

Dr. Simon E. Gant, CEng FIMechE

Contact Details

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Profile

I am a Principal Scientist in the Fluid Dynamics Team, responsible for fluid dynamics analysis on a range of projects including incident investigations, support work on new guidance and standards, model reviews, government-funded research and consultancy for various companies. Amongst other projects, over the last twelve years at HSE's Buxton Laboratory (formerly the Health and Safety Laboratory, HSL) I have led work using Computational Fluid Dynamics (CFD) to investigate the Buncefield Incident and the fluid flow analysis at the Institute of Animal Health during the investigation into the foot-and-mouth outbreak in 2007.

In recent years, I have been heavily involved in research aimed at assessing the risks posed by leaks from pipelines transporting dense-phase carbon dioxide (CO₂). I led HSL's involvement in a large CO₂ pipelines project sponsored by National Grid (COOLTRANS) and was heavily involved in an EU-sponsored CO₂ pipelines project (CO₂PipeHaz). This work included running CFD simulations of the complex multi-phase dispersion behaviour of CO₂ jets. I also led the CFD modelling work in a four year industry-sponsored project on flammable mists. Over the last year, I have been focussed on modelling dispersion of pressure-liquefied chlorine for the Jack Rabbit II experiments as part of an international modellers working group coordinated by the US Department of Homeland Security and Defense Threat Reduction Agency.

Work Experience

2011 - Present	Band 2, Principal Scientist, Fluid Dynamics Team, HSL
2006 – 2011:	Band 3, Senior Scientist, Fluid Dynamics Team, HSL
2005 – 2006:	Band 4, Fluid Flow Modeller, Health and Safety Laboratory, Buxton
2007:	Research Fellow for six months part time, undertaking research on marine current turbines, Joule Centre, Manchester University
1998 – 2004:	PhD Student, Research Assistant/Associate, Temporary Lecturer, Mech. Aero. Civil Eng. (MACE) School, Manchester University – inc. four-month post-doc at Université d'Aix-Marseille, France

- 1997 – 1998: Building Services Design Engineer, Ove Arup & Partners, Manchester
- 1993 – 1997: Sponsored Student, Ove Arup & Partners, London, Edinburgh, Italy, Manchester
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Qualifications & Professional Membership

- Chartered Fellow of the Institute of Mechanical Engineers (CEng FIMechE)
 - PhD in CFD and turbulence Modelling, MACE School, Manchester University, 2002
 - Thesis entitled: “Development and application of a new wall function for complex turbulent flows”
 - MEng (Distinction) in Mechanical Engineering, Leeds University, 1997
 - One year spent at Waterloo University, Ontario, Canada
 - Awarded IMechE Best Student Prize
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Journal Peer Reviews

Since 2010 I have completed 17 peer reviews for the following journals:

- Atmospheric Environment
 - Chemical Engineering Science
 - Fuel Journal
 - International Journal of Greenhouse Gas Control
 - International Journal of Heat and Fluid Flow
 - Journal of Loss Prevention in the Process Industries
 - Journal of Wind Engineering and Industrial Aerodynamics
 - Process Safety and Environmental Protection
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Publications

Journal Papers

- Batt, R., Gant, S.E., Lacome, J.-M., Truchot, B. and Tucker, H., “CFD modelling of dispersion in neutrally and stably-stratified atmospheric boundary layers: results for Prairie Grass and Thorney Island”, International Journal of Environment and Pollution (accepted, in press), 2017
- Atkinson, G.T., Coldrick, S. Gant, S.E. and Cusco, L. "Flammable vapor cloud generation from overfilling tanks: learning the lessons from Buncefield", Journal of Loss Prevention in the Process, 35, p329-338, 2015
- Woolley, R.M., Fairweather, M., Wareing, C.J., Falle, S.A.E.G., Mahgerefteh, H., Martynov, S., Brown, S., Narasimhamurthy, V.D., Storvik, I.E., Saalen, L., Skjold, T., Economou, I.G., Tsangaris, D.M., Boulougouris, G.C., Diamantonis, N., Cusco, L., Wardman, M., Gant, S.E., Wilday, J., Zhang, Y.C., Chen, S., Proust, C., Hebrard, J., Jamois, D. "CO₂PipeHaz: quantitative hazard assessment for next generation CO₂ pipelines", Energy Procedia, 63, p2510-2529, 2014

- Gant, S.E., Narasimhamurthy, V.D., Skjold, T., Jamois, D. and Proust, C. "Evaluation of multi-phase atmospheric dispersion models for application to carbon capture and storage", *Journal of Loss Prevention in the Process Industries*, 32, p286-298, 2014
- Lisbona D., McGillivray A., Saw J.L., Gant S.E., Bilio M. and Wardman M. "Risk assessment methodology for high-pressure CO2 pipelines incorporating topography" *Process Safety and Environmental Protection Journal*, 92(1), p27-35, 2014
- Gant S.E., Kelsey A., McNally K., Witlox H.W.M. and Bilio M. "Methodology for global sensitivity analysis of consequence models" *J. Loss Prev. Proc. Ind.*, 26, p792-802, 2013
- Gant S.E. "Framework for validation of pipeline release and dispersion models for the COOLTRANS project", *Journal of Pipeline Engineering*, 11 (3), p201-212, 2012
- Gant, S.E. and Kelsey, A. "Accounting for concentration fluctuations in gaseous releases of carbon dioxide", *J. Loss Prev. Proc. Ind.*, 25 (1), p52-59, 2012
- Coldrick, S., Atkinson, G.T. and Gant, S.E. "Factors affecting vapour production in large scale evaporating liquid cascades", *Process Safety and Environmental Protection*, 89 (6), p371-381, 2011.
- Gant, S.E. and Atkinson, G.T. "Dispersion of the vapour cloud in the Buncefield Incident", *Process Safety and Environmental Protection*, 89 (6), p391-403, 2011
- Gant, S.E., Pursell, M.R., Lea, C.J., Fletcher, J., Rattigan, W., Thyer, A.M., Connolly, S. "Flammability of hydrocarbon and carbon dioxide mixtures", *Process Safety and Environmental Protection*, 89 (6), p472-481, 2011
- Walsh, P.T., Gant S.E., Dowker, K.P. and Batt, R. "Response of electrochemical oxygen sensors to inert gas-air and carbon dioxide-air mixtures: measurements and mathematical modelling", *J. Haz. Mat.*, 186(1), p190-196, 2011.
- Ivings, M.J., Gant S.E., Saunders, C.J. and Pocock, D.J. "Flammable gas cloud build up in a ventilated enclosure", *J. Haz. Mat.*, 184 (1-3), p170-176, 2010.
- Gant S.E. "Reliability issues of LES-related approaches in an industrial context", *Flow, Turbulence and Combustion*, 84(2), p325-335, 2010.
- Craft T.J., Gant S.E., Gerasimov A.V., Iacovides H., and Launder B.E. "Development and application of wall-function treatments for forced and mixed convection flows", *Fluid Dynamics Research*, 38 (2-3), p127-144, 2006.
- Craft T.J., Gant S.E., Iacovides H., and Launder B.E. "A new wall function strategy for complex turbulent flows", *Numerical Heat Transfer Part B: Fundamentals Vol. 45, No. 4*, p301-318, 2004.

Conference Papers and Presentations

- Gant S.E. and Tucker H., "Computational Fluid Dynamics (CFD) modelling of atmospheric dispersion for land-use planning around major hazards sites in the UK", 18th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes (Harmo-18), Bologna, Italy, 9-12 October 2017
- McKenna B., Garcia M.M., Gant S.E., McGillivray A., Batt R., Wardman M., Tucker H., Tickle G. and Witlox, H.W.M. "Jack Rabbit II 2015 chlorine release experiments: simulations of the trials using Drift and Phast and comparisons against preliminary experimental data", 18th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes (Harmo-18), Bologna, Italy, 9-12 October 2017
- Gant S.E. and Tucker H. (2017) "CFD results for near-field dispersion in Jack Rabbit II", 21st Annual George Mason University Conference on Atmospheric Transport and Dispersion Modeling, Fairfax, Virginia, USA, 13-15 June 2017
- Gant S.E., McKenna B., Garcia M.M., Stewart J., McGillivray A., Wardman M., Tucker H., Tickle G. and Witlox H.W.M. (2017) "Integral model predictions of the Jack Rabbit II 2015 experiments using DRIFT and

PHAST", 21st Annual George Mason University Conference on Atmospheric Transport and Dispersion Modeling, Fairfax, Virginia, USA, 13-15 June 2017

- Gant S.E., Tucker H., McKenna B., Garcia M.M., McGillivray A., Batt R., Stewart J., Tickle G. and Witlox H.W.M. (2017) "Dispersion model predictions of the Jack Rabbit II chlorine release experiments", 10th Euro Chlor International Chlorine Technology Conference & Exhibition, Berlin, Germany, 16-18 May 2017
- McKenna B., Garcia M.M., Gant S.E., McGillivray A., Batt R., Wardman M., Tucker H., Tickle G. and Witlox H.W.M. (2017) "Jack Rabbit II 2015 trials: preliminary comparison of the experimental results against Drift and Phast dispersion model predictions", IChemE Hazards 27 Conference, Birmingham, UK, 10-12 May 2017
- Kelsey A. and Gant S.E. "Sensitivity and uncertainty analysis of consequence models", FABIG UK Technical Meeting: New Insights into Risk Assessment, Aberdeen and London, UK, 30 November - 1 December 2016
- Gant S.E. "Review of recent LNG research at HSL and possible future R&D topics", PHMSA Pipeline Safety Research and Development Forum, Cleveland, Ohio, USA, 16-17 November 2016
- Gant S.E., Atkinson G.T. and Tucker H. "Dispersion behavior in severe vapor cloud explosion incidents", 20th Annual George Mason University Conference on Atmospheric Transport and Dispersion Modeling, Fairfax, Virginia, USA, 14-16 June 2016
- McKenna B., Garcia M.M., Gant S.E., Tucker H., Tickle G., Batt R., Witlox H.W.M. and Stene J. "Integral model predictions of chlorine dispersion for the proposed Jack Rabbit II experiments in 2016", 20th Annual George Mason University Conference on Atmospheric Transport and Dispersion Modeling, Fairfax, Virginia, USA, 14-16 June 2016
- Batt R., Gant S.E., Lacombe J.-M. and Truchot B. "Modelling of stably-stratified atmospheric boundary layers with commercial CFD software for use in risk assessment", 15th International Symposium on Loss Prevention and Safety Promotion in the Process Industries (Loss Prevention 2016), Freiburg, Germany, 5-8 June 2016
- Gant S.E. "Vapor Dispersion Model Evaluation Protocol (MEP) Update", Pipelines and Hazardous Materials Safety Administration (PHMSA) Public Workshop on Liquefied Natural Gas (LNG) Regulations, Washington DC, USA, 18-19 May 2016
- Gant S.E., Coldrick S., Tickle G. and Tucker H. "Impact of alternative model validation methods: A case study on the LNG model validation database using Drift", 17th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes (Harmo-17), Budapest, Hungary, 9-12 May 2016
- Batt R., Gant S.E., Lacombe J.-M., Truchot B. and Tucker H. "CFD modelling of dispersion in neutral and stable atmospheric boundary layers: Results for Prairie Grass and Thorney Island", 17th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes (Harmo-17), Budapest, Hungary, 9-12 May 2016
- Gant S.E., Bettis R., Coldrick S., Burrell G., Santon R., Fullam B., Mouzakitis K., Giles A. and Bowen P. "Area classification of flammable mists; summary of joint-industry project findings", IChemE Hazards 26 Conference, Edinburgh, UK, 24-26 May 2016
- Pursell M., Gant S.E., Newton A., Bennett D., O'Sullivan L., Hooker P. and Piper D. "Investigation of cargo tank vent fires on the GP3 FPSO, Part 1: Identification of ignition mechanisms and analysis of material ejected from the flare", IChemE Hazards 26 Conference, Edinburgh, UK, 24-26 May 2016
- Gant S.E., Pursell M., Newton A., Bennett D. and O'Sullivan L. and Piper D. "Investigation of cargo tank vent fires on the GP3 FPSO, Part 2: Analysis of vapour dispersion", IChemE Hazards 26 Conference, Edinburgh, UK, 24-26 May 2016
- McKenna B., Garcia M.M., Gant S.E., Batt R., Tucker H., Wardman M., Tickle G., Witlox H.W.M., Fernandez M., Harper M. and Stene J. "Dispersion model predictions of the Jack Rabbit II chlorine experiments using Drift and Phast", IChemE Hazards 26 Conference, Edinburgh, UK, 24-26 May 2016
- Atkinson G., Betteridge S., Hall J., Hoyes J. and Gant S.E. "Experimental determination of the rate of flame spread across LNG pools", IChemE Hazards 26 Conference, Edinburgh, UK, 24-26 May 2016

- Gant S.E., McKenna B., Garcia M., Batt R., Witlox H.W.M., Stene J., Fernandez M. and Tickle G. "Integral dispersion model predictions for the proposed Jack Rabbit II experiments", 19th Annual George Mason University Conference on Atmospheric Transport and Dispersion Modeling, 9-10 June 2015, Fairfax, Virginia, USA
- Woolley R.M., Fairweather M., Wareing C.J., Falle S.A.E.G., Mahgerefteh H., Martynov S., Brown S., Narasimhamurthy V.D., Storvik I.E., Saelen L., Skjold T., Economou I.G., Tsangaris D.M., Boulougouris, G.C., Diamantonis N., Cusco L., Wardman M., Gant S.E., Wilday J., Zhang Y.C., Chen S., Proust C., Hebrard J., Jamois D. "CO2PipeHaz: quantitative hazard assessment for next generation CO2 pipelines", International Conference on Greenhouse Gas Technologies (GHGT-12), Austin, Texas, USA, 6-9 October 2014
- Betteridge, S., Hoyes, J., Gant S.E. and Ivings, M. "Consequence Modelling of Large LNG Pool Fires on Water", Submitted to the IChemE Hazards 24 Conference, Edinburgh, UK, 7-9 May 2014
- Kelsey A., Gant S.E., McNally K., and Betteridge S. "Application of global sensitivity analysis to FDS simulations of large LNG fire plumes", Submitted to the IChemE Hazards 24 Conference, Edinburgh, UK, 7-9 May 2014
- Atkinson G.T., Coldrick S., Gant S.E. and Cusco L. "Flammable vapour cloud generation from overfilling tanks: learning the lessons from Buncefield", Mary Kay O'Connor Process Safety Center International Symposium, College Station, Texas, USA, 22-24 October 2013
- Kelsey A., Gant S.E., McNally K., and Betteridge S. "Application of global sensitivity analysis to FDS simulations of large LNG fire plumes" EDF-ERCOFTAC Workshop on Uncertainty Quantification in Computational Fluid Dynamics, Lyon, France, 17 June 2013
- Mahgerefteh, H., Martynov, S., Brown, S., Fairweather, M., Woolley, R., Falle, S., Narasimhamurthy, V., Taraldset, O.J., Skjold, T., Economou, I., Tsangaris, D., Cusco, L., Wardman, M., Gant, S., Wilday, J., Zhang, Y.C., Chen, S., Proust, C. "CO2PipeHaz: quantitative hazard assessment for next generation CO2 pipelines", Fourth International Forum on the Transportation of CO2 by Pipeline, Newcastle, UK, 19-20 June 2013.
- Gant, S.E., Kelsey, A., McNally, K. Witlox, H. and Bilio, M. "Sensitivity analysis of dispersion models for jet releases of dense-phase carbon dioxide", submitted to Loss Prevention 2013 conference, Florence, Italy, 12-15 May 2013
- Dixon C.M., Gant S.E., Obiorah C. and Bilio M. "Validation of dispersion models for high pressure carbon dioxide releases" IChemE Hazards XXIII Conference, Southport, UK, 12-15 November 2012.
- Gant S.E., Bettis R., Santon R., Buckland I., Bowen P. and Kay P. "Generation of flammable mists from high flashpoint fluids: Literature Review" IChemE Hazards XXIII Conference, Southport, UK, 12-15 November 2012.
- Mahgerefteh H., Fairweather M., Falle S., Melheim J., Ichard M., Storvik I., Taraldset O.J., Skjold T., Economou I., Tsangaris D., Cusco L., Wardman M., Gant S.E., Wilday J., Zhang Y.C., Chen S., and Proust C. "CO2PIPEHAZ: Quantitative hazard assessment for next generation CO₂ pipelines" Hazards XXIII, p606-610, 12-15 Nov 2012
- Gant S.E. "Framework for validation of pipeline release and dispersion models for the COOLTRANS project", The Third International Forum on the Transportation of CO2 by Pipeline, 20-21 June 2012, Newcastle, UK
- Gant, S.E. and Atkinson, G.T. "CFD for reconstruction of the Buncefield Incident", Dechema 50th Tutzing Conference, Tutzing, Germany, 22-25 May 2011
- Lamont D., Bettis R., Fletcher J., Nicol A., Gant S. and Coldrick S. "Water spray barriers in tunnels under construction" World Tunnel Congress and 37th General Assembly, Helsinki, Finland, 20-26 May 2011
- Coldrick, S., Atkinson, G.T. and Gant, S.E. "Large scale evaporating liquid cascades – an experimental and computational study", accepted for publication at the IChemE Hazards XXII Symposium & Workshop, Liverpool, UK, 11-14 April 2011
- Pursell, M.R., Gant, S.E., Fletcher, J., Rattigan, W., Thyer, A.M., Connolly, S. "Flammability of hydrocarbon/CO2 mixtures: Part 1. Ignition and explosion characteristics", accepted for publication at the IChemE Hazards XXII Symposium & Workshop, Liverpool, UK, 11-14 April 2011

- Gant, S.E., Pursell, M.R., Lea, C.J., Thyer, A.M., Connolly, S. "Flammability of hydrocarbon/CO₂ mixtures: Part 2. Predictive models for gas jet ignition", accepted for publication at the IChemE Hazards XXII Symposium & Workshop, Liverpool, UK, 11-14 April 2011
- Thyer, A. M., Kay, J., and Gant, S. E. "Investigations into the flammability of propane/carbon dioxide, hydrogen/carbon dioxide and hydrogen/nitrogen mixtures" Proc. IChemE Hazards XXI Symposium & Workshop, Manchester, UK, 10-12 November 2009
- Atkinson G., Gant S.E., Painter D., Shirvill L. and Ungut A., "Liquid dispersal and vapour production during overfilling incidents" Proc. IChemE Hazards XX Symposium & Workshop, Manchester, UK, 15-17 April 2008. Also published in IChemE Loss Prevention Bulletin, June 2009
- Gant S.E., "Practical quality measures for large-eddy simulation" ERCOFTAC Workshop on Direct and Large Eddy Simulation 7 (DLES7), Trieste, Italy, 8-10 September 2008
- Gant S.E. and Stallard, T. "Modelling a tidal turbine in unsteady flow", ISOPE conference, Vancouver, Canada, 2008
- Gant S.E., Ivings M.J., Jones A. and Santon R. "Hazardous area classification of low pressure natural gas systems using CFD predictions" Proc. IChemE Hazards XIX Symposium & Workshop, Manchester, UK, 27-30 March 2006
- Craft T.J., Gant S.E. and Iacovides H. "Application of a generalised RANS wall function to recirculating flows with heat transfer", Fourth Int. Conf. on Computational Heat & Mass Transfer (ICCHMT), 17-20 May, Paris-Cachan, France, 2005
- Craft T.J., Gant S.E., Gerasimov A.V., Iacovides H., and Launder B.E. "Advances in Practical Near-Wall Turbulence Modelling", Fourth European Thermal Sciences Conference, Birmingham, UK, 2004
- Craft T.J., Gant S.E., Gerasimov A.V., Iacovides H., and Launder B.E. "Wall-function approaches for turbulent flow CFD" 6th ISHMT-ASME Heat and Mass Transfer Conference, Kalpakkam, Tamil Nadu, India, 5-7 January 2004
- Craft T.J., Gant S.E., Gerasimov A.V., Iacovides H. and Launder B.E. "Wall Function Strategies for use in Turbulent Flow CFD", Proc. 12th International Heat Transfer Conference, Grenoble, France, 2002
- Craft T.J., Gant S.E., Iacovides H., Launder B.E. and Robinson C.M.E. "Computational study of flow around the "Ahmed" car body (case 9.4)", 9th ERCOFTAC/IAHR/COST Workshop on Refined Turbulence Modelling, Darmstadt, Germany, 4-5 October 2001
- Craft T.J., Gant S.E., Iacovides H. and Launder B.E. "Development and Application of a New Wall Function for Complex Turbulent Flows", ECCOMAS CFD2001 Conference, Swansea, Wales, UK, 4-7 September 2001

Book Chapters

- Craft T.J., Gant S.E., Gerasimov A.V., Iacovides H., and Launder B.E. "Numerical modeling of heat transfer in wall-adjacent turbulent flows" Chapter 11, Handbook of Numerical Heat Transfer, 2nd Edition, Minkowycz, Sparrow & Murthy (Editors), ISBN 0-471-34878, 2006
- Gant, S.E. and Atkinson, G.T. "CFD for reconstruction of the Buncefield Incident", Chapter 18, Process & Plant Safety: Applying Computational Fluid Dynamics, Schmidt, J. (Editor), Wiley-VCH, 2012

Reports

- Gant S.E., Pursell M., McGillivray A., Wilday J., Wardman M. and Newton A. "Overview of Carbon Capture and Storage (CCS) Projects at HSE's Buxton Laboratory", Health and Safety Executive, Research Report RR1121, 2017
- Ivings M.J., Gant S.E., Jagger S.F., Lea C.J., Stewart J.R. and Webber D.M. "Evaluating vapor dispersion models for safety analysis of LNG facilities", Final report for the Fire Protection Research Foundation, Quincy, Massachusetts, USA, September 2016

- Stewart J.R., Coldrick S., Lea C.J., Gant S.E. and Ivings M.J. "Guide to the LNG model validation database version 12", Final report for the Fire Protection Research Foundation, Quincy, Massachusetts, USA, September 2016
- Gant S.E. "Generation of flammable mists from high flashpoint fluids: literature review", Health and Safety Executive, Research Report RR980, 2013 (Available from: <http://www.hse.gov.uk/research/rrhtm/rr980.htm>)
- Atkinson G.T. and Gant S.E. "Flammable vapour cloud risks from tank overfilling incidents" Health and Safety Executive, Research Report RR937, 2012
- Gant, S.E., Lea, C.J., Pursell, M., Fletcher, J., Rattigan, W., Thyer, A., Connolly, S. "Flammability of hydrocarbon and carbon dioxide mixtures: measurements and modelling", HSL Report MSU/2010/21, 2011.
- Gant, S.E. "CFD Simulations of Spray Releases from Gasoline Pipelines", HSL Report MSU/2010/20, 2010.
- McGillivray, A., Gant, S.E. And Cruse, H. "PHAST Simulations of Spray Releases from Gasoline Pipelines", HSL Report FP/2010/28, 2010.
- Gant, S. E. and Hoyes, J. "Review of FLACS version 9.0: Dispersion modelling capabilities", Health and Safety Executive Report RR779, 2010.
- Webber, D.M., Gant S.E., Ivings, M.J. and Jagger, S.F., "LNG Source term models for hazard analysis: a review of the state-of-the-art and an approach to model assessment", Final Report MSU/2008/24, The Fire Protection Research Foundation, March 2009.
- Ivings, M. J., Clarke, S., Gant, S. E., Fletcher, B., Heather, A., Pocock, D. J., Pritchard, D. K., Santon, R. and Saunders, C. J. "Area classification for secondary releases from low pressure natural gas systems", Health and Safety Executive Report RR630, 2008.
- Lea, C. J. and Gant, S. E. "Final report on Efectis' CFD simulations of fire on a channel tunnel HGV shuttle", HSL Report MSU/2008/05, 2008.
- Kay, J., Thyer, A. M. and Gant, S. E. "Investigations into the effects of carbon dioxide and nitrogen on the flammability limits of gases", HSL Report PS/08/06, 2008.
- Gant, S.E. "CFD Modelling of the Pirbright Drainage System", HSL Report MSU/2007/16, 2007.
- Gant S.E., Heather A. and Kelsey A. "CFD models for evaporating hydrocarbon sprays", HSL Report CM/07/04, 2007.
- Atkinson, G. and Gant S.E. "Buncefield Investigation: Liquid flow and vapour production", HSL Report FS/06/09, 2007.
- Gant S.E. and Atkinson, G. "Buncefield Investigation: Dispersion of the vapour cloud", HSL Report CM/06/13, 2007.
- Gant S.E. "CFD modelling of water spray barriers", HSL Report HSL/2006/79, 2006.
- Gant S.E. and Kelsey A. "Factors influencing the indoor transport of contaminants and modelling implications", HSL Report HSL/2006/29, 2006.
- Gant S.E. "Large-eddy simulation of gas dispersion in a room", HSL Report HSL/2006/28, 2006.
- Gant S.E. and Ivings M.J. "CFD modelling of low pressure jets for area classification", HSL Report HSL/2005/11, 2005.
- Gant S.E. and Ivings M.J. "CFD modelling of low pressure 'coke oven gas' jets", HSL Report CM/05/08, 2005.

Other

- Gant, S.E. "Axisymmetric buoyant far-field plume", Underlying Flow Regime 1-06, ERCOFTAC QNET Knowledge Base (<http://qnet-ercoftac.cfms.org.uk>), 2010.

- Gant, S.E. "Unsteady near-field plume", Underlying Flow Regime 1-07, ERCOFTAC QNET Knowledge Base (<http://qnet-ercoftac.cfms.org.uk>), 2010.
- Craft T.J., Gant S.E., Iacovides H., Launder B.E. and Serre E. "Three-dimensional simulation of rotor-stator cavity flow", CSAR Focus Magazine, Edition 12, 2004.
- Gant S.E. "Development and Application of a New Wall Function for Complex Turbulent Flows", PhD Thesis, Dept. of Mechanical, Aerospace and Manufacturing Engineering, University of Manchester Institute for Science and Technology (UMIST) [now Manchester University], November 2002