CASTS TALKS

Special Program in Applied Mathematics and Applied Mechanics

Slip flow and constant flux heat transfer in microchannels

2015 - 05 - 13 (Wed.)
15:00 - 18:00
308, Mathematics Research Center Building (ori. New Math. Bldg.)

The flow in micron- sized channels or ducts has become important due to contemporary applications in microfluidics. The major effects due to such small scales are boundary slip and temperature jump. The boundary conditions of both rarefied gas flows and superhydrophobic liquid flows can be described by the generic Navier's condition. We shall present a Ritz method to treat slip flow and H1, H2 heat transfer in general micro-ducts. Some examples are illustrated.