

CURRICULUM VITAE

ANDREW POLLARD
BAsC, DIC, PhD, FCAE, FASME, FAPS



Professor (Emeritus)
**Queen's Research Chair in Fluid Dynamics
and Multi-scale Phenomena**
Dept. Mechanical and Materials Engineering
Queen's University at Kingston ON K7L 3N6
Email: pollarda@queensu.ca
<https://me.queensu.ca/People/Pollard/index.html>
Tel: (613) 545-2569

SIGNIFICANT CAREER ACHIEVEMENTS

Inaugural President, Executive Director and Founding Member, Computational Fluid Dynamics Society of Canada. Founded in 1992, this Society continues to serve and support advanced research in a critically enabling science and technology for world class fundamental research and engineering applications in aerospace, biomedicine and energy.

Project Originator and Leader, High Performance Computing Virtual Laboratory (HPCVL). A multi-million dollars, four university consortium project. It has successfully enabled hundreds of researchers to achieve world class computational results and through it to contribute to a Nobel Prize in Physics. Formed in 1999, it continues to provide, under its new banner The Centre for Advanced Computing, high availability, secure, advanced computing resources and support for academic and medical researchers across Canada.

Chair of the Board of Directors, President and Founding Member, C3.ca Association Inc. Since 1998, C3.ca advocated and supported over 50 university and industry organisations and 1000's of researchers for High Performance Computing in Canada. Pollard advocated for and directed the Long-Range Plan for HPC for Canada *The Engines of Discovery: the 21st Century Revolution*. C3.ca transformed into Compute - Calcul Canada (ca. 2006) that continues to serve the computational science, engineering and health science communities in Canada.

"Through Andrew's vision and brilliant and resourceful leadership to establish HPCVL, the SNO team was able to rapidly do the calculations that achieved its "eureka" moment that confirmed that neutrinos have mass"

Prof. A. McDonald, Nobel Laureate Physics 2015.

EDUCATION

1978	Ph.D. Supervisor – Prof. Spalding, D. Brian FRS, FREng, FIME, FEI, FICE Franklin Institute Laureate Global Energy Prize Laureate	University of London London, England
1978	D.I.C. Mechanical Engineering	Imperial College of Science and Technology, London, England
1975	B.A.Sc. Mechanical Engineering	University of Waterloo Waterloo, ON Canada
1970	Diploma, Mechanical Engineering Technology	Ryerson Polytechnical Institute Toronto, ON Canada

EMPLOYMENT HISTORY

2014	Visiting Professor	University of Patras, GREECE
2014	MERIT Fellow	University of Melbourne, AUSTRALIA
2010-2014	Adjunct Professor	Syracuse University, NEW YORK, USA
2009	Honorary Univ. Professor	University of Auckland, NEW ZEALAND
2009	Visiting Professor	University of Canterbury, NEW ZEALAND
2008-2012	Director	Sustainable Bio-Economy Centre Queen's University
2005-2012	Director	Queen's Collaborative Specialization in Computational Science & Engineering
2005- present	Queen's Research Chair in Fluid Dynamics and Multi- scale Phenomena	Queen's University (Canada Research Chair Tier 1 equivalent)
1995-1996	Director	Centre for Advanced Gas Combustion Technology, Queen's University
1993-1994	Visiting Professor	Centre D'Etudes Aerodynamiques et Thermique (CNRS/University Poitiers), FRANCE
1992-1995	Associate Director	Centre for Advanced Combustion Technology Queen's University.

1990-present	Professor	Dept. Mechanical Engineering Queen's University
1986-1987	Alexander von Humboldt - Fellow	Universität Erlangen-Nurnberg, FEDERAL REPUBLIC OF GERMANY
1983-1990	Assoc. Professor Tenured, 1987	Dept. Mechanical Engineering Queen's University
1981-1983	Assistant Professor	Dept. Mechanical Engineering Queen's University
1978-1981	Assistant Professor	Dept. Mechanical Engineering University of Calgary
1975-1978	Research Assistant	Dept. Mechanical Engineering Imperial College of Science and Technology, ENGLAND
1975	Research Engineer	University of Waterloo
1972-1975	Research Engineer Training	University of Waterloo G.S.W. Research, Sheridan Park, ONTARIO
1970-1972	Assistant to Works Manager	Babcock and Wilcox Co. Ltd., CAMBRIDGE, ONTARIO

FELLOWSHIPS, HONOURS, AWARDS AND INTERNATIONAL ACKNOWLEDGEMENTS

2017

Alumni Achievement Medal for Academic Excellence, University of Waterloo. “In recognition of his world-renowned research in fluid mechanics, for establishing numerous academic-industrial institutions, and for his ongoing mentorship and dedicated support of his students.”

2017

Fellow, Canadian Academy of Engineering. Citation includes: “He is best known for his seminal work on turbulent flows, especially free shear flows, which have provided the fundamental knowledge required to accelerate the field.”

2017

“Festschrift” Volume of the *International Journal of Heat and Fluid Flow* dedicated to A. Pollard for “...his ability to use effectively both experiments and simulations as complementary tools for understanding fundamental processes”. Vol. 67, Part B, October 2017

2017

Royal Society, London: Biographical Memoir of Professor D. Brian Spalding FRS, FREng (deceased November 2016) Acknowledged as a giant in the fields of combustion, turbulence modelling, multi-phase flows and computational fluid dynamics. His accolades include the highly prestigious World Energy Prize (~\$850,000 Cdn) “for numerous original concepts of heat-and-mass transfer processes, which formed the basis of practical calculations in fluid mechanics and computational fluid mechanics” and the Franklin Institute Benjamin Franklin Medal “For his seminal contributions to the computer modeling of fluid flow, creating the practice of computational fluid dynamics (CFD) in industry, and paving the path for the widespread application of CFD to the design of objects from airplanes to heart valves.”

2014

Fellow, American Physical Society. Citation includes: “For sustained and innovative contributions to computational and experimental fluid dynamics and their symbiotic interplay, and exceptional contributions to higher education, including establishment and leadership of networks supporting international collaboration”

2014 (February)

MERIT Fellowship as Visiting Research Professor, University of Melbourne, Australia. Awarded to support visits of international scholars of significance.

2013-2017

Member, International Scientific Advisory Board, United Kingdom Consortium on Mesoscale Engineering Sciences UKCOMES, <http://www.ukcomes.org/> “It was established in June 2013, supported by the EPSRC Grant No. EP/L00030X/1. It is one of seven high-end computing (HEC) consortia for science and engineering in the UK funded by the Research Councils. Mesoscale problems lie at the interfaces between microscales and macroscales, between engineering and sciences, where new and exciting discoveries and applications are likely to be made in the 21st century.”

2010

Inducted to Hall of Achievement, Thousand Islands Secondary School, Brockville “..to honour an exceptional over-achiever and graduate who is a role model for our current and future students...”

2009 (January-March)

Honorary Visiting Research Professor University of Auckland, New Zealand

2009 (April-June)

Visiting Research Professor University of Canterbury, New Zealand

2008

Fellow, American Society of Mechanical Engineers

2006

Best paper award, CFD Society of Canada

2005

Best paper award, 6th World Conference on Heat Transfer, Fluid Mechanics and Thermodynamics: The most comprehensive thermal-fluids conference in the world.

2004

Best paper award, CFD Society of Canada

2001

“Silver Wrench Award”

Awarded to “the Professor who best displays interest and enthusiasm towards Queen’s Mechanical Engineering as chosen by the Graduating Class.

1997

Best paper award, CFD Society of Canada

1993

Best poster award, Int’l Symp. Turbulent Shear Flow: The pre-eminent global symposium for turbulence research

1992

Distinguished Lecturer, Sowerby Research Centre, British Aerospace

1991

Best paper award, 2nd World Conference on Heat Transfer, Fluid Mechanics and Thermodynamics: The most comprehensive thermal-fluids conference in the world.

1987

Strategic Partner for Outstanding Contributions to Computational Fluid Dynamics, Silicon Graphics Incorporated

1986

Alexander von Humboldt Fellowship, Federal Republic of Germany

1974

Research award for academic achievement, University of Waterloo

1970

Academic proficiency award, Ryerson Polytechnic Institute

1969

Academic proficiency award, Ryerson Polytechnic Institute

BIOGRAPHICAL DATABASES

1985

Who's Who in Canada

1991

Who's Who in Canadian Engineering

2005

Who's Who in Engineering Education

2006

Who's Who in Computational Science and Engineering

EDITORIAL SERVICE (See also "Books and/or Chapters in Books")

2016

Lead editor, Whither Turbulence and Big Data in the 21st Century, Springer Verlag

<http://www.springer.com/gp/book/9783319412153>

2015

Editor in Chief, International Journal Heat and Fluid Flow,

<https://www.journals.elsevier.com/international-journal-of-heat-and-fluid-flow>

This premier journal in the field of turbulence, heat and mass transfer

2015

Co-editor, Special Issue, Journal of Turbulence

(selected papers from Colloquium on Near Wall Turbulence, Trondheim, Norway)

<http://explore.tandfonline.com/content/est/journal-of-turbulence-special-issues/special-issue-wall-turbulence-colloquium>

2012-2015

Associate Editor, International Journal Heat and Fluid Flow

2007

Lead Editor, Special issue: International Journal of Computational Fluid Dynamics (Selected papers from CFD 2006) <http://www.tandfonline.com/toc/gcfd20/22/1-2?nav=tocList>

2005

Lead as Chair of the Board, C3.ca. HPC-CHP Engines of Discovery: the 21st Century Revolution, The Long Range Plan for High Performance in Canada

<https://www.computecanada.ca/wp-content/uploads/2015/02/LRP.pdf>

2001

Lead Editor, IUTAM Symposium on Turbulent Mixing and Combustion, Kluwer Academic Press <http://www.springer.com/la/book/9781402007477>

2002

Regional Editor, CFD Journal, Japan

2000

Lead Editor, High Performance Computing Systems and Applications, Springer Verlag
<https://link.springer.com/book/10.1007/b115800>

1998

Co-Editor, Flow Control, Fundamentals and Practices, Springer Verlag
www.springer.com/gp/book/9783540696728

1992

Editorial Advisory Board, CFD Journal, Japan

1992

Editorial Advisory Board, Int'l Journal Computational Fluid Dynamics
<http://www.tandfonline.com/toc/gcfd20/current>

1992-1997

Editorial Advisory Board, International Journal of Applied Scientific Research {This Journal became Flow, Turbulence and Combustion, An International Journal published in association with ERCOFTAC <http://www.springer.com/engineering/mechanics/journal/10494>

1983

Co-Editor, Numerical Prediction of Flow, Heat Transfer, Turbulence and Combustion, Selected Works of Professor D. B. Spalding, Pergamon Press
https://books.google.ca/books/about/Numerical_prediction_of_flow_heat_transf.html?id=3ZZRAAAAMAAJ&redir_esc=y

1983-1987

Associate Editor, International Journal of Physicochemical Hydrodynamics

NOTABLE OTHER EDITORIAL AND LEADERSHIP ACTIVITIES

2015-present

International papers committee, Int'l Congress Theoretical and Applied Mechanics, Montreal 2016, Milan 2020 (Elected, one of six members worldwide) This is the most significant international congress for the world's mechanics community and the international papers committee adjudicates over 2000 submissions for excellence and novelty.

2005-2010

Member, Multi - disciplinary Assessment Committee, office of VP-Research, Queen's University (2005-2010) Adjudicated research proposals for eventual forwarding to external funding agencies in Canada and abroad.

2010- 2012

Member, Research Management Committee, Carbon Management Canada, a National Centres of Excellence based at University of Calgary. We adjudicated the science and research outcomes for multi-million dollars in proposals, including carbon capture and storage etc.

2008-2012

Inaugural Director and Founder, Sustainable Bioeconomy Centre, Queen's University. This Centre served the Applied Science, Public Policy and Environmental Science communities at Queen's. It hosted annual symposia that brought together government policy makers with industry and academics for spirited discussions on the future for a bio-economy for the whole north east of North America.

2006

Chair. Information Technologies International Review Panel, Canada Foundation for Innovation. I lead a team of experts as we adjudicated the disposition of \$80,000,000 in infrastructure applications.

2005-2007

International Advisor, National Centre for High Performance Computing, Cape Town, South Africa. I worked with a small group of international experts to help set up the NCHPC for South Africa that now contributes to the largest scientific effort in the world: the square kilometer array of radio telescopes located in Africa and Australia/NZ.

2005

Canadian Member, International Selection Board, Nusselt-Reynolds Prize awarded by World Congress on Expt'l. Fluid Mechanics, Heat Transfer & Thermodynamics

2005-2012

Inaugural Director and Founder, M.Sc. Collaborative Specialization in Computational Science and Engineering, Queen's University. A University-wide (17-department) specialization for exceptional students.

