

## Paul G. Tucker

School of Engineering  
University of Wales Swansea  
Swansea SA2 8PP, UK

Phone: (+44) (0) 1792 602256  
Fax: (+44) (0) 1792 295676  
e-mail: P.G.Tucker@swansea.ac.uk

### **Current position**

Professor of Engineering

### **Education**

1989-1993 -DPhil, Rolls Royce Technology Centre, University of Sussex.  
1986-1989-BEng (Honours), First Class, Mechanical Engineering, (Day-Release), Kingston Polytechnic.

### **Research interests**

Computational Fluid Dynamics, Turbulence Modelling, Computational Aeroacoustics

### **Career**

2004: Civil and Computational Engineering Centre, University of Wales, Swansea, Professor.  
2004-2007: Rolls Royce Aero Engines (40 % time), Visiting Professor.  
1998-2004: Department of Engineering, University of Warwick, Coventry, Senior Lecturer.  
2003: NASA Langley (3 months), Visiting Scientist.  
2001-2002: Boeing Commercial Airplanes (9 months), Visiting Scientist.  
2001: Chalmers University Sweden (3 months), Visiting Professor.  
1995-1998: Department of Applied Physics and Electronic and Mechanical Engineering, University of Dundee, Dundee, Lecturer in Fluid Mechanics.  
1993-1995: School of Mechanical Engineering, University of Bath, Claverton Down, Bath, Researcher.  
1989-1993: Thermo-Fluid Mechanics Research Centre, University of Sussex, Brighton, Sussex, Researcher.  
1985-1989: Sigma Film Equipment Ltd. Storrington, Sussex, Engineer.

### **Professional activities**

International Member of the American Institute of Aeronautics and Astronautics Fluid Dynamics Technical Committee

### **Refereed papers and chapters in books**

3 books, 39 Journal papers and 49 refereed conference papers + 1 NASA/TM

### **Summary of journal publications**

Journal	Impact factor	Number of papers
Int. J of Heat and Fluid Flow	1.052	4
AIAA J.	0.847	2
Int J. of Numerical Methods in Fluids	0.544	6
Other indexed journals		-
Other papers in refereed journals		27

### **Selected publications (max. 5)**

Tucker P. G. 2001. Computation of unsteady internal flows, Kluwer Academic Publishers, Dordrecht, ISBN 0-7923-7371-5 (monograph)

Tucker P. G., Rumsey C. L., Spalart P. R., Bartels R. E. and Biedron R. T. 2005. Computations of wall distances based on differential equations, *AIAA Journal* Vol. 43, No. 3, pp. 539-549.

Tucker P. G. 2003. Differential equation based wall distance computation for DES and RANS, *Journal of Computational Physics*, Vol. 190, Issue 1, 1<sup>st</sup> September, pp. 229-248.

Tucker P. G. and Davidson L. 2004. Zonal *k-l* based large eddy simulations, *Computers and Fluids*, Vol. 33, pp. 267-287.

Tucker P. G. 2004. Novel MILES computations for jet flows and noise, International Journal of Heat and Fluid Flow, Vol. 25, No. 4, pp. 625-635.

## ***Other relevant information***

---

### *National and International recognition*

Editor: Aerospace Theme Issue of the PHILOSOPHICAL TRANSACTIONS of the ROYAL SOCIETY  
Chairman of the National Association for Finite Element Methods and Standards CFD Committee - This was set-up to improve Industrial CFD Standards. I chaired this for 5 years.

Member of the American Institute of Aeronautics and Astronautics Fluid Dynamics Technical Committee

Past editor of the NAFEMS International Journal of CFD Case Studies

Reviewer of papers for numerous international journals, conferences and funding applications (the latter includes the Royal Society, Engineering and Physical Sciences Research Council (UK) and the National Science Foundation (USA))

Invited expert at the 1999 Zurich ERCOFTAC (European Community Of Flow Turbulence And Combustion) workshop to review CFD Guidelines

Invited session chairman at: the Int. Symposium on Computational Fluid Dynamics in Bremen, 1999

(Multigrid Methods); ECOMASS CFD conference, 2002 (Unsteady Flow Modelling Session); 4<sup>th</sup> Int.

Symposium on Turbulence, Heat and Mass Transfer, Turkey, 2003 (LES/DNS Session), EuroSimE,

Germany, 2005, Germany; FEF05 IACM, Swansea, 2005 (Turbulence Modelling).

Organising Committee for FEF05 IACM Special Interest Conference supported by ECCOMAS, April 4-6, 2005, Swansea, Wales, UK

### Seminar/Conference Organisation

I have organised the following Seminar/Conferences and Edited Proceedings:

- Industrial CFD – Venue: Grantham (Sponsor: NAFEMS)
- CFD and the Offshore Industry – Venue: Aberdeen (Sponsors: NEL/NAFEMS)
- CFD and the Electronics Industry – Venue: London (Sponsor: NAFEMS)
- Coupled CFD Problems – Venue: Kenilworth (Sponsor: NAFEMS)
- Multiphase Flow Modelling – Venue: Warwick University (Sponsor: NAFEMS)

### Invited Presentations

- 11th AT&T Design for Excellence Conference, America (1996)
- Chalmers University (2001)
- Lund University (2001)
- Volvo Car Corporation, Sweden (2001)
- Rolls-Royce Aero Engines (2000)
- ERCOFTAC QNET-CFD meeting in Athens (2001)
- ECCOMAS Conference, Swansea University (2001) – 2 invited papers
- Oxford University (2002)
- Boeing Commercial Airplanes (2002)
- Rolls-Royce Aero Engines (2003)
- NASA Langley, 'Differential equation based length scales to improve DES and RANS simulations,' 22<sup>nd</sup> May (2003)
- NASA Langley, 'Transport equation based wall distance computations aimed at flows with time-dependent geometry,' 13<sup>th</sup> September (2003)
- Royal Academy of Engineering, 'The application of detached eddy simulation to airplanes,' Royal College of Physicians, London, 10<sup>th</sup> June (2003)
- LES-UK Colloquium on LES, DES and related hybrid LES-RANS Techniques, 3<sup>rd</sup> March (2005)
- 6<sup>th</sup> IEEE EuroSimE Conference (Key Note Lecture), Berlin, Germany, 20<sup>th</sup> April (2005).