2015 : International Conference on Bioinformatics and Biomedicine

Conference Location : Istanbul, Türkiye

Conference Dates : May 21-22, 2015