

2nd Internal Numerical Analysis Student Conference
Lecture Theatre, Computing Lab

DAY 1: TUESDAY Dec 5th, 2006

9:30 Welcome
Nachi Gupta and Anna Sher

Session I	Finite Element Methods	<i>[Chair: Martin Stoll]</i>
9:35	Janice Giudice (NA Group) <i>(DG)FE Approximation of Non-Newtonian Flows</i>	
10:05	David Knezevic (NA Group) <i>On Simulating Polymeric Fluid Flows</i>	
10:35	Christoph Ortner (NA Group) <i>A Posteriori Existence in Numerical Computations</i>	

11:05 Coffee Break

Debate Session	<i>[Chair: Anna Sher]</i>
11:20	James Osborne (Computational Biology Group) <i>The exciting developments in our field mainly come from people working on new scientific applications.</i>
11:40	Dan Nicolau (Centre for Mathematical Biology) <i>The heart of our field is the development of fundamental tools that are application-independent.</i>
12:00	Rebuttal
12:10	Questions

12:20 Lunch

Session II	Numerical Linear Algebra	<i>[Chair: Christoph Ortner]</i>
13:30	Thomas Schmelzer (NA Group) <i>Summing Curious Slowly Convergent Harmonic Subseries</i>	
14:00	Sue Dollar (Rutherford Appleton Laboratory) <i>Solving Saddle-Point Problems at a Gallop</i>	
14:30	Martin Stoll (NA Group) <i>Optimal Short-Term Recurrences for Solving Linear Systems</i>	

15:00 Coffee Break and Poster Session I

Session III	Computational and Mathematical Biology	<i>[Chair: Nachi Gupta]</i>
15:30	Jonathan Cooper (Computational Biology Group) <i>Automatic Validation and Optimisation of Cardiac Electrophysiological Models</i>	
16:00	Dan Nicolau (Centre for Mathematical Biology) <i>Monte Carlo Models of Diffusion on the Cell Membrane</i>	
16:30	Tahir Mansoori (Computational Biology Group) <i>Mesh Geometry and Parameter Extraction from Medical Images for Cardiac Simulations</i>	

17:00 Pub/Dinner

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DAY 2: WEDNESDAY Dec 6th, 2006

9:30 Opening
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Session IV	Numerical Methods for Diverse Applications	<i>[Chair: Schmelzer]</i>
9:35	Andrejs Novikovs (OCIAM)	<i>The Numerical Solutions for the Unsteady Fanno model</i>
10:05	Greg Gyurko (OCIAM)	<i>Cubature on Wiener Space</i>
10:35	Michel Paradis (Computational Linguistics Group)	<i>Numerically Discriminating Semantic Relations from Corpora</i>

11:05 Coffee Break

First Year NA Group Students Past/Future Work	<i>[Chair: Alex Prideaux]</i>	
11:20	Siobhan Burke	
11:30	Nick Hale	
11:40	Ricardo Pachon	
11:50	Tyrone Rees	
12:00	Margarita Satraki	
12:10	Adam Chandler	

12:20 Lunch

Session V	Finance and Optimization	<i>[Chair: Sue Dollar]</i>
13:30	Nachi Gupta (NA Group)	<i>Inferring the Composition of a Multi-Trader Population Driving a Financial Market</i>
14:00	Denis Zuev (OCIAM)	<i>Robust Portfolio Selection via Worst Case Utility Optimisation with Smaller Uncertainty Sets</i>
14:30	Ravi Kalia (Department of Statistics)	<i>Sequential Minimal Optimization</i>

15:00 Coffee Break and Poster Session II

15:45 3 Best Talks Awards and Concluding Remarks
Nachi Gupta and Anna Sher

Posters	Nick Hale (NA Group) <i>bvp6c; A Sixth-Order Extension to the MATLAB ODE BVP Package</i>
	Nicolas Jeannequin (Computational Biology Group) <i>Adaptivity for High Order Finite Element Simulations of Electrocardiological Models</i>
	Alex Prideaux (NA Group) <i>Pricing American Put Options</i>
	Anna Sher (Computational Biology Group) <i>Ca²⁺ Homeostasis in Heart Muscle Cells: The Role of Na⁺/Ca²⁺ Exchanger</i>