2004

Member, Blue Ribbon Task Force on National Consultation on Access to Scientific Research Data, (David Strong, Chair) Lead by NRC with CFI, CIHR, IC, NSERC, SSHRC. This report set the stage for research data management and curation by all Canadian Universities.

1997-2007

Organiser, Thousand Islands Fluid Mechanics Meeting: Annual event that in 2017 celebrated its 20th anniversary

1996

Co-organiser, Symposium and Workshop, Flow Control (with Profs. M. Gad-el-Hak and J-P Bonnet) Cargese, Corsica and University of Notre Dame, Indiana

1992-1996

Director, Associate Director and Founding Member, Centre for Advanced Gas Combustion Technology, Queen's University.

1990-1993

International selection board for Nusselt-Reynolds prize, considered as a career achievement prize for research in thermo-fluid dynamics. I wrote the biographical entries for Nusselt and Reynolds and served on selection committee for two awards.

1989-Present

Lead scientist, Fluid Mechanics, World Conferences Fluid Mechanics, Heat Transfer and Thermodynamics: This is a high visibility position, for a major international series of meetings held triennially.

Lead Scientist and Member of many scientific and organizing committees including:

- a) Turbulent Shear Flow Phenomena – considered to be the pre-eminent conference in the field of fundamental turbulence
- b) Turbulence Heat and Mass Transfer – considered as a major highlight in the stable of meetings under the auspices of the International Centre for Heat Mass Transfer
- c) Int'l conferences on Sustainable Development of Energy, Water and Environmental Systems

SUPERVISION OF RESEARCH ASSOCIATE / POST DOCTORAL FELLOW / RESEARCH ENGINEER

– Total of 20

Current Positions –

- 13 in professorial positions in Australia, Canada, France, Iran, NZ, USA, UK
- 3 in high level research leadership positions; for example, lead experimental aerodynamicist for Williams Formula 1 Team, Oxford, UK
- 4 in various management positions in industry

SUPERVISION OF GRADUATE STUDENTS

– Total of 29 Ph.D. and 31 M.A.Sc.

Current (known) Positions –

- 17 in professorial positions in Canada, China, USA, Philippines, Australia
- 16 in senior scientific portfolios and post doctoral positions
- 1 forensic pathologist.

RESEARCH FUNDING (Please contact for details)

From 1980 through 2017, either as principal or co-principal investigator, I have generated over **\$57,000,000** in research funding:

1980-2017

I have been continuously supported by NSERC through the Discovery, Research Tools and Instruments, CRD and other sources since 1980, approximately \$7.1 million.

Specific examples, **not** included in the above are:

1990-1993

Steel Reheating Furnace Research, co-funded by NSERC, Ministry of Energy of Ontario, Centra Gas, Consumers Gas, Union Gas, Dofasco and Stelco, Co-P.I.: Becker, Grandmaison and Pollard

Amount: \$4,291,200

1999-2002

Pioneering HPC Partnerships in Canada, NRC-NSERC Research Partnership Program in collaboration with C3.ca, P.I.: Pollard

Amount: \$960,000

2000-2003

High Performance Computing Access Support Network, NSERC, P.I.: Pollard

Amount: \$1,800,000

2000-2005

High Performance Computing Virtual Laboratory, Canada Foundation for Innovation, Ontario Research Development Challenge Fund, Sun Microsystems, IBM, Entrust Technologies, P.I.: Pollard

Amount: \$36,800,000

2009-2011

Biomass Energy from Field to Grid, Lafarge Cement and Ontario Centres of Excellence, Co-P.I.: Matovic and Pollard

Amount: \$800,000

2010

*The Wind Engineering, Energy and Environment Research **Institute** (WindEEE RI)*, University of Western Ontario, Canada Foundation for Innovation and others, Co-applicant, P.I.: Hangan

Amount: \$23,690,970

2010-2014

Modelling the Pediatric Upper Airway using Anatomic Optical Coherence Tomography and Computational Fluid Dynamics, U.S. National Institutes of Health, P.I.: Wang (UC Irvine)

Amount: \$US 3,850,440

2013-2018

Sensing for Sustainable Engineering in Remote Areas, NSERC CREATE programme, P.I.:
Green

Amount: \$1,650,000

PATENTS

Pollard, A., Duncan, A and Fellouah, H, “Biomass Pellet and Method of Producing Same”
United States Patent No. 9,701,086, Issue Date: **11 July 2017**
Canadian Patent for same, No. 2,850,975 issued September 2020.

Pollard, A. “A novel aerosol delivery system,” Invention disclosure Tech ID 2002-022,
PARTEQ, Queen’s University, 2002.

Secretain, F., Choy, I. and Pollard, A., “A variable camber airfoil,” Invention disclosure,
PARTEQ, Queen’s University, 2002.

Pollard, A., Secretain, F., Ball, C. G., Uddin, M., Ali, M., Milne, B. and Hamilton, A.
“DETECTS- A method and system for identifying and quantifying particles in flow
systems,” Provisional patent filed with U.S. Patent and Trademark Office, 06/11/2007 and
final patent application filled 06/11/2008.

Secretain, F. and Pollard, A., “Bubble Destruction,” invention disclosure filed with PARTEQ,
Queen’s University 2011.

PUBLICATIONS (BOLD refers to Students and PDFs)

Journal Articles

1. **Samie, M.**, Lavoie, P. and Pollard, A. A scale-dependent coherence analysis of turbulent round jets including the effects of shear layer manipulation, *Intl. Jn. Heat and Fluid Flow*, Vol. 82, 2020, 108524.
2. Pollard, A. Turbulent Round Jet Entrainment – A Historical Perspective. Invited Contribution to Professor D.B. Spalding Commemorative Volume: *50 Years of CFD in Engineering Sciences*, Runchal (ed.), Springer, 2019
3. Xu, M., Cheong, K-P., Mi, J. and Pollard, A. Local dissipation scales in turbulent jets, *Experimental Thermal Fluid Science*, May 2018, Vol. 93, Pages 178-185
<https://doi.org/10.1016/j.expthermflusci.2017.12.019>.
4. **Sadeghi, H.**, Lavoie, P. and Pollard, A. Effects of finite hot-wire spatial resolution on turbulence statistics and velocity spectra in a round turbulent free jet, *Experiments in Fluids*, March 2018, Vol. 59, Pages 40-50, <https://doi.org/10.1007/s00348-017-2486-8>
5. T. Panidis, T., Pollard, A and Schwab, R.R. The role of vorticity in the near field development of sharp-edged, rectangular, wall jets, *International Journal of Heat and Fluid Flow*, October 2017, Vol. 67, Pages 3-22 <https://doi.org/10.1016/j.ijheatfluidflow.2017.06.010>
6. **Dorostkar, A.**, Boegman, L., and Pollard, A. “Three-dimensional simulation of high-frequency nonlinear internal waves in Cayuga Lake”, *Journal of Geophysical Research: Oceans*. Vol. 122, No. 3, Pages 2183-2204, January 2017 *doi*: [10.1002/2016JC011862](https://doi.org/10.1002/2016JC011862).
7. Davis, J., Matovic, D. and Pollard, A. The performance of resistance, inductance, and capacitance handheld meters for determining moisture content of low-carbon fuels, *Fuel*, 188(15) January 2017, Pages 254-266
<http://www.sciencedirect.com/science/article/pii/S0016236116309723>
8. **Sadeghi, H.**, Lavoie P. and Pollard, A. “Scale-by-scale budget equation and its self-preservation in the shear-layer of a free round jet”, *International Journal of Heat and Fluid Flow* [Volume 61, Part A](https://doi.org/10.1016/j.ijheatfluidflow.2016.09.005), October 2016, Pages 85–95.
9. Lavoie, P., Pollard, A. and **Sadeghi, H.** “Turbulence and Data Analytics in the 21st Century: The Round Free Jet. in *Whither Turbulence and Big Data for the 21st Century?*” Pollard, Castillo, Danaila, Glauser (eds), Springer Verlag 2016
10. **Andrews, R.**, Pollard, A. and Pearce, J. “Photovoltaic System Performance Enhancement With Non-Tracking Planar Concentrators: Experimental Results and Bi-Directional Reflectance Function (BDRF) Based Modelling”, *IEEE Journal of Photovoltaics*, DOI:10.1109/JPHOTOV.2015.2478064

11. **Leslie, G.**, Rutter, A., Pollard, A., **Davis, J.** and Matovic, D. "The Effects of Weathering on the Pyrolysis of Low- Carbon Fuels: Railway Ties and Asphalt Shingles." *Fuel Processing Technology* doi:10.1016/j.fuproc.2015.06.022 (June 2015)
12. **Sadeghi, H.**, Lavoie P. and Pollard, A. "Equilibrium similarity solution of the turbulent transport equation along the centreline of a round jet." *Journal of Fluid Mechanics* 772:740-755, doi: 10.1017/jfm.2015.224 (May 2015)
13. **Secretain, F.**, Pollard, A., Uddin, M., Ball, C., Ali, M., Milne, B., Hamilton, A. and Tanzola, R. "A novel software program for in vivo detection of potential air emboli during cardiac surgery." *Journal of Cardiac Ultrasound* 13:3, doi:10.1186/1476-7120-13-3 (January 2015)
14. **Vouros, A.**, Panidis, T., Pollard, A. and Schwab, R. "Near field vorticity distributions from a sharp-edged rectangular jet." *International Journal of Heat and Fluid Flow*, doi:10.1016/j.ijheatfluidflow.2014.10.002 (Print version: 51:383-394 2015) (October 2014)
15. Pollard, A., **Secretain F.**, and Milne B. "Air and blood fluid dynamics: at the interface between engineering and medicine." *Journal of Physics: Conference Series* Vol. 530 2014, doi:10.1088/1742-6596/530/1/012005
16. **Nicksy, D.**, Pollard, A., Strong, D. and Hendry, J. "In-Situ Torrefaction and Spherical Pelletization of Partially Pre-Torrefied Hybrid Poplar." *Journal of Biomass and Bioenergy* Volume 70, Pages 452-460, doi:10.1016/j.biombioe.2014.08.011 (November 2014)
17. **Leslie, G.**, Pollard, A. and Matovic, D. "Calorimetric and heat transfer studies of the spontaneous combustion of two low carbon fuels." *Journal of Loss Prevention in the Process Industries* Vol 32:44-51 (August 2014)
18. **Davis, J.**, Pollard, A. and Chandler, A. J. "Comparison of Variability in Dioxin and Furan Data acquired using Single Train and Simultaneous Multiple Train Stack Sampling Methods." *Journal of the Air and Waste Management Assoc.* (May 2014) Accepted.
19. **Andrews, R. W.**, Pollard, A. and Pearce, J. M. "Photovoltaic system performance enhancement with non-tracking planar concentrators: Experimental results and BDRF based modelling." *IEEE 39th Photovoltaic Specialists Conference (PVSC)* (pp. 0229-0234). IEEE. doi:10.1109/PVSC.2013.6744136 (2013)
20. **Sadeghi, H.**, Lavoie, P. and Pollard, A. "The effect of Reynolds number on the scaling range along the centreline of a round turbulent jet." *Journal of Turbulence* doi:10.1080/14685248.2014.906810 (April 2014)
21. **Zhang, J., Xu, M.**, Pollard, A. and Mi, J. "Effects of external intermittency and mean shear on the spectral inertial-range exponent in a turbulent square jet." *Physical Review E*, 87(5) 2013. doi: 10.1103/PhysRevE.87.053009
22. **Mojab, M.**, Pollard, A. Pharoah, J., Beale, S. and Hanff, E. "Unsteady laminar to turbulent flow in a spacer filled channel." *Flow, Turbulence and Combustion* (doi) 10.1007/s10494-013-9514-4 (October 2013)
23. **Mahdaviifar, A.**, Pollard, A. Pharoah, J. and Beale, S. "Wall Proximity Effects on Flow over a Simple Membrane Spacer." *Computers and Fluids*, Volume 88, Pages 180-188 (December 2013)

