



PIMS / AMI Seminar

Tuesday, March 22, 2011
3:30 p.m.
CAB 657

Applied
Mathematics
Institute



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“An extension of continuum mechanics to non-local problems”

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Abstract

It is well-known that the classical equations of continuum mechanics are not well-suited to the modelling of many problems of fundamental importance in solid mechanics (eg crack formation, phase transitions etc). Non-local methods have been proposed in recent years to address the limitations of classical continuum mechanics. We shall briefly review one such approach - the peridynamic theory of Silling and co workers, and briefly indicate how fractional derivatives can be used to extend the classical continuum mechanism formalism to encompass this non-local theory.

Refreshments will be served in CAB 649 at 3:00 p.m.