Spencer Sherwin, Imperial College London

Talk title	Development and application of Spectral/hp element methods for high-Reynolds number complex geometry flows
Biography	Spencer Sherwin is the Professor of Computational Fluid Mechanics and Head of the Aerodynamics Section in the Department of Aeronautics at Imperial College London. Over the past 20 years he has specialised in the development and application of advanced parallel spectral/hp element methods for flow around complex geometries with a particular emphasis on vortical and bluff body flows, biomedical modelling of the cardiovascular system and more recently in industrial practice through the partnership with McLaren Racing and Rolls Royce. Professor Sherwin's research group (www.sherwinlab.info) also develops and distributes the open source spectral/hp element package Nektar++ (www.nektar.info) which has been applied to direct numerical simulation, large eddy simulation and stability analysis to a range of applications including vortex flows of relevance to offshore engineering and vehicle aerodynamics as well as biomedical flows associated with arterial atherosclerosis. He has published numerous peer-reviewed papers in international journals covering topics from numerical analysis to applied and fundamental fluid mechanics and co-authored a highly cited book on the spectral/hp element method. Currently he is an associate editor on the Journal of Fluid Mechanics and chair of the EPSRC funded Platform for Research in Simulation Methods (PRISM) at Imperial College London (www.prism.ac.uk).