24. **Xu, M.**, Pollard, A., Mi, J., Secretain, F., Sadeghi, H. “Effects of Reynolds number on some properties of a turbulent jet from a long square pipe.” *Physics of Fluids* 25, 035102 (2013)
25. **Andrews, R.**, Pollard, A., and Pearce, J. “The effects of snowfall on solar photovoltaic performance.” *Journal of Solar Energy* 92:84–97 (June 2013)
26. **Andrews, R.**, Pollard, A. and Pearce, J. “A new method to determine the effects of hydrodynamic surface coatings on the snow shedding effectiveness of solar photovoltaic modules.” *Solar Energy Materials and Solar Cells* 113 71–78 doi: 10.1016/j.solmat.2013.01.032 (2013)
27. **Sadeghi, H.** and Pollard, A. “Effects of shear layer and potential core modifications on turbulent round jet flow using passive control rings.” *Physics of Fluids* 24, 115103 <http://dx.doi.org/10.1063/1.4767535> (2012)
28. **Shinneeb, A-M.**, and Pollard, A. “Investigation of the Flow Physics in Human Pharynx/Larynx Region.” *Experiments in Fluids* doi 10.1007/s00348-012-1336-y (July 2012)
29. **Andrews, R.**, Pollard, A. and Pearce, J. “Improved parametric empirical determination of module short circuit current for modelling and optimization of solar photovoltaic systems.” *Solar Energy* 86:2240-2254, <http://dx.doi.org/10.1016/j.solener.2012.04.016> (May 2012)
30. **Duncan, A.**, Pollard, A. and Fellouah, H. “Torrefied Biomass Pellets through the use of Experimental Design.” *Journal of Applied Energy* <http://dx.doi.org/10.1016/j.apenergy.2012.03.035> (April 2012)
31. **Shinneeb, A-M.** and Pollard, A. “Identification of Vortical Structures inside the Human Pharynx/Larynx Region from POD-Reconstructed Velocity Fields.” *Experiments in Fluids* doi: 10.1007/s00348-012-1293-5 (March 2012)
32. Pollard, A., Uddin, M., **Shinneeb, A-M.** and Ball, C. “Recent Advances and Key Challenges in Investigations of the Flow Inside Human Oro-Pharyngeal-Laryngeal Airway.” Invited article for Special Issue of Multi-disciplinary CFD in *International Journal of Computational Fluid Dynamics* C. Mavriplis (ed) doi:10.1080/10618562.2012.668616 (May 2012)
33. **Wei, L.**, and Pollard, A. “Direct numerical simulation of low Mach number turbulent wall bounded flow with favourable and adverse pressure gradients.” *Journal of Turbulence*, doi: 10.1080/14685248.2011.652305 (February 2012)
34. Ball, C.G., Fellouah, H. and Pollard, A. “The Flow Field of a Turbulent Round Jet.” *Progress in Aerospace Sciences* 50:1-26 (February 2012)
35. **Bespalko, D.**, Pollard, A. and Uddin, M. “Analysis of the pressure fluctuations from an LBM simulation of turbulent channel flow.” *Computers and Fluids* doi:10.1016/j.compfluid.2011.10.008 (October 2011)
36. **Wei, L.**, and Pollard, A. “Direct numerical simulation of compressible turbulent channel flows using discontinuous Galerkin method.” *Computers and Fluids* 47(1):85-100 (2011)
37. **Raiesi, H.**, Piomelli, U., Pollard, A. “Evaluation of turbulence models using direct numerical and large-eddy simulation data.” *ASME Journal of Fluids Engineering* Volume 133, Issue 2, 021203 (10 pages) doi:10.1115/1.4003425 (February 2011)

38. **Wei, L.** and Pollard, A. "Interactions among pressure, density, vorticity and their gradients in compressible turbulent channel flows." *Journal of Fluid Mechanics* doi:10.1017/S0022112010006166 (February 2011)
39. Rowe, R.K., **Hoor A.** and Pollard, A. "Examination of a Method for Reducing the Temperature of MSW Landfill Liners." *ASCE Journal of Environmental Engineering* 136(8): 794-803. doi:10.1061/(ASCE)EE.1943-7870.0000212 (2010)
40. **Fellouah, H.** and Pollard, A., "Velocity spectra and turbulence length scale distributions in the near to intermediate region of a round free turbulent jet." *Physics of Fluids* 21, 115101 doi:10.1063/1.3258837(2009)
41. **Bespalko, D.**, Pollard, A. and Uddin, M. "Direct numerical simulation of fully-developed turbulent channel flow using lattice Boltzmann method and analysis of OpenMP scalability." *High Performance Computing Systems and Application, Lecture Notes in Computer Science*, Volume LNCS 5976, 2010, pp 1-19
42. **Wei, L.** and Pollard, A. "Direct numerical simulation of a turbulent flow with pressure gradients, Progress in Turbulence III." *Proceedings of the iTi Conference in Turbulence* (2008), *Springer Proceedings in Physics* Vol.131, Peinke, Joachim; Oberlack, Martin; Talamelli, Alessandro (Eds.) (2010)
43. Artemov, V., Beale, S., de Vahl, G., Davis, Escudier, M., Fueyo, N., Launder, B.E., Leonardi, E., Lamil, M.R., Minkowycz, W., Patankar, S. V., Pollard, A., Runchal, A., Rodi, W. and Vanka, P. "A tribute to Spalding, D.B. and his contributions in science and engineering." *International Journal of Heat and Mass Transfer* 52(17-18):3884-3905, (2009)
44. **Fellouah, H., Ball, C.G.** and Pollard, A. "Reynolds number effects within the development region of a turbulent round free jet." *International Journal of Heat and Mass Transfer* 52(17-18):3943-3954 (2009)
45. **Fournier, G., Golanski, F.** and Pollard, A. "A novel outflow boundary condition for incompressible laminar wall- bounded flows." *Journal of Computational Physics* 227:7077-7082 (2008)
46. **Ball, C.G.**, Uddin, M. and Pollard, A. "High resolution turbulence modelling of airflow in an idealised human extra-thoracic airway." *Computers & Fluids* 37(8):943-964 (2008)
47. **Ball, C.G.**, Uddin, M., Pollard, A. "Mean flow structures inside the human upper airway" *Flow, Turbulence and Combustion* 81(1-2):155-188 (2008)
48. **Uddin, M.** and Pollard, A. "Self-similarity of co-flowing jets: the origin of the virtual origin." *Physics of Fluids* 19, 068103_1-068103_4 June 2007
49. **Uddin, M.** and Pollard, A. "MPI Scalability of a Large Memory LES Code." *International Journal of High Performance Computing and Networks* 4(5-6):295-302 Invited 2006
50. **Johnstone, A., Uddin, M.** and Pollard, A. "Calibration of hot-wire probes using non-uniform mean-velocity profiles." *Experiments in Fluids* 39:525-532 2005.
51. Pollard, A., **Ozem, H.** and Grandmaison, E.W. "Turbulent, Swirling Flow Over An Axisymmetric, Constant Radius Surface." *Journal of Experimental Thermal and Fluid Science* 29(4):493-509 2005

52. Benaissa, A., Fleck, B. and Pollard, A. "Wall Effects on Axi-symmetric Jet Evolution." *International Journal of Transport Phenomena* 6(4):323-331 2004
53. **Johnstone, A., Uddin, M.,** Pollard, A., **Heenan, A. F.** and Finlay, W. H. "The flow inside an idealised form of the human extra-thoracic airway." *Experiments in Fluids* 37(5) 673-689 2004
54. **Heenan, A. F.,** Finlay, W. H., Grgic, B., Pollard, A. and Burnell, P.K.P. "An Investigation of the Relationship Between the Flow Field and Regional Deposition in Realistic Extra-thoracic Airways." *Journal of Aerosol Science* 35(8) 1013-1023 2004
55. **Heenan, A.F.,** Matida, E., Pollard, A. and Finlay, W. "Experimental Measurements and Computational Modelling of the Flow Field in an Idealised Extra-thoracic Airway." *Experiments in Fluids* 35:70-84 2003
56. **Lavoie, P.** and Pollard, A. "Uncertainty Analysis of Four-sensor Hot-Wires and Their Data Reduction Schemes used in the Near Field of a Turbulent Jet." *Experiments in Fluids* 34: 358-370 2003
57. Xu, H., Khalid, M. and Pollard, A. "Large Eddy Simulation of Turbulent Flow in a Confined Square Annular Jet." *International Journal of Computational Fluid Dynamics* 17(5):339-356 2003
58. **McIlwain, S.** and Pollard, A. "Large Eddy Simulation of the Effects of Mild Swirl on the Near Field of a Round Jet." *Physics of Fluids* 14(2): 653-661 2002
59. **Xu, H.** and Pollard, A. "Large Eddy Simulation of Turbulent Flow in a Square Annular Duct." *Physics of Fluids* 13(11): 3321-3337 2001
60. Delabroy, O., Haile, E., Lucas, F., Candel, S., Pollard, A., Sobiesiak, A. "Passive and Active Control of NO_x in Industrial Burners." *Experimental Thermal Fluid Science* 16:64-75 1998
61. Pollard, A., Bonnet, J-P., Gad el Hak, M. "Flow Control, Current Status and Future Prospects." *Experimental Thermal Fluid Science* 16:157-164 1998
62. **Ormerod, R.C.,** Becker, H.A., Grandmaison, E.W., Pollard, A., Sobiesiak, A. and **Thurgood, C.P.** "Effect of Process Variables on Scale Formation in Steel Reheating." *Canadian Journal of Chemical Engineering* 75:402-413 1997
63. **Xu, H.,** Matovic, D. and Pollard, A. "Finite Difference Schemes for 3D, Time Dependent Convection Diffusion Equation Using Full Global Discretisation." *Journal of Computational Physics* 130:109-122 1997
64. Pollard, A. "Active and Passive Control of Near Wall Turbulence." *Progress in Aerospace Sciences* 33:689-708 Invited 1997
65. **Fernandes, R.L.J.,** Sobiesiak, A. and Pollard, A. "Single and opposed round jets issuing into a small aspect ratio channel crossflow." *Experimental Thermal Fluid Science* 13:374-394 1996
66. **Sullivan, P.E.** and Pollard, A. "Coherent structure identification from the analysis of hotwire data." *Measurement Science and Technology topical issue on Thermal Anemometry* 8:1498-1516 Invited 1996

67. **Liu, F.**, Becker, H.A. and Pollard, A. "Spatial Differencing Schemes of the Discrete Ordinates Method." *Numerical Heat Transfer, Part B* 30:23-43 1996
68. Pollard, A., **Wakarani, N.** and Shaw, J. "Genesis and morphology of erosional shapes associated with turbulent flow over a forward facing step in Coherent Flow Structures in Open Channels." *Ashworth, Bennett, Best and McLelland (eds), Wiley and Sons Ltd.*, Chapter 13, pp. 249-265 1996
69. **Heyerichs, K.** and Pollard, A., "Prediction of some separated turbulent flows with heat transfer." *International Journal of Heat and Mass Transfer* 39(12):2385-2400 1996
70. Pollard, A., Savill, A.M., **Tullis, S.** and **Wang, X.** "Effects of thin element, compound thin element and flat valley v-groove riblets on near wall turbulent flow." *American Institute of Aeronautics and Astronautics Journal* 34(11):2261- 2268 1996
71. **Sullivan, P.**, Pollard, A., Delville J. and Bonnet, J.P. "Two-dimensional Gram-Charlier Reconstruction of Velocity Correlations." *Physics of Fluids* 8(10):2671-2677 1996
72. **Zheng, L.**, **Matovic, D.M.**, Pollard, A. and Sellens, R.W. "A distributive mass balance correction in single and multigrid incompressible flow calculation." *International Journal Computational Fluid Dynamics* 6(2):125-136 1996
73. **Thurgood, C.P.**, Pollard, A. and Becker, H.A. "The T-N quadrature set for Discrete Ordinates Method." *ASME, Journal of Heat Transfer* 117:1068-1070 1995
74. **Sullivan, P.**, **Day, M.** and Pollard, A. "Enhanced VITA techniques for turbulent structure identification." *Experiments in Fluids* 18(1/2):10-16 1994
75. **Simoneau, J.** and Pollard, A. "Finite-Volume Methods for Laminar and Turbulent Flows using a Penalty-Function Approach." *International Journal of Numerical Methods in Fluids* 18(8):733-746 1994
76. **Tullis, S.** and Pollard, A. "Time Dependent Flow Over V and U Groove Riblets of Different Sizes." *Physics of Fluids* 6(3):1310-1314 1994
77. **Humber, A.J.**, Grandmaison, E.W. and Pollard, A. "Mixing Between a Sharp-Edged Rectangular Jet and a Transverse Cross-Flow." *International Journal of Heat and Mass Transfer* 36(18):4307-4316 1993
78. **Tullis, S.** and Pollard, A. "Modelling the Time-Dependent Flow Over Riblets in the Viscous Wall Region." *Applied Scientific Research* 51:563-567 1993. Advances in Turbulence, Nieuwstadt (ed.), Kluwer Academic Press, Dordrecht. (Note: due to a publisher's oversight, the title of this paper duplicates an earlier one; however, the results presented are for riblets with greater spatial density)
79. **Tullis, S.** and Pollard, A. "Modelling the Time Dependent Flow over Riblets in the Viscous Wall Region." *Applied Scientific Research* 51:299-314 1993 Special Volume on Drag Reduction, Krishna Prasad, (ed.), Kluwer Scientific Publishers, 1993 (See also, 6th Euro. Drag Reduction Meeting, Eindhoven 1991)
80. **Rubini, P.A.**, Becker, H.A., Grandmaison, E.W., Pollard, A., **Sobiesiak, A.** and **Thurgood, C.P.** "Multi-grid acceleration of three-dimensional, turbulent, variable density flows." *Numerical Heat Transfer, Part B* 22:163-177 1992
81. Pollard, A., Thomann, H. and Savill, A. M. "Manipulation and Modelling of Turbulent Pipe Flow: Some Parametric Studies of Single and Tandem Ring Devices." *Turbulence Control by Passive Means* E. Coustols (ed.), pp23-40, Kluwer Academic Publishers, Dordrecht 1990

