



**The Hong Kong Polytechnic University
Department of Applied Mathematics**

Colloquium

On

**Modelling of cell movement in tissue and application
to glioma growth and wolf movement**

by

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Abstract

In this talk I will study mathematical models for the movement of cells in aligned tissue. These cells are typically cancer metastasis, which invade along fibre tracks into healthy tissue. A new MRI modality called DTI imaging (diffusion tensor imaging) can be used to measure the fibrous structure inside the brain (e.g. white matter tracks). I will discuss how transport equations and non-isotropic diffusion equations can be used to implement DTI data into the modeling of glioma growth. A similar problem arises as wolf move along seismic lines and roads to hunt their prey. I will show some initial results about wolf movement in non-isotropic environments. (joint work with K.J. Painter, Heriot-Watt, Edinburgh, UK).

Date : April 27, 2012 (Friday)
Time : 2:00 p.m. – 3:00 p.m.
Venue : HJ610, The Hong Kong Polytechnic University

*** * * ALL ARE WELCOME * * ***