The Hong Kong University of Science and Technology

Department of Mathematics

<u>Seminar in Applied Mathematics</u>

Generalized Irvine-Kirkwood formulation for the Eulerian coordinate system

By

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<u>Abstract</u>

In this talk, I will introduce how to derive continuum models from atomistic ones within the Irvine-Kirkwood (IK) framework and under the setup of Eulerian coordinate systems, which works for non-crystalline solids as well as fluids. Both mathematical formulation and practical numerical implementation will be discussed. In particular, I will also discuss the relation as well as differences between the IK approaches as the zero/finite temperature Cauchy-Born rule, which works only for crystalline solids. How NS equations can be derived from the IK approach will also be illustrated.

Date :   *Wednesday, 17 August 2016*

Time: *10:00 a.m. – 11:00 a.m.*

Venue: *Room 3472, Academic Building (near Lift 25&26), HKUST*

All are welcome!