Natural Convection between Two Parallel Wavy Plates

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Abstract : In this work, the effects of the wavy surface on free convection heat transfer boundary layer flow between two parallel wavy plates have been studied numerically. The two plates are considered at a constant temperature. The equations and the boundary conditions are discretized by the finite difference scheme and solved numerically using the Gauss-Seidel algorithm. The important parameters in this problem are the amplitude of the wavy surfaces and the distance between the two wavy plates. Results are presented as velocity profiles, temperature profiles and local Nusselt number according to the important parameters.