



Thermoelasticity Center
of Excellence



Mechanical Engineering
Department

Series of meetings of Mechanical Engineering Department

Title of this week meeting: Overview of Selected Energy-Related R&D in Transport Processes



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Sunday, 17 April 2011

10 am - 12 am

Conference room, No. 621, 6th floor, Mechanical Engineering Department

Synopsis:

This seminar is intended to provide a global overview of the presenter's R&D effort in the general areas of heat, mass and momentum transport. Following a brief look at his current academic affiliation, the lecture will focus on the overall objectives, scope and approach of his research projects carried out at McGill University during 1975-2000 in the chemical engineering department and later in the mechanical engineering department at the National University of Singapore (2000- present). In view of the large number of projects carried out as well as those in progress, this talk will provide a snapshot of the overall plan and then present some details on recent research in transport processes involved in impinging jets, opposing jets, transport processes in helical channels, thermal management issues in PEM fuel cells and battery packs, micro-reactors, development of a new dryer for low rank coals etc. The role of mathematical modeling in intensifying innovation will be stressed in the light of results to be presented selectively.

