CURRICULUM VITAE – TOMÁS NORTON

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Year of Birth: 1980
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RESEARCH INDICATORS[1]

h-index: 10
publications: 26
citations: 704 total citations by 591 documents

POSITIONS

2016-2018	Guest Professor at M3-BIORES, KU Leuven
2011-present	Senior Lecturer in Agricultural Engineering, Harper Adams University
2010-2011	Lecturer in Agricultural Engineering at Harper Adams University
2007-2009	Part-time Lecturer in Building Services Engineering at Department of Engineering, Dublin Institute of Technology, Bolton Street, Dublin 1, Ireland.
2006-2007	Assistant Lecturer in Food & Agricultural Engineering at Department of Biosystems Engineering University College Dublin, National University of Ireland.
2004-2006	Part-time lecturer in Food & Agricultural Engineering at Department of Biosystems Engineering, University College Dublin, National University of Ireland.
2003-2010	PhD Research Assistant at Department of Biosystems Engineering University College Dublin, National University of Ireland.

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[1] *Obtained from SCOPUS on 7/6/2016: https://goo.gl/5ciLpm

CURRICULUM VITAE – TOMÁS NORTON

EDUCATION
2003 Bachelor of Agricultural Science (BAgrSc), University College Dublin
2010 Doctor of Philosophy in Biosystems Engineering (Ph.D.), University College Dublin

TEACHING EXPERIENCE

Teaching:
Lecturing/lectured on the following modules in the Engineering department of Harper Adams University:

Course ID	Title	Year & Degree	Role
E4004	Applied Mechanics	1st year BEng	Module tutor
EC011	Maths for Technologists	1st year BEng	Module tutor
E5004	Agricultural Engineering Principles	2nd year BEng/BSc	Module leader
E5016	Continuum Mechanics	2nd year BEng	Module tutor
E5006	Engineering Science	2nd year BSc	Module tutor
EH003	Engineering Mechanics	4th year BEng	Module tutor
EH008	Engineering Technology	4th year BSc	Module tutor
E6002	Agricultural Engineering Mechanics	4th year BEng	Module tutor
E7004	Advanced Research Methods	MSc/MEng	Module leader

Lectured in the following subjects at University College Dublin 2004 - 2006:
- Introduction to Thermodynamics
- Food Engineering Processes: Simulation & Control

Co-lectured the following topics at Dublin Institute of Technology 2007 - 2009:
- Building Energy Simulation
- Use of Excel for computer modelling
- Introduction to CAD/CFD/FEM modelling

- Erasmus visiting lecturer, University of Agriculture Nitra, Slovatia, July 2010
- Erasmus visiting lecturer, Aarhus University Denmark, July 2011
- Lectured on MSc course: Design and Management of Storage Structures, KU Leuven, 2016
- Lectured on PhD course in Precision Livestock Farming, SLU, Sweden, April 2016.

ACADEMIC ACTIVITIES

Boards/Committees:
- Member of the Editorial board of ***Computers and Electronics in Agriculture*** (IF:1.761) since 2014
- Member of the Advisory Board of the PIGIT Project, University of Copenhagen
- Member of Harper Adams Engineering Department Management Team
- Member of the Harper Adams research ethics committee, 2014-2016
- Engineering Department coordinator of research, 2011, 2014

Memberships:
- Institute of Agricultural Engineers **since 2013**
- International Commission of Agricultural Engineering (CIGR) **since 2013**

- External panel member of 2 PhD commissions:

  2013: Wentao Wu Aarhus University (Denmark) – PhD thesis on Modelling and Measurement of Emissions from Livestock Buildings

  2015: Philippe Van Overbeke – PhD thesis on Development of a natural ventilation quantification technique using a reference test construction

- External Member of 2 MEngSc/MEng (by research) commissions:

  2015: Amruta Helwatkar, Tralee Institute of Technology (Ireland) – MEng thesis on Dairy cow health monitoring using sensor technology; Supervisor: Dr Joseph Walsh

  2016: Declan Lynch, University College Dublin (Ireland) – MSc thesis on Poultry Litter as an Alternative Fuel Source on a Broiler Farm; Supervisor: Prof Kevin McDonnell

- External Member of programme validation panel for Department of Biological and Pharmaceutical Sciences at Institute of Technology Tralee Ireland, **September 2014**

- External Member of course review panel for Agricultural Engineering at Institute of Technology Tralee Ireland, **April 2015**

- Assessor of modifications to undergraduate Agricultural Engineering and Manufacturing programmes for Tralee Institute of Technology, Ireland, **May 2015,**

- External Member of programme validation panel for MSc in Agricultural Science and Msc in Agricultural Biotechnology at Dundalk Institute of Technology, Ireland, **March 2015**

- Scientific committee member and session chairman during the symposium on CFD in the agri-food industry (CIGR-AgEng International Conference in Agricultural Engineering, Valencia, Spain, **June 2012**)

- Member of the CIGR Cattle Housing Working Group since **July 2015**

- Operational Board member for 4D4F: Data-Driven Dairy Decision for Farmers, **March 2016-2019**

- Member of the scientific committee for "The International Symposium of CFD in Agricultural & Biosystems Engineering", Aarhus, Denmark, **June 2016**

- Chair of Precision Livestock Farming Session and review panel member for CIGR-AgEng Internation Conference of Agricultural Engineering, Aarhus, Denmark, **June 2016**.

INVITED KEYNOTES:

XXVI International Congress of the Hungarian Association for Buiatrics	Precision Livestock Farming: taking technology from lab to field	Upcoming: Budapest October 2016
Welfare aspects of lameness in animals: Seminar within the Graduate School – Veterinary Medicine and Animal Sciences	Automatic Lameness Detection	May 2016, SLU, Sweden
XV AveSui Scientific Technical Seminar of Poultry and Swine and and I Precision Livestock Congress	Animal Sound talks: technology for monitoring health and welfare through the sound of animals	May 2016, Florinopolis, Brazil
UK- Indonesia Symposium on Engineering, Energy, Environmental Sