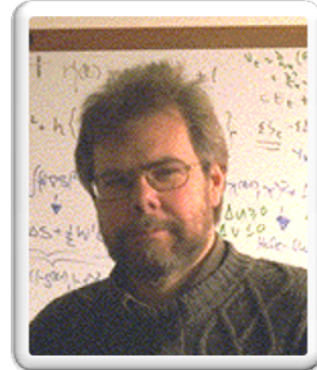


Computational Surface Partial Differential Equations

Prof. Charles Elliott
Mathematics Institute
University of Warwick, UK



Date : 24 July 2009 (Friday)
Time : 4.30 pm – 5.30 pm
Venue: SPMS-Executive Classroom 1, MAS-03-06
School of Physical and Mathematical Sciences

Evolutionary PDEs on stationary and moving surfaces appear in many applications such as the diffusion of surfactants on fluid interfaces, surface pattern formation on growing domains, segmentation on curved surfaces and phase separation on biomembranes and dissolving alloy surfaces. In this talk I discuss three numerical approaches based on: (I) Surface Finite Elements and Triangulated Surfaces, (II) Level Set Method and Implicit Surface PDEs and (III) Phase Field Approaches and Diffuse Surfaces.

Speaker Biography

Prof. Charles Elliott received his B.S (1972), M.S (1973) and Ph.D (1976) from the University of Birmingham and University of Oxford. He is currently a Professor of Mathematics at the University of Warwick. He served as the Chair of the Department of Mathematics at the University of Sussex from 1987 to 2007. Prof. Elliott serves as the editors of several top journals in numerical analysis and scientific computing involving IMA J. Numerical Analysis. He has made great contributions in the areas including unfitted finite element method, free boundary problems, PDE based image processing, PDEs on surfaces and geometric evolution equations.

Host: Prof. Wang Desheng, Division of Mathematical Sciences, School of Physical and Mathematical Sciences

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