82. Grandmaison, E.W., Pollard, A. and Ng, S. "Scalar mixing in a free turbulent rectangular jet." *International Journal of Heat and Mass Transfer* 34(10): 2653-2662 1991
83. Pollard, A., Savill, A.M. and Thomann, H. "Turbulent Pipe Flow Manipulation: Some Experimental and Computational Results for Single Manipulator Rings." *Applied Scientific Research* 46(3):281-290 1989
84. **Martinuzzi, R.** and Pollard, A. "A Comparative Study of Turbulence Models in Predicting Turbulent Pipe Flow Part 2: Reynolds Stress Models vs. $k-\epsilon$." *American Institute of Aeronautics and Astronautics Journal* 27(12):1714-1721 1989
85. **Martinuzzi, R.** and Pollard, A. "A Comparative Study of Turbulence Models in Predicting Turbulent Pipe Flow. Part 1: Algebraic Stress Models vs. $k-\epsilon$." *American Institute of Aeronautics and Astronautics Journal* 27(1):29-36 1989
86. **Tabatabai, M.** and Pollard, A. "Turbulence in Radial Flows Between Parallel Disks at Medium and Low Reynolds Numbers." *Journal of Fluid Mechanics* 185:483-502 1987
87. **Latornell, D.J.** and Pollard, A. "Some Observations on the Evolution of Shear Layer Instabilities in Laminar Flow Through Axisymmetric Sudden Expansions." *Physical Fluids* 29(9): 2828-2835 1986
88. **Tabatabai, M.**, Pollard, A. and McPhail, A. "A Device for Calibrating Hot-Wire Probes at Low Velocities." *Journal of Physics E: Scientific Instruments* 19: 630-632 1986
89. **Hessami, M.A.**, Pollard, A., Rowe, R.D. and Ruth, D.W. "A Study of Free Convective Heat Transfer in a Horizontal Annulus with a Large Radii Ratio." *ASME, Journal of Heat Transfer* 107: 603-610 1985
90. **Latimer, B.R.** and Pollard, A. "A Comparison of Pressure-Velocity Coupling Solution Algorithms." *Numerical Heat Transfer* 8: 635-652 1985
91. Pollard, A. and **Iwaniw, M.A.** "The Flow from Sharp-Edged Rectangular Orifices – Effect Of Corner Rounding." *American Institute of Aeronautics and Astronautics Journal* 23 (4): 631-633 1985
92. **Quinn, W.R.**, Pollard, A. and Marsters, G.F. "Mean Velocity and Static Pressure Distributions in a Three- Dimensional Turbulent Free Jet." *American Institute of Aeronautics and Astronautics Journal* 23(6):971-973 1985
93. **Hessami, M. A.**, Pollard, A. and Rowe, R.D., "Numerical Calculation of Natural Convective Heat Transfer Between Horizontal Concentric Isothermal Cylinders - Effects of the Variation of the Fluid Properties." *ASME, Journal of Heat Transfer* 106:668-671 1984
94. Pollard, A. and **Siu, A.L-W.** "The Calculation of Some Laminar Flows Using Various Discretisation Schemes." *Computational Methods of Applied Mechanical Engineering* 35:293-313 1982
95. Pollard, A., "Computer Modelling of Flow in Tee-Junctions." *Physicochemical Hydrodynamics* 2(2/3):203-227 1981
96. Pollard, A. "A Contribution on the Effects of Inlet Conditions when Modelling Stenoses Using Sudden Expansions." *Journal of Biomechanics* 14(5):349-355 1981
97. Pollard, A. and Spalding, D.B. "On the Three-Dimensional Laminar Flow in a Tee-Junction." *International Journal of Heat Mass Transfer* 23:1605-1607 1980

98. Pollard, A. "The Numerical Calculation of Partially Elliptic Flows." *Numerical Heat Transfer* 2: 267-278 1979
99. Pollard, A. and Thyagaraja, A. "A New Method of Handling Flows with Body Forces." *Computer Methods in Applied Mechanical Engineering* 19:107-116 1979
100. Pollard, A. and Spalding, D.B. "The Prediction of the Three-Dimensional Turbulent Flow Field in a Flow Splitting Tee-Junction." *Computer Methods in Applied Mechanical Engineering* 13:293-306 1978
101. Raithby, G.D., Pollard, A., Hollands, K.G.T. and Yovanovich, M.M. "Free Convection Heat Transfer from Spheroids." *ASME Journal of Heat Transfer* 3:452-458 1976

Journal Papers Submitted/ In Preparation

102. Samie, M., Lavoie, P., Pollard, A. Quantifying eddy structures and very-large-scale motions in turbulent round jets, submitted, Jn. Fluid Mechanics, September 2020

Books and/or Chapters in Books and Special Issues of Journals

103. Pollard, A., Turbulent Round Jet Entrainment – A Historical Perspective. Invited Contribution to Professor D.B. Spalding Commemorative Volume: *50 Years of CFD in Engineering Sciences*, Runchal (ed.), Springer, 2019
104. Pollard, A., L. Danaila, L. Castillo and M. Glauser, *Whither Turbulence and Big Data for the 21st Century?* Springer Verlag ISBN-13: 978-3319412153 2016.
105. Pollard, A. and P-A. Krogstad (eds.) Wall Turbulence: A colloquium under the midnight sun, Special Issue, J. Turbulence, June 2015
106. Pollard, A., Pharoah, J. and Matovic, D. (eds) Special issue of the Int'l Jn. Computational Fluid Dynamics, CFD 2006, IJCFD, Vol 22, No's. 1&2, 133 pages. 2008
107. Pollard, A. and Candel, S. (eds.), *Turbulent Mixing and Combustion*, Proceedings of the IUTAM Symposium, Kingston, June 2001, Kluwer Academic Publ. 2002
108. Pollard, A., Mewhort, D. and Weaver, D. (eds.), *High Performance Computing Systems and Applications*, Kluwer Academic Pub. 2000
109. Pollard, A., Near Wall Turbulence Control, Chapter 7 in *Flow Control, Fundamentals and Practices*, Shortcourse Notes from Workshop held in Cargese, Corsica, Springer Verlag (ISBN3-540-63936-5), pp431-466, Pollard, Bonnet and Gad el Hak (eds) 1998
110. Gad-el-Hak, M., Pollard, A., and Bonnet, J.-P. (eds.) *Flow Control: Fundamentals and Practices*, Lecture Notes in Physics, Vol. m53, 540 pages, Springer-Verlag, Berlin. 1998
111. Pollard, A. "Riblets and other methods of controlling near-wall turbulence", Invited Contribution, *Emerging Techniques in Drag Reduction*, K.S. Choi, K. K. Prasad and T.V. Truong (eds.), Mechanical Engineering Publications, pp. 45--76, 1996
112. Patankar, S.V., Pollard, A., Singhal, A.K., and Vanka, S.P. (eds.) *Numerical Prediction of Flow, Heat Transfer, Turbulence and Combustion - Selected Works of D. Brian Spalding*, Pergamon Press, New York, 1983

113. Pollard, A., "Computer Analysis of Heat Exchangers", Chapter 12, *Industrial Heat Exchangers – A Basic Guide*, by Walker, McGraw-Hill 1982

Conference papers

114. Samie, M., Lavoie, P. and Pollard, A. Assessing Coherent Structures in Turbulent Round Jets Using Two-Point Measurements, 22nd Australasian Fluid Mechanics Conference, Brisbane, December 2020

115. Samie, M., Lavoie, P. and Pollard, A. Spectral analysis of a turbulent round jet, International workshop international workshop entitled "Reynolds number effect: implications for understanding and controlling turbulence", Institute for Turbulence-Noise-Vibration Interactions and Control, Harbin Institute of Technology, Shenzhen, China, during March 28-30, 2019

116. **Sadeghi, H.**, Lavoie, P. and Pollard, A. Hot-wire spatial resolution effects on turbulence statistics and velocity spectra in a turbulent round jet, Physics and Control of Turbulent Shear Flow, City University of New York, July 2017

117. Panidis, T., Pollard, A. and Schwab, R. R. The role of vorticity in turbulent, rectangular, free and wall jets, 10th International Symposium on Turbulent Shear Flow Phenomena, Chicago, July 2017.

118. Panidis, T., Pollard, A. and Schwab, R. R. Near field development of sharp-edged rectangular free and wall jets, 9th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, Foz do Iguazu, Brazil, June 2017

119. Xu, M., Zhang, J., Mi, J. and Pollard, A. Local dissipation scales in turbulent jets, Australasian Fluid Mechanics Conference, AFMC 2016 Perth, Australia

120. **Sadeghi, H.**, Lavoie, P. and Pollard, A. Hot-wire spatial resolution effects in measurements of turbulent round jets, ICTAM 2016 Montreal, August 2016

121. Panidis, T., Pollard, A. and R.R. Schwab, Cross-plane vorticity distributions in a rectangular wall jet, ICTAM 2016, Montreal, August 2016

122. **Dallali, M.**, Castano, S. L., da Silva, A-M., Pollard, A. and Armenio, V. Analysis of turbulent flow in meandering channel, XXV Convegno Nazionale di Idraulica e Costruzioni Idrauliche, Bologna, Sept. 2016

123. Panidis, T., Pollard, A. and Schwab, R.R. Vorticity component distributions in the near field of a wall jet, HEFAT2016, 12th Intl. Conf. on Heat transfer, Fluid mechanics and Thermodynamics, Costa del Sol, Malaga, Spain, July 2016.

124. **Dallali, M.**, Armenio, V., da Silva, A-M. and Pollard, A. LES Study of Meandering Flow in Streams Exhibiting Downstream Variation in Curvature, M.Yalin, S. Memorial Colloquium 2015. Fundamental river processes and connection between fluvial and coastal systems in a changing climate, University of Palermo, Italy, Nov. 2015

125. **Sadeghi, H.**, Lavoie, P. and Pollard, A. Turbulence and Data Analytics in the 21st Century: The Round Free Jet. Whither Turbulence and Big Data for the 21st Century, International Symposium at Inst. D'Etudes Sci. de Cargese, Cargese, Corsica April 20-14 2015.

126. **Sadeghi, H.**, Lavoie, P. and Pollard, A. The effect of large-scale inhomogeneities on small-scale structure in a turbulent flow, 15th European Turbulence Conference, Delft, Netherlands, August 25-28, 2015.
127. **Sadeghi, H.**, Lavoie, P. and Pollard, A. Self-preservation of the energy scale budget transport equation in a round free turbulent jet, TSFP-9, Melbourne, 2015. 1. Also presented as “The turbulent round jet: consequences of equilibrium similarity analysis”, 23rd ABCM Int’l Congress of Mechanical Engineering, Rio de Janeiro, Brazil. Dec 2015.
128. **Leslie, G.**, Pollard, A. and Matovic, D. Some issues associated with the introduction of low carbon fuels into cement manufacturing, 33rd International Conference on Thermal Treatment Technologies and Hazardous Waste Combustors, Baltimore, MD, October 13-15, 2014.
129. **Davis, J.**, Pollard, A. and Chandler, J. The relationship between the standard deviation & the concentration of single train & simultaneous multiple train Dioxin & Furan data, 33rd International Conference on Thermal Treatment Technologies and Hazardous Waste Combustors, Baltimore, Maryland, October 13-15, 2014.
130. Vouros, A.P., Pollard, A., Panidis, T. and Schwab, R. R. Momentum and Vorticity balances in a jet that Issues from a Sharp-edged Rectangular Orifice, 19th Australasian Fluid Mechanics Conf. Melbourne, Australia, Dec. 2014.
131. **Sadeghi, H.**, Pollard, A. and Lavoie, P. Turbulent Energy Scale Budget Equation Applied to a Free, Round, Turbulent Jet and the Effect of a Passive Ring, 19th Australasian Fluid Mechanics Conf. Melbourne, Australia, Dec. 2014.
132. Pollard, A. and **Asgari, M.** Characterising non-homogeneous wall roughness using texture analysis, Wall Turbulence: A Colloquium under the Midnight Sun, Trondheim, Norway, June 23-24, 2014.
133. Pollard, A., **Secretain, F.** and Milne, B. Air and Blood Fluid Mechanics: The interface between Engineering and Medicine, **Keynote**, 21st Fluid Mechanics Conference of the Polish Academy of Sciences, Krakow, Poland, June 2014.
134. Pollard, A. Low carbon fuels: An alternate source of energy for the cement industry, University of Melbourne, Victoria, Australia, February 2014.
135. Pollard, A. Scaling velocity spectra in a round, free, turbulent jet, Fluid Mechanics in New Zealand, University of Auckland, New Zealand, January 2014.
136. **Andrews, R.**, Pollard, A., Pearce, J. Photovoltaic system performance enhancement with non-tracking planar concentrators: Experimental measurements and BDRF based modelling, 39th IEEE Photovoltaics Specialists Conference, Tampa, Florida, June 2013. (This paper was reviewed and published as doi:10.1109/PVSC.2013.6744136 and is duplicated in Journal Publications, above)
137. **Vouros, A.**, Schwab, R., Pollard, A. and Pannidis, T. Velocity and vorticity distributions in cross planes of a sharp- edged rectangular jet, 8th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, Lisbon, Portugal 2013.
138. **Mojab, S.M.**, Beale, S., Hanff, E., Pollard, A. and Pharoah, J. Computational and experimental studies for doubly- periodic arrays of spacer-filled membrane passages, ASME Summer Heat Transfer Conference, Minneapolis, Minnesota, July 14-19 2013.

