COMPUTATIONAL FLUID DYNAMICS LAB

Course Code: 13CH2120   **L   P   C**
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All simulation results should be validated with correlations available. The student is expected to attach the simulation predictions and the literature results when he presents the record.

1) Natural convection over a sphere.

2) Mixed convection over a sphere.

3) Forced convection over a sphere.

4) Forced convection over two cylinders in tandem arrangement.

5) Calculation of Nusselt number for staggered and in line arrangement of shell and tube heat exchanger.

6) Turbulent flow in a circular pipe: generating the friction coefficient versus Reynolds number.

7) Calculation of forces over a bent pipe.

8) Calculation of flow and heat transfer in a lid driven cavity.

9) Wall effect on a sphere in a cylindrical tube.

10) Flow of a power law non Newtonian fluid over an elliptic cylinder.

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