

Warwick EPSRC Symposium 2008/2009

**Challenges in Scientific Computing**

Organiser: Andrew Stuart

**Computational Fluid Dynamics**

Tuesday 1 – Thursday 3 September 2009

Organisers: Dwight Barkley (Warwick), Robert Kerr (Warwick), Richard Peltier (Toronto)

**Programme***All talks will be in Lecture Room B3.02 • Mathematics Institute • Zeeman Building*

18 September 2009

**Tuesday 1<sup>st</sup> September 2009**

- 09:30 **Registration** in the MRC room number B1.37 and Coffee in the Mathematics Common Room  
10:30 **Paul Tucker** (Cambridge) *Developing large eddy simulation for turbomachinery applications including jet noise*  
11:30 **Dimitris Drikakis** (Cranfield) *Implicit large eddy simulation of aeronautical and compressible turbulent mixing flows*  
12:30 Lunch in the Mathematics Common Room  
13:30 **Phil Archer** (Southampton) *Vortex rings*  
14:30 **Flavio Giannetti** (Salerno) *An adjoint-based approach for the study of global instabilities*  
15:30 Tea in the Mathematics Common Room  
16:00 **Zheng-Tong Xie** (Southampton) *Urban LES*  
18:00 **Drinks and Dinner** in the Mathematics Common Room

**Wednesday 2<sup>nd</sup> September 2009**

- 09:00 **Steve Derbyshire** (Met Office) *Cloud-resolving modelling*  
10:00 Coffee in the Mathematics Common Room  
10:30 **Zbigniew Piotrowski** (Warsaw) *Cloud resolving calculations*  
11:30 **Gary Coleman** (Southampton) *Near-wall similarity and DNS*  
12:30 Lunch in the Mathematics Common Room  
13:30 **Jean-Christophe Robinet** (INSAM) *The effects of non-normality and non-linearity in separated boundary-layer flow*  
14:30 **Uwe Ehrenstein** (IRPHE) *Global instability, model reduction and control of a separating boundary-layer flow*  
15:30 Tea in the Mathematics Common Room  
16:00 **Luca Brandt** (KTH) *Optimal perturbations in boundary layers by the time-stepper approach*  
17:00 **Sylvain Lardeau** (Imperial) *Analysis of long and short-lived structures in turbulent flows using a dynamical system approach*  
18:00 **BBQ** - Lawn outside Maths Institute weather permitting, or in The Street, Zeeman Building

**Thursday 3<sup>rd</sup> September 2009**

- 09:30 **Bob Beare** (Exeter) *Atmospheric boundary layers*  
10:30 Coffee in the Mathematics Common Room  
11:00 **Arnold Moene** (Wageningen, NL) *Mixing in the atmospheric boundary layer*  
12:00 Lunch in the Mathematics Common Room  
13:30 **Philipp Schlatter** (KTH) *High-Reynolds number turbulent boundary layers studied by numerical simulation*  
14:00 **Chris Cantwell** (Warwick) *Numerical study of transient growth in expanding pipe flow*  
14:20 **David Moxey** (Warwick) *Numerical studies of the transition to turbulence in long pipes*  
15:00 Tea in the Mathematics Common Room  
15:30 **Trip to Kenilworth Castle** (weather permitting)

*If you have any questions during the workshop please see either Hazel Higgs or Yvonne Collins  
in Room B1.37 opposite the Common Room*