139. **Sadeghi, H.**, Lavoie, P. and Pollard, A. Scaling Exponent of Velocity Spectra and Structure Functions in the Moderate Range of Taylor Reynolds Numbers in a Turbulent Jet, Turbulent Shear Flow Phenomena, Poitiers, France August 2013.
140. **Sadeghi, H.** and Pollard, A. The preferred and shear layer modes in a jet under passive control, 18 Australasian Fluid Mechanics Conference, Launceston, Tasmania, December 2012.
141. Secretain, F. and Pollard, A., Acoustic breakup of potential cerebral emboli, 18 Australasian Fluid Mechanics Conference, Launceston, Tasmania, December 2012.
142. **Mojab, S.M.**, Pollard, A., Pharoah, J., Beale, S.B., Hanff, E.S. Unsteady-laminar to turbulent flow in a spacer filled channel, 7th International Symposium Turbulence and Heat and Mass Transfer, Palermo, Italy 2012.
143. **Sadeghi, H.** and Pollard, A. Axial velocity spectra scaling in a round, free jet, 7th International Symposium Turbulence and Heat and Mass Transfer, Palermo, Italy 2012.
144. Zanko, P., Pollard, A. and Miheev, N., Unsteady phenomena in separated and reattaching flows from statistical characteristics to instantaneous space-time fields, 15th Intl. Symposium Flow Visualization, Minsk, Russia, June 2012.
145. **Xu, M.**, Pollard, A., Mi, J., **Secretain, F.** and **Sadeghi, H.** Reynolds number effects on the spectra from a turbulent free jet of initial square cross-section and the Kolmogorov isotropy “law”, 23rd Intl Congress of Theoretical and Applied Mechanics, Beijing, China August 19-24 2012.
146. **Sadeghi, H.** and Pollard, A. Mixing Transition in a Round Free Turbulent Jet: Effect of a Passive Ring, 9th International ERCOFTAC Symposium Engineering Turbulence Modelling and Measurements, Thessaloniki, Greece, June 2012.
147. **Mojab, S.M.**, Beale, S.B., Pharoah, J.G., Pollard, A., Hanff, E.S. Reynolds number effects on flow in a spacer filled channel, CFDSC, CFD 2012, Banff, Alberta, May 2012.
148. Beale, S., Pharoah, J., **Mojab, S.M.** and Pollard, A. Numerical study of laminar flow and mass transfer for offset diagonal spacer filled passages employed in membrane modules, ASME IMECE, Denver, Colorado Nov. 2011.
149. **Duncan, A.**, Fellouah, H. and Pollard, A. Torrefied Biomass Pellets through the use of Experimental Design, 6th Dubrovnik Conference on Sustainable Development of Energy, Water and Environment Systems, Dubrovnik, Croatia, Sept 25-29 2011.
150. **Bespalko, D.J.**, Pollard, A. and Uddin, M. Pressure variance and spectra using LBM based DNS, 13 Asian Congress of Fluid Mechanics, Daka, Bangladesh, December 2010.
151. **Bespalko, D. J.**, Pollard, A. and Uddin, M. On the Accuracy of the Pressure Fluctuations Calculated from an LBM Simulation of Turbulent Channel Flow, 7th Int'l Symposium of Turbulent Shear Flow Phenomena, Ottawa, Ontario, July 2011.
152. **Wei, L.** and Pollard, A. Near-wall Vorticity Dynamics in Turbulent Compressible Flows, 7th Int'l Symposium of Turbulent Shear Flow Phenomena, Ottawa, Ontario, July 2011.
153. **Raiesi, H.**, Pollard, A. and Piomelli, U. Direct Numerical Simulations of Turbulence Induced Secondary Motion in Square and Skewed Ducts, 7th Int'l Symposium of Turbulent Shear Flow Phenomena, Ottawa, Ontario, July 2011.

154. **Secretain, F.**, Milne, B. and Pollard, A. Detection of Emboli using Transesophageal Echocardiography for Counting, Total Volume and Size Estimation, Society of Cardiovascular Anesthesiologists, 33rd Annual Meeting and Workshop, Savannah, Georgia, April/May 2011.
155. **Shinneeb, A-M.** and Pollard, A. Investigation of Vortical Structures in the human pharynx/larynx region, 7th Int'l Symposium of Turbulent Shear Flow Phenomena, Ottawa, Ontario, July 2011.
156. Pollard, A. and Attfield, B. Back to the Future with Supercomputing: Our Retrospective, KEYNOTE lecture, HPCS 2011, Montreal, Quebec, June 14-17, 2011.
157. Pollard, A. Oro-Pharangeal-Laryngeal Flow Physics, KEYNOTE lecture, 17th Australasian Fluid Mechanics Conference, Auckland, New Zealand, December 2010.
158. Pollard, A. and **Shinneeb, A-M.** Flow in the upper human airway – A kaleidoscope of flow physics, KEYNOTE paper, 18th Annual Conference CFDSC, London Ontario, May 2010.
159. **Ford, M.**, Piomelli, U., Cao, R.Y., Funk, C.D. and Pollard, A. Numerical simulation of the intra-aneurismal vortex shedding in induced mouse abdominal aortic aneurysms, Proceedings of ASME 2010 3rd Joint US-European Fluids Engineering Summer Meeting & 8th International Conference on Nanochannels, Microchannels, and Minichannels FEDSM 2010-ICNMM 2010, Montreal, Quebec, August 2-4, 2010.
160. **Raiesi, H.**, Piomelli, U. and Pollard, A. Evaluation of turbulence models in separated boundary layers, 3rd Joint US-European Fluids Engineering Summer Meeting, Montreal, Quebec, August 1-5, 2010.
161. **Raiesi, H.**, Pollard, A. and Piomelli, U. Direct numerical simulations of turbulent flow in square and skewed ducts, Proceedings, 18th Annual Conference of CFD Society of Canada, CFD 2010, London, Ontario, May 2010.
162. **Dorostkar, A.**, Boegman, L., Diamessis, P. and Pollard, A. Comparison of hydrostatic and non-hydrostatic internal wave fields in Cayuga Lake, Intl. Assoc. Great Lakes Research, Toronto, Ontario, May 2010.
163. **Dorostkar, A.**, Boegman, L., Diamessis, P. and Pollard, A. Sensitivity of MITgcm to different model parameters in application to Cayuga Lake, 6th Int'l. Symp. Environmental Hydraulics, Athens, Greece, June 2010.
164. **Mojab, S.M.**, Hanff, E.S., Beale, S.B., Pollard, A. and Pharoah, J.G. Particle image velocimetry investigation of flows within spacer-filled channels, 15th Intl Symp. Applications of Laser Techniques to Fluid Mechanics, Lisbon, Portugal, July 2010.
165. **Shinneeb, A.** and Pollard, A. Vortex Identification in the Human Epiglottal Region From POD-Reconstructed Velocity Fields, 15th Intl Symp. Applications of Laser Techniques to Fluid Mechanics, Lisbon, Portugal, July 2010.
166. **Duncan, A.**, Pollard, A. and Mabee, W. Disruptive Policy Decisions and Impact on Conversion From Coal to Biomass – An Ontario Perspective, Thousand Island Energy Research Forum, Alexandria Bay, New York, October, 2009.
167. **Wei, L.** and Pollard, A. Effect of Mach number on structure functions and correlations in turbulent channel flow, Proceedings, 6th Int'l Symposium on Turbulent, Heat and Mass Transfer, Rome, Italy, September 14-18, 2009.

168. **Bespalko, D.**, Pollard, A. and Uddin, M. Direct numerical simulation of fully developed channel flow using lattice Boltzmann method and use of METIS in parallel HPC environments, HPC Symposium 2009, Kingston ON, June 2009.
169. **Raiesi, H., Bespalko, D.** and Pollard, A. Large scale synthetic turbulent structures as initial conditions for temporally developing direct and large eddy simulations, CFD 2009, Ottawa, Ontario, May 3-5, 2009.
170. Pollard, A. The influence of boundary conditions on turbulent jets, Keynote Lecture, 7th World conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, Jagiellonian University, Krakow, Poland, June/July 2009.
171. Ball, C.G., **Shinneeb, A.** and Pollard, A. Three dimensional flows in the human upper airway, XXII Congress, International Society Biomechanics, Cape Town, South Africa, July 2009.
172. **Fellouah, H.** and Pollard, A. The near and intermediate field of a round jet: the effect of Reynolds number and mixing transition, TSFP-6, Seoul, South Korea, June 2009.
173. Pollard, A. Bio-mass and Bio-Energy: Feedstock to Product Chain Options for the Great Lakes Regions, New Zealand Institute for Mathematics and its Applications, Program on Energy, Wind and Water, Auckland, New Zealand, February 2009. (Invited)
174. **Wei, L.** and Pollard, A. Direct numerical simulation of turbulent channel flow with pressure gradients, iTi Conference on Turbulence III, Bertinoro, Italy, October 12-15 2008.
175. Pollard, A. Whither the round jet? And the effects of swirl, tabs and walls, 'CHT-08', Proc. 4th Int. Symposium on Advances in Computational Heat Transfer, Marrakech, Morocco, May 11th-16th 2008. (Invited) <http://www.edata-center.com/proceedings/1bb331655c289a0a,7b3a3e4b261b8fb8.html>
176. Rowe, R.K., Pollard, A., **Chisholm, E., Chong, A., Toda, R.** and **Tomson, C.** Sustainable landfills- a technique for extracting heat to prolong liner service-life of geomembrane liners, Proceedings, 60th Canadian Geotechnical Conference, Ottawa, Ontario, October 2007. pp1310-1315
177. **Fournier, G., Golanski, F.** and Pollard, A. A novel outflow boundary condition for laminar flows, AERO07, Cdn Aeronautical and Space Institute Symposium, Toronto, Ontario, April 2007.
178. **Raiesi, H., Sheridan, E.** and Pollard, A. Identification of separation and reattachment in steady and unsteady flows, AERO07, Cdn Aeronautical and Space Institute symposium, Toronto, Ontario, April 2007.
179. **Bespalko, D.**, Uddin, M. and Pollard, A. Direct Numerical Simulation of turbulent channel flow using the Lattice Boltzmann Method, Proceedings, CFD 2007, Toronto, Ontario, May 27-30, 2007.
180. **Golanski, F.**, Pollard, A. and Hall, K. Large Eddy Simulation of a low speed, high aspect ratio rectangular jet in a cross flow, Proceedings, Turbulent Shear Flow Phenomena, Munich, Germany, 2007.
181. **Ball, C.G., Uddin, M.** and Pollard, A. Lattice Boltzmann simulation of flow in the human upper airway, Int'l Symp. Turbulence, Heat and Mass Transfer 5, Dubrovnik, Serbia,

Hanjalic, Nagano and Jakirlic (eds), Sept. 2006. (Invited for inclusion in special volume of Flow, Turbulence and Combustion)

182. Pollard, A. Insights derived from the application of lattice Boltzmann methods to the complex flow within a human airway, Canadian Society of Fluid Dynamics, York University, Toronto, Ontario, July 16-20 2006.

183. **Ball, C.G., Uddin, M.**, Pollard, A. Direct numerical simulation of airflow in an idealised upper airway, Proceedings, CFD 2006, Kingston ON, July 16-18, 2006. (Runner up, best paper award)

184. Pollard, A., **Ball, C.G., Bepalko, D., Secretain, F., Uddin, M., Wei, L. and Fernandes, R.** Unsteady RANS study of the spacing effects of four opposed jets in a cross flow, 13th Annual Conference of the CFDSC, St. John's Newfoundland, July, 2005.

185. Pollard, A., **Ball, C.G., Bepalko, D., Secretain, F., Uddin, M., Wei, L. and Fernandes, R.** Experimental and Computational Study of Two Pairs of Opposed Jets in a Confined Cross-Flow, 6Th World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, Miyagi, Japan, April 2005. (Best paper award)

186. **Uddin, M.** and Pollard, A. Effect of initial conditions in the near and far fields of a co-flowing jet, Proceedings, 4th Int'l Symposium Turbulent Shear Flow Phenomena, Williamsburg, Virginia, June 2005 Humphrey et al. (eds.)

187. Finlay, W.H., **Grgic, B., Heenan, A.**, Pollard, A. and Burnell, P.K.P. Deposition and fluid motion measurements in realistic mouth-throat replicas, American Association for Aerosol Research Conference, Hyatt Regency Atlanta, Atlanta Georgia, October 4-8, 2004.

188. **Uddin, M.** and Pollard, A. MPI scalability of a large memory LES code, High Performance Computing Symposium, Winnipeg, Manitoba, May 2004.

189. **Ball, C., Uddin, M.** and Pollard, A. Evaluation of several turbulence models to predict flow in an idealised human extra-thoracic airway, CFD'04, Ottawa, Ontario, May 2004. (Best Student Paper Award, Runner-up)

190. Pollard, A., **Uddin, M.** and **Braly, J.** Large eddy simulation of 3-D square wall jets, CFD'04, Ottawa, Ontario, May, 2004.

191. **Uddin, M.** and Pollard, A. Effects of initial conditions on the self-similarity in a co-flowing axi-symmetric jet, CFD'04, Ottawa, Ontario, May, 2004.

192. Finlay, W. H., Zhang, Y., Grgic, B., Heenan, A., Burnell, P., Matida, E. A., Pollard, A., and Lange, C. F. Solving a Major In Vitro - In Vivo Correlation Problem: Impactor Induction Ports, In R. N. Dallby, P. R. Byron, J. Peart, J. D. Suman, and S. J. Farr, eds. Respiratory Drug Delivery IX, volume I, pages 203-210, Palm Desert, California. Respiratory Drug Delivery, Davis Healthcare International Publishing, LLC, River Grove, Illinois, USA.

193. **Uddin, M.** and Pollard, A. On the existence of similarity of Reynolds Stresses in a high velocity ratio co-flowing round jet, American Physical Society, Division of Fluid Dynamics, East Rutherford, New Jersey, November 2003. Paper KG010.

194. Benaissa, A., Fleck, B. and Pollard, A. Wall Effects on Axi-symmetric Jet Evolution, Proceedings, 14th Int'l. Symp. Transport Phenomena, Bali, Indonesia, July 2003.

195. Xu, H., Khalid, M. and Pollard, A. Numerical Simulation of Low Reynolds Number Turbulent Flow in Rectangular Annular Ducts, Proceedings, Turbulent Shear Flow Phenomena, Sendai, Japan, June 25-27, 2003.
196. **Johnstone, A., Heenan, A.,** Pollard, A. and Finlay, W. Experimental Investigation of Turbulent Flow in an Idealised Human Airway in the Extra-thoracic Region, Proceedings, Turbulent Shear Flow Phenomena, Sendai, Japan, June 25-27, 2003.
197. **Waterman, S., Holme, T.,** McIlwain, S. and Pollard, A. Investigation of various structure identification methods and the effects of tabs on the near field of round jets, ASME Symposium "On the measurement and modelling of large scale turbulent structures", ASME Fluids Engineering Summer Meeting, Montreal, Quebec, June 2002.
198. Xu, H., Khalid, M. and Pollard, A. LES of Turbulent Flows in a 2:1 ratio Rectangular Duct, Proceedings, IX European Turbulence Conference, Castro, Hancock, Thomas (eds.), 2002, International Centre for Numerical Methods in Engineering, Barcelona, Spain, pp391-394.
199. McIlwain, S., **Holme, T., Waterman, S.** and Pollard, A. Effects of single, dual and quadruple tabs on the near field of round jets, Proceedings, IUTAM Symposium on Turbulent Mixing and Combustion, Kluwer Academic Pub., Dordrecht, Netherlands, 2002. Pollard and Candel (eds.), pp 377-385
200. Pollard, A., Eddies are Captivating, Invited talk, Symposium in Honour of Professor A.E. Perry, Adelaide, Australia, December 2001.
201. Finlay, W. H., DeHaan, W., **Grgic, B., Heenan, A., Matida, E. A.,** Hoskinson, M., Pollard, A. and Lange, C. F. Fluid mechanics and particle deposition in the oropharynx: Factors that really matter. In: Dalby, RN, Byron, PR Farr, SJ (eds) Respiratory Drug Delivery VIII, Tuscon, Arizona, Serentic Press, pp 171-177. May 12-16, 2001.
202. **Marcouyre, M.,** McIlwain, S. and Pollard, A. Large Eddy Simulation of the near field of round jets with vortex generating tabs, Proceedings, Turbulent Shear Flow Phenomena, Stockholm, Sweden, June 2001. Volume 3, pp 113-118
203. Xu, H. and Pollard, A., Detailed analysis of LES of turbulent flow in a square annular duct, Proceedings, CFD 2001, Waterloo, Ontario, Schneider (ed), pp 489-494, May 2001-09-11.
204. **Lavoie, P.** and Pollard, A. Analysis of four data reduction schemes applied to four sensor hot-wire probes, 14th Australasian Fluid Mechanics Conference, Adelaide, Australia, December 2001.
205. Pollard, A. and **McIlwain, S.** Effects of single, dual and quadruple tabs on the near field of round jets, Proceedings, IUTAM Symposium on Turbulent Mixing and Combustion, Kingston ON, June 2001. Kluwer Academic Pub., Dordrecht, Netherlands, 2002, Pollard and Candel (eds)
206. Xu, H., Khalid, M. and Pollard, A. Large eddy simulation of turbulent flow in a confined square coaxial jet, 4th Pacific Int'l. Conference on Aerospace Science and Technology, Taiwan, 2001.
207. **McIlwain, S.** and Pollard, A. LES of Free Jets, Presented at International Congress of Theoretical and Applied Mechanics, ICTAM 2000, Chicago, Illinois, June 2000.
208. **McIlwain, S.** and Pollard, A. Large scale structures in a co-annular jet with low swirl, Proceedings, CFD 2000, CFDSC, Montreal, Quebec, June 2000.

209. Pollard, A., **McIlwain, S.** and **Amalfi, S.** The hidden structure in a round jet, Proceedings, 3rd Int'l Conference on Flow - Interaction of Science and Art, February 2000. Gyr, Koumoutsakos, Burr (eds), pp 79-84, Kluwer Academic Publ.
210. **McIlwain, S.** and Pollard, A. Flow Topology in a Square Annular Duct, Symposium on Turbulence Shear Flow Phenomena, Santa Barbara, California, 1999.
211. **Xu, H.**, Khalid, M. and Pollard, A. Spatial evolution of turbulent flow in a confined square coaxial jet, AIAA, 99- 3357, 14th CFD Conference, Virginia, July 1999.
212. Bonnet, J.-P., Pollard, A. and Gad-el-Hak, M., Flow Control: Principles and Applications for Turbulent Flows, Invited Paper, 3rd Int'l. Conference on Pumps and Fans, pp 1-10, Wu and Cao (eds), Tsinghua University, Beijing, China, 1998.
213. **Benaissa, A., Ewing, D.**, J.F. Morrison and Pollard, A. Effects of Wall Proximity on Round Jets, Proceedings, 7th Euro. Conf. Turbulence, pp47-50, Frisch (ed), Kluwer Academic Press 1998.
214. **McIlwain, S., Ewing, D.** and Pollard, A. A Similarity Hypothesis for the Two-Point Two-Time Velocity Correlation Tensor in a Temporally Evolving Wake, Turbulent Shear Flow 11, Grenoble, France, September 1997.
215. **Xu, H.** and Pollard, A. Large Eddy Simulation of Annular Duct Flows, Proceedings, Turbulent Shear Flows 11, Grenoble, France 1997.
216. **Benaissa, A., Ewing, D.** and Pollard, A. Investigation of Three Dimensional Wall Jet with Axis Removed from the Wall and the Effect of the Wall on Coherent Structures, Proceedings, Turbulent Shear Flows 11, Grenoble, France 1997.
217. **Ewing, D.** and Pollard, A. Evolution of the Large Scale Motions in a Three Dimensional Wall Jet, 28th AIAA paper 97, Snowmass, Colorado, July 1997.
218. **Xu, H.** and Pollard, A. Simulation of Square and Annular Duct Turbulent Flows, Proceedings, CFD'97, CFD Society of Canada, Victoria, British Columbia, 1997.
219. **McIlwain, S., Ewing, D.** and Pollard, A. Effects of Finite Boundary Conditions on the Evolution of Equilibrium Flows, Proceedings, CFD'97, CFD Society of Canada, Victoria, British Columbia, 1997. (Best Student Paper Award)
220. Pollard, A. Interaction Between CFD and Experiments, Plenary Paper, Proceedings, CFD'97, CFD Society of Canada, Victoria, British Columbia, 1997.
221. **Xu, H.** and Pollard, A. Large Eddy Simulation of Annular Duct Flows Using Parallel Computation, Proceedings, First AFOSR Int'l. Conference on DNS and LES, Rushton, Louisiana, Liu & Liu (eds.) Greydon Press, Columbus, Ohio, pp 299-306, 1997.
222. **Ewing, D., Benaissa, A.,** Pollard, A., **Citriniti, J.**, Abahamsson, H. and Lofdahl, L. Contribution of Large Structures to the Anisotropic Spread Rate in a Wall Jet Issuing from a Round Nozzle, Proceedings, ISTP-10 Conference, Kyoto, Japan, 1997.
223. **Fernandes, R.**, Sobiesiak, A. and Pollard, A. Mixing between opposed, round jets and a transverse channel flow, Combustion Institute, Canadian Section, 1996 Spring Technical Meeting, University of Waterloo, Waterloo, Ontario, May 27-29.

224. **Liu, F.**, Becker, H. and Pollard, A. Evaluation of thermal NO models in methane/air combustion using a diffusion flamelet model, Combustion Canada conference, Ottawa, Ontario, June 1996.
225. **Liu, F.**, Becker, H. and Pollard, A. Modelling of turbulent non-premixed combustion in gas-fired furnaces using a non-adiabatic full-equilibrium combustion model, Combustion Canada conference, Ottawa, Ontario, June 1996.
226. Pollard, A., **Lam, S.** and **Liu, F.** Axisymmetric swirling free jets: assessment of Reynolds stress and two equation models of turbulence, Proceedings, CFD96, 4th Annual conference of the CFD Society of Canada, Ottawa, Ontario, June 1996.
227. Pollard, A., Gyr, A. and Muller, A. Flow topology of turbulent flow over a forward facing step, Proceedings, CFD96, 4th. Annual conference of the CFD Society of Canada, Ottawa, Ontario, June 1996.
228. **Heyerichs, K.** and Pollard, A. Assessment of some two equation models for predicting heat transfer in separated and impinging turbulent flows, Proceedings, Turbulent Heat Transfer Conference, San Diego California, March 10-15, 1996.
229. **Liu, F.**, Becker, H.A. and Pollard, A. A laminar flamelet model of non-adiabatic non-premixed turbulent combustion, Spring Technical Meeting Combustion Institute, Canadian Section, Victoria, British Columbia, May 24-26, 1995.
230. Pollard, A. Impingement of a round turbulent jet with heat transfer: Validation exercise, Proceedings, Third National Conference, CFD Society of Canada, Banff, Alberta, June 12-27, 1995.
231. **DaSilva, A.M.F.** and Pollard, A. Prediction of turbulent, meandering streams, Proceedings, Third National Conference, CFD95 of the CFD Society of Canada, Banff, Alberta, June 25-27, 1995.
232. **Heyerichs, K.** and Pollard, A. Prediction of impinging turbulent flow with heat transfer, Proceedings, Third National Conference, CFD95 of the CFD Society of Canada, Banff, Alberta, June 25-27, 1995.
233. **Xu, H.**, Pollard, A. and **Matovic, D.M.** Global Discretisation of the convection-diffusion equation, Proceedings, Third National Conference, CFD95 of the CFD Society of Canada, Banff, Alberta, June 25-27, 1995.
234. **Matovic, D.M.** and Pollard, A. Improved multi-grid convergence rate by a distributive mass balance correction, PROCEEDINGS, Third National Conference, CFD95 of the CFD Society of Canada, Banff, Alberta, June 25-27, 1995.
235. Pollard, A., **Wakarani, N.** and Shaw, J. Genesis and morphology of erosional shapes associated with turbulent flow over a forward facing step, Int'l Conference on coherent flow structures in open channels: origins, scales and interactions with sediment transport and bed morphology, Leeds, England April 10-12, 1995.
236. Yalin, S. and Pollard, A. Large scale turbulent structure effects on erodable surfaces, Int'l Conference on coherent flow structures in open channels: origins, scales and interactions with sediment transport and bed morphology, Leeds, England April 10-12, 1995.
237. **DaSilva, A.M.F.** and Pollard, A. Turbulent flow and erosion/deposition in sine generated meandering channels, Accepted for presentation, Int'l Conference on coherent flow

structures in open channels: origins, scales and interactions with sediment transport and bed morphology, Leeds, England, April 10-12, 1995.

238. **Sullivan, P.** and Pollard, A. The anisotropic growth rate in the near field of a three-dimensional wall jet, Proceedings, Tenth Symposium Turbulent Shear Flow, Pennsylvania State University, State College, Pennsylvania, August 14-16, 1995.

239. **Ozem, H.**, Becker, H.A., Grandmaison, E.W., Pollard, A. and Sobiesiak, A. Application of three equation models to a flat-flame burner, Proceedings, CFD94, Toronto, Ontario, June 1994.

240. **Bindar, Y.**, Becker, H.A., **Liu, F.**, Pollard, A., Sobiesiak, A. and **Thurgood, C.P.** Modelling the flow and radiative heat transfer in a large scale gas fired furnace, Proceedings, CFD94, Toronto, Ontario, June 1994.

241. Pollard, A., **Tullis, S.** and **Wang, X.** Skin friction drag reduction: A computational study of riblets, Proceedings, CFD94, Toronto, Ontario, June 1994.

242. **Matovic, D.M.** and Pollard, A. Numerical modelling of a multi-jet burner near field using a block collocated method and multi-grid acceleration, Proceedings, CFD94, Toronto, Ontario, June 1994.

243. **Sullivan, P.** and Pollard, A. Large eddy simulation subgrid scale reconstruction using Gram-Charlier, Stochastic Estimation and Wavelets, Proceedings, CFD94, Toronto, Ontario, June 1994.

244. **de Souza, F.**, Pollard, A., Delville J. and Bonnet, J.P. Manipulation of near wall turbulence using a laterally oscillating ribbon, Euromech 328, Manipulation and Control of Turbulent Flows, Berlin, Germany, October 1994.

245. Pollard, A. Riblets, Skin Friction and Near Wall Turbulence, Plenary Lecture/Paper 11th Canadian Symposium on Fluid Dynamics, Edmonton, Alberta, June 1994.

246. Pollard, A. Drag Reduction: Contributions from LES – DNS, Invited Paper, ERCOFTAC, Special Interest Group Workshop, 8th European Drag Reduction Meeting, Lausanne, Switzerland, September 1993.

247. Pollard, A., Delville J. and Bonnet, J.P. Skin friction reduction using a laterally oscillating ribbon, 8th European Drag Reduction Meeting, Lausanne, Switzerland, September 1993.

248. Pollard, A., **Tullis, S.** and **Wang, X.** Flow over pyramid, rectangular and compound rectangular shaped riblets, including higher order statistics, 8th European Drag Reduction Meeting, Lausanne, Switzerland, September 1993.

249. Pollard, A. Modelling Steel Reheat Furnaces: An example of Collaborative Research, Invited paper, CFD93, Computational Fluid Dynamics Society of Canada, Montreal, Quebec, June 1993.

250. **Matovic, D.**, Pollard, A., Becker, H.A. and Grandmaison, E.W. FAS Multigrid Calculations of Three-Dimensional Flow Using Non-Staggered Grids, Proceedings, 6th Annual Copper Mountain Conference on Multigrid Methods, April 1993.

251. **Wakarani, N.** and Pollard, A. Three-Dimensional, Time Dependent, Transitional Flow over a Forward Facing Step including Near Wall Structure, Proceedings, Int'l. Symposium on Turbulent Shear Flows, Kyoto, Japan, August 1993.

252. **Sullivan, P.** and Pollard, A. An Investigation of Coherent Structure in a Three-Dimensional Wall Jet using POD, VITA and PFV, Proceedings, Int'l. Symposium on Turbulent Shear Flows, Kyoto, Japan, August 1993. (Best poster award)
253. **Tullis, S.** and Pollard, A. A Numerical Investigation of the Turbulent Flow Over V and U Groove Riblets Using a Viscous Wall Region Model, Proceedings, Int'l Conference on Near Wall Turbulent Flows, March 15-18, Tempe, Arizona, So, Speziale and Launder (eds.), pp. 761-770, Elsevier Publishing, Amsterdam, Netherlands, 1993.
254. **Day, M., Sullivan, P.** and Pollard, A. Conditional Coherent Structure Identification in a Three-Dimensional Wall Jet, CANCAM, Queen's University, Kingston ON, 1993.
255. **Sullivan, P.** and Pollard, A. Use of Conditional and Unconditional Hot Wire Techniques in a Three Dimensional Wall Jet, Proceedings, 3rd World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, Kelleher, Sreenivasan, Joshi and Shah (eds), Elsevier Pub. 1993.
256. **Ozem, H.,** Becker, H.A., Grandmaison, E.W. and Pollard, A. LDA Measurements of a Swirling, Turbulent flow Field passing over an expanding, convex-curved surface, Proceedings, 3rd World Conference on Experimental Heat Transfer, Fluid Mechanics and Thermodynamics, Kelleher, Sreenivasan, Joshi and Shah (eds), Elsevier Pub. 1993.
257. **Tullis, S.** and Pollard, A. Modelling the time Dependent Flow Over V and U Groove Riblets, Proceedings, 13th Symposium Turbulence, Missouri-Rolla, September 1992.
258. **Humber, A.J.,** Grandmaison, E.W. and Pollard, A. Mixing Between a Sharp-Edged Rectangular Jet and a Transvers Cross-Flow, Proceedings, 13th Symposium Turbulence, Missouri-Rolla, September 1992.
259. **Ozem, H.,** Becker, H.A., Grandmaison, E.W., Pollard, A. and Sobiesiak, A. Two Variations of the k- ϵ model and their application to wall-bounded flows, Proceedings, 13th Symposium on Turbulence, Missouri-Rolla, September 1992.
260. **Tullis, S.** and Pollard, A. Modeling the Flow Over Riblets in the Viscous Wall Region, Proceedings, 4th European Turbulence Conference, Delft, Netherlands 1992. Nieuwstadt (ed.), Kluwer Academic Press, Dordrecht (1993)
261. **Bindar, Y., Sobiesiak, A., Thurgood, C.P.,** Becker, H.A., Grandmaison, E.W. and Pollard, A. Experimental and Computational Studies of the CAGCT Research Furnace, Presentation to Combustion Institute, Canadian Section, Edmonton, Alberta, May 1992.
262. **Thurgood, C.P.,** Becker, H.A., Grandmaison, E.W., Pollard, A. and **Sobiesiak, A.** Construction of Boundary Conditions from Industrial Data for Validation of the FUMO Code, Presentation to Combustion Institute, Canadian Section, Edmonton, Alberta, May 1992.
263. **Sullivan, P.** and Pollard, A. Preliminary Investigation of Coherent Structure Identification in a Three-Dimensional Wall Jet using Proper Orthogonal Decomposition and Psuedo-Flow Visualisation, Proceedings, IUTAM Symposium on Eddy Structure Identification in Free Turbulent Flows, Poitiers, France, October 1992.
264. Pollard, A. Modelling of Drag Reduction by Passive Means, invited paper, 2nd North American Soviet Workshop on Computational Aerodynamics, Montreal, Quebec, September 1991.

265. **Matovic, D.M.**, Becker, H.A., Grandmaison, E.W., Pollard, A., **Rubini, P.A.**, **Sobiesiak, A.**, **Thurgood, C.P.**, and **Xiao, D.** Highly Accurate Processing of Low Quality Signals Using Contiguous Data Blocks, Proceedings, 4th Int'l. Conference on Laser Anemometry, Cleveland, Ohio, August 1991.
266. **Thurgood, C.P.**, Becker, H.A., Grandmaison, E.W., Pollard, A., **Rubini, P.A.** and **Sobiesiak, A.** The HEART Scheme and T-N Quadratures for Radiation Calculations, Proceedings, 2nd World Conference Experimental Fluid Mechanics, Heat Transfer and Thermodynamics, Dubrovnik, Yugoslavia, June 1991. Keffer, Shah and Ganic (eds.), pp. 613-620
267. Pollard, A. and Savill, A.M. Further Computational Optimisation Studies for Tandem Ring Manipulators in Turbulent Pipe Flow, 6th European Drag Reduction Meeting, Eindhoven, Netherlands, November 21-22, 1991.
268. **Tullis, S.** and Pollard, A. Modelling Flow over Riblets and their Effects on Near-Wall Turbulence, 6th European Drag Reduction Meeting, Eindhoven, Netherlands, November 21-22, 1991.
269. Becker, H.A., Grandmaison, E.W., **Matovic, M.**, Pollard, A., **Rubini, P.A.**, **Sobiesiak, A.** and **Xiao, D.** "Experimental and Computational Study of the Reheating Furnace Cold Model", Presentation to Combustion Institute, Canadian Section, Ottawa, Ontario, May
270. **Thurgood, C.P.**, Becker, H.A., Grandmaison, E.W., Pollard, A., **Rubini, P.A.** and **Sobiesiak, A.** Computation of Radiant Heat Transfer in Complex Enclosures, Presentation to Combustion Institute, Canadian Section, Ottawa, Ontario, May 1991.
271. Becker, H.A., Grandmaison, E.W., Pollard, A., **Rubini, P.A.** and **Sobiesiak, A.** Development of a Test Facility for Advanced Combustion Technology, Spring Meeting, The Combustion Institute, Canadian and Western States Sections, Banff, Alberta, April 29 - May 2, 1990.
272. **Omerod IV, R.C.**, Becker, H.A., Grandmaison, E.W., Pollard, A., **Rubini, P.A.** and **Sobiesiak, A.** Multifactor Process Analysis with Application to Scale Formation in Steel Reheat Systems, Proceedings, Int'l. Symposium Steel
273. Reheat Furnace Technology, August 26-29, 1990. Hamilton, Ontario, F. Mucciardi (ed.), Metallurgical Society, Canadian Institute of Mining and Metallurgy, pp. 227-242
274. **Rubini, P.A.**, Becker, H.A., Grandmaison, E.W., Pollard, A. and **Sobiesiak, A.** Three-dimensional Modelling of a Steel Reheat Furnace, Proceedings, Int'l. Symposium Steel Reheat Furnace Technology, August 26-29, 1990.
275. Hamilton, Ontario, F. Mucciardi (ed.), Metallurgical Society, Canadian Institute of Mining and Metallurgy, pp. 168-180
276. **Thurgood, C.P.**, Becker, H.A., Grandmaison, E.W., Pollard, A., **Rubini, P.A.** and **Sobiesiak, A.** Development of the HEART Scheme for Radiation Calculations, Proceedings, Int'l. Symposium Steel Reheat Furnace Technology, August 26-29, 1990. Hamilton, Ontario, F. Mucciardi (ed.), Metallurgical Society, Canadian Institute of Mining and Metallurgy, pp. 113-139
277. **Sobiesiak, A.**, Becker, H.A., Grandmaison, E.W., Pollard, A. and **Rubini, P.A.** A Test Facility for the Physical Modelling of a Steel Reheat Furnace, Proceedings, Int'l. Symposium

Steel Reheat Furnace Technology, August 26- 29, 1990, Hamilton, Ontario, F. Mucciardi (ed.), Metallurgical Society, Canadian Institute of Mining and Metallurgy, pp. 52-62

278. Lemay, J., Pollard, A., Bonnet, J.P. and Savill, A.M. International Cooperative Research Programs in the Area of Turbulent Boundary Layer Manipulation, Presented, 7th Canadian Conference on Engineering Education, Toronto, Ontario, June 27-28, 1990.

279. Pollard, A., **McMeekin, R.** and **O'Sullivan, S.** Boundary layer manipulation: Some flow visualization results over V-grooved roughnesses, CASI Aerodynamics Symposium, Ottawa, Ontario, December 1989.

280. **Schwab, R.R.** and Pollard, A. The Velocity Field of a Rectangular Wall Jet, Proceedings, 10th Australasian Fluid Mechanics Conference, Melbourne, Australia, 1989.

281. Pollard, A., Savill, A.M. and Thomann, H. Turbulent pipe flow manipulation: some experimental and computational results for tandem manipulator rings, Proceedings, 10th Australasian Fluid Mechanics Conference, 1989.

282. **Simoneau, J.** and Pollard, A. A Combined Penalty Function - Finite Volume Method, Proceedings, 10th Australasian Fluid Mechanics Conference, 1989.

283. **Yeung, P.K.** and Pollard, A. Calculation of laminar single and dual heated jets in a three-dimensional channel, Presented at 42 Annual Meeting of Div. Fluid Dynamics, American Physical Society, San Francisco, California November 1989.

284. Pollard, A., Savill, A.M. and Thomann, H. Turbulent pipe flow manipulation and Modelling, 4th European working party meeting on drag reduction, EPFL, Lausanne, Switzerland, July 1989.

285. **Schwab, R.R.** and Pollard, A. An Experimental Investigation of Wall Jets Issuing from Rectangular Sharp-Edged Orifices, Proceedings, 7th Symposium on Turbulent Shear Flows, Stanford University, Stanford, California, 1989.

286. Pollard, A., Savill, A.M. and Thomann, H. Turbulent pipe flow manipulation and modelling, Proceedings, IAHR Symposium, Drag Reduction, DRAG89, Davos, Switzerland, July, 1989. pp. 27-34, Ellis-Horwood Publ., Chichester, R.H.J. Sellin and R.T. Moses, (eds.)

287. Pollard, A. and **Schwab, R.R.** The near field behaviour of rectangular free jets: An experimental and numerical study, Proceedings, First world conference on experimental heat transfer, fluid mechanics and thermodynamics, pp 1510-1517, Dubrovnik, Croatia, 1988.

288. Grandmaison, E.W., Pollard, A. and **Ng, S.** Contaminant mixing in a rectangular free jet, Proceedings, 6th Int'l Symposium Turbulent Shear Flows, pp. 9-4-1/9-4-6, Toulouse, France, September 1987.

289. Pollard, A., and **Martinuzzi, R.** Comparative study of eleven models of turbulence, Proceedings, 6th Int'l Symposium Turbulent Shear Flows, pp. 17-9-1/17-9-5, Toulouse, France, September 1987.

290. **Tabatabai, M.** and Pollard, A. On the Process of Inverse Transition in Radial Flow Between Parallel Disks, Proceedings, IUTAM Symposium on Turbulence Management and Relaminarisation, Bangalore, India, January, 1987. Springer Verlag (Liepmann, H. and Narasimha, R. eds.)

291. **Schwab, R.R.**, Pollard, A., Grandmaison, E.W. A Three-Dimensional Wall Jet: A Flow Visualization Study, Paper PR.1, 4th Int'l. Symp. Flow Visualization, pp. 523-526, Paris, France, August 1986.
292. Pollard, A., **Latornell, D.J.** Shear Layer Stability in Axisymmetric Backstep Flows, Paper B4.9, Proceedings, 4th Int'l. Symposium on Flow Visualization, Paris, France, August 1986.
293. **Tabatabai, M.** and Pollard, A. Turbulence Decay of Radial Flow Between Parallel Disks, Proceedings 5th Turbulent Shear Flow Conference, Cornell University, Ithica, New York, August 1985.
294. **Tabatabai, M.** and Pollard, A. Some Aspects of Radial Flow Between Parallel Disks, Proceedings, pp. B133-B134, CANCAM '85, London, Ontario, 1985.
295. Grandmaison, E.W., **Ng, S.**, Pollard, A. and **Zettler, N.L.** Turbulent Mixing in a Rectangular Jet, Proceedings, Canadian Chemical Eng. Conf., pp. 110-115, Calgary, Alberta, 1985.
296. **Schwab, R.R.** and Pollard, A. On Saddle-Backed Velocity Profiles in Three-Dimensional Free Jets, Proceedings, pp. B55-B56, CANCAM, '85, London, Ontario, 1985. See Also: Dept. Mech. Eng., TFG/84/1, 1984.
297. Oosthuizen, P.H. and Pollard, A. Combined Forced and Free Convective Air Flow through Short Vertical Tubes, Developments in Mechanics, Vol. 18, Proceedings 18 Mid-Western Mechanics Conference, pp. 197-200, Iowa, 1983.
298. **Hessami, M.A.**, Pollard, A., Rowe, R.D. and Ruth, D.W. A Study of Free Convection Heat Transfer in a Horizontal Annulus with a Large Radii Ratio, in Natural Convection In Enclosures – 1983, ASME HTD-Vol. 26, pp. 95-102, I. Catton and K.E. Torrence (eds.), 1983.
299. **Quinn, W.R.**, Pollard, A. and Marsters, G.F. On Saddle-Backed Velocity Distributions in a Three-Dimensional Turbulent Free Jet, Paper AIAA-83-1677, AIAA Plasma and Fluid Dynamics Conference, Danvers, Massachusetts, 1983.
300. Pollard, A. and Oosthuizen, P.H. Free Convection Through Open-Ended Pipes, Paper, 83-HT-68, ASME/AICHE Heat Transfer Conference, Seattle, Washington, 1983.
301. **Hessami, M.A.**, Pollard, A. and Rowe, R.D. An Investigation of Free Convection Heat Transfer in a Horizontal Annulus, Proceedings, Canadian Congress of Applied Mechanics, Saskatoon, Saskatchewan, pp. 635-636, May, 1983.
302. Pollard, A. and **Pethrick, W.D.** Inlet Effects on the Wall Pressure Distribution Downstream of a Tubular Expansion, Proceedings, Canadian Congress of Applied Mechanics, Saskatoon, Saskatchewan, pp. 475-476, 1983.
303. **Quinn, W.R.**, Pollard, A. and Marsters, G.F. Measurements in a Turbulent Rectangular Free Jet, Proceedings Fourth Symposium Turbulent Shear Flows, pp. 7.1-7.6, Karlsruhe, Germany, 1983.
304. **Iwaniw, M.** and Pollard, A. Multiple Jet Mixing in a Rectangular Duct: Centre-Plane Behaviour, Paper 83/FE/35, ASME Fluids Engineering Conference, Houston, Texas, June 20-22, 1983.

305. Pollard, A. and **Siu, A. L-W.** Laminar Flow Calculations Using a Modified Second Order Discretisation Scheme, Proceedings International Symposium on Refined Modelling of Flows, pg. 89-100, Paris, France, September 1982.
306. Pollard, A. Flow Over a Backward Facing Step, Proc. 1980/81.AFOSR-HTTM Stanford Conference on Complex Turbulent Flows: Comparison of Computation and Experiment", Vol. III, pp. 1486-1490, Stanford University, Stanford, California, September 14-18 1981. Kline, Cantwell, Lilley (eds.).
307. Pollard, A. On the Calculation of the Laminar and Turbulent Flow Between Parallel Disks, Proc. 2nd International Conf. Numerical Methods in Laminar and Turbulent Flow, Venice, Italy, pp. 377-388 1981. Pineridge Press, Taylor and Scheffler (eds.)
308. Pollard, A. Laminar Flow and Heat Transfer in Axisymmetric Sudden Expansions, Proc. 2nd International Conf. Numerical Methods in Thermal Problems, Venice, Italy, Pineridge Press, Lewis, Morgan and Scheffler (eds)
309. Pollard, A. Entrance and Diameter Effects on the Laminar Flow in Sudden Expansions, ASME HTD, Momentum and Heat Transfer in Recirculating Flows, Vol. 13 1980.
310. Pollard, A. and Spalding, D.B. Turbulent Flow and Heat Transfer in a Tee-Junction, ASME Paper 79-WA/HT-47 1979

Letters to the Editor

Pollard, A., "A Comment on a Comparison of Hybrid and Quadratic Upstream Differencing in High Reynolds Number Elliptic Flows", Comp. Methods Applied Mech. Eng. 35, 1982

Other

Pollard, A., "HPC-You ain't seen 'nothing yet", Invited Contribution, Advanced Manufacturing, August 1999. Various contributions to the Bulletin of the CFD Society of Canada, see www.cfdsc.ca

Pollard, A., "What do airplanes and sharks have in common?" IBM VISIONS, High Performance Computing magazine, No.1, 1995.

Pollard, A., "A Report on a Birthday Celebration for Prof. Spalding, D.B. ", Jn. Heat Transfer Engineering, 5, No. 1-2, pp. 14-16,1984.

Invited Lectures/Seminars (non-conference)

Regularly invited to provide talks to industry and academe that are too numerous to mention. Recent ones include:

Pollard, A., Flow in the Human Oro-pharynx: A Kaleidoscope of Flow Physics RMIT University, Melbourne, May, 2011

Pollard, A., Biomass for the Great Lakes Regions, University of Auckland, June 2009

Pollard, A., Round jets and the effects of Reynolds number and boundary conditions:

- La Sapienza, University of Roma, October 17, 2008.
- National University of Singapore, January 16, 2009.
- University of Auckland, June, 2009

Pollard, A., Sustainable Bioeconomy for the Great Lakes, Rotary Club 12/03/08 and Q'PID Forum 18/03/08.

Pollard, A., HPC in Canada, Invited Talk to the South Africa National Centre for High Performance Computing (NCHPC), Cape Town, October 28-29, 2004.

Guest, M. and Pollard, A., Top Thirty Suggestions for the NCHPC, Cape Town, South Africa, October 28-29, 2004.

Pollard, A. and Uddin, M. "Self-similarity and initial conditions in co-flowing round jets," Symposium on Fluid Mechanics in the Spirit of A.E. Perry, Kingston, May 2004

Pollard, A. "Flow in the human airway: a combination of canonical flows," Symposium on Fluid Mechanics in the Spirit of A.E. Perry, Kingston, May 2004

Pollard, A., Uddin, M. and Braly, J., "Large eddy simulation of co-flowing and wall jets," University of Newcastle, Australia, March 2004

Pollard, A., Uddin, M. "Computational and experimental study of flow in the human extra-thoracic airway," University of Auckland, March, 2004.

Pollard, A., Uddin, M. "Turbulence, Structure and Why an Elephant Can Be Something Else," HPCVL Symposium, Kingston, October 2003

Pollard, A. "LES of turbulence and the emerging option of distributed computing," Seminar to NRC, Ottawa, February, 2001.

Pollard, A. "Coherent structures in co-flowing streams," seminar, University of Alberta, Edmonton, February, 2001

Pollard, A. "Computational Fluid Dynamics and Grid Computing, Invited Presentation," Alexander von Humboldt Stiftung special session for Canada, Ottawa, May 2001

Pollard, A. "Airplane Design Feature is 15 Million Years Old," Canadian Aeronautical and Space Institute, Kingston Branch, November 2001

Book Reviews

Turbulence modelling and vortex dynamics, Proceedings of Workshop, Istanbul, European Jn. Mechanics/B, 17(5):781-784, (1998) (with J.F. Morrison)

Fluid Vortices by S.I. Green, Kluwer Academic Publ. Volume 30 in series Fluid Mechanics and its Applications, Bulletin of the CFD Society of Canada, Volume 7, 1996 (see www.cfdsc.ca).

OTHER PROFESSIONAL ACTIVITIES

Professional Consulting

Consulted for Gas de France, British Aerospace, Goodfellow Consulting Engineers, Fuel Cell Technologies, Air Liquide, Petromont-Usine Petrochimique, Placer-Dome Canada Ltd., Rogers Data Services/URBACON, Dupont Canada, National Research Council of Canada, Salmon River Project

Technology Transfer

1996 CAGCT – was principal in formulating computer software to model the flow and heat transfer inside walking beam and pusher re-heat furnaces. These codes were delivered to Dofasco, Stelco and Algoma Steel companies.

1995-1996 Riblet code – my laboratory developed a computer code to study the near wall flow over riblets that can have a variety of shapes. This code is now used by British Aerospace.

1981 GRAFFIC – Graphical Analysis of Fluid Flow by Interactive Computation. A computer software package that I contributed to and was sold to CHAM Ltd., London U.K.

Expert Witness

Expert witness for trial: Province of Ontario vs Placer Dome (Tory, Tory, Deslauriers and Binnington, Toronto)

Reviews

Continuing reviewer and proposal evaluator for:

- American Institute of Aeronautics and Astronautics
- Applied Mathematical Modelling
- ASME Journal of Fluids Engineering
- ASME Journal of Heat Transfer
- Canada Foundation for Innovation
- Chemical Engineering Communications
- Computers and Chemical Engineering
- Experiments in Fluids
- International Journal CFD
- International Journal Heat and Fluid Flow
- International Journal Heat Mass Transfer
- Institute of Physics journals
- Journal Computers and Fluids
- Journal of Fluid Mechanics
- Journal of Numerical Heat Transfer

- National Research Council of Canada, High Performance Computing competition
- Natural Science and Engineering Research Council of Canada (various capacities)
- Physics of Fluids
- Premier's Research Excellence Award Program (Ontario)
- Provincial and National Centres of Excellence
- National Science Foundations of the USA, Israel and Italy

Reviewer for papers submitted to both national and international conferences (too numerous to mention)