
Dr. Chris Cantwell

Research Associate
Department of Mathematics
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Employment

10/2009- **Research Associate, Department of Mathematics, Imperial College London**
Member of the Cardio-Mathematics group, developing numerical models for simulating activation potentials in myocardium.

Education

2006-2009 **Ph.D., Mathematics, University of Warwick.**
Supervisor: Prof. Dwight Barkley.
Topic: *Transient Growth of Separated Flows.*

2005-2006 **M.Sc., Scientific Computing, University of Warwick.**
Supervisor: Prof. Dwight Barkley.
Dissertation on *Computational Linear Stability Analysis of Flow Past a Circular Cylinder.*

2001-2005 **MMath, Mathematics (1st class with honours), University of Warwick, UK.**
Undergraduate Research Project on *Comparison of Fast Fourier Transform Software.*

1999-2001 A-levels, Deyes High School, Maghull, UK.

Refereed Publications

- *Transient growth analysis of flow through a sudden expansion in a circular pipe with Dwight Barkley and Hugh Blackburn, Phys. Fluids (to appear).*

Scholarships and Awards

- 2008 **Institute for Advanced Study (IAS) Award, University of Warwick, UK.**
Award (£1,000) for the organisation of a 1-day Workshop on *Computational Methods for Pricing and Hedging Exotic Options*.
- 2006-2009 **EPSRC Scholarship,**
Department of Mathematics, University of Warwick.

Recent Talks

- Numerical study of transient growth in expanding pipe flow. *Workshop on Computational Fluid Dynamics*. University of Warwick, UK
- Noise-driven flow in an expanding pipe. *BAMC 2009*. University of Nottingham, UK (April 2009).
- Transient Growth of Perturbations in an Expanding Pipe. *7th Euromech Fluid Mechanics Conference*. University of Manchester, UK (September 2008).
- DimSplit++: C++ Concepts and Design. *Computational Methods for Pricing and Hedging Exotic Options (Workshop)*. University of Warwick, UK (July 2008).
- Portable Batch System and the Centre for Scientific Computing. *Postgraduate Numerical Seminar Series*. University of Warwick, UK (January 2008).
- Overview of Spectral Element Methods. *Meeting of the Turbulence Research Group*. University of Warwick, UK (November 2006).

Recent Conferences and Short Courses Attended

- *Analysis of Fluid Stability Workshop*. ICMS, University of Edinburgh, UK (June 2009).
- *BAMC 2009*. University of Nottingham, UK (April 2009).
- *7th Euromech Fluid Mechanics Conference*. University of Manchester, UK (September 2008).
- *Computational Methods for Pricing and Hedging Exotic Options*, Warwick University, UK (July 2008).
- *Symmetry Preserving Methods in CFD and Beyond*. Reading University, UK (January 2008).
- Short Course on *Hydrodynamic Stability Theory*. Keele University, UK (September 2007).

Work Experience

Teaching, University of Warwick.

2006-2009 Course organiser for *C++ for Numerical Methods*.

2007-2008 Support for *Computational Linear Algebra and Optimisation*.

2006-2008 Teaching Assistant for *Introduction to Scientific Computing*.

2006-2007 Lab demonstrator for *High-performance Computing*.

2005-2006 Teaching Assistant for *Mathematics by Computer*.

2005-2006 Supervision of first year mathematics students.

2006 - Marking and invigilations for undergraduate and postgraduates courses.

Administration, University of Warwick.

2008 Organisation of a 1-day workshop on *Computational Methods for Pricing and Hedging Exotic Options*.

2007-2008 Co-Organizer of the *CSC PhD Numerical Seminar Series*. Weekly meetings for PhD students.

2007-2008 Operate the Taught Course Centre Access Grid Node, Department of Mathematics, University of Warwick.

Computer Skills

Languages: C++, BASH, PERL, L^AT_EX, Java, HTML, Fortran

Applications: MATLAB, Microsoft Office

Operating Systems: Linux, UNIX, Microsoft Windows 98/2000/XP/Vista

Languages

English (first language), French and Italian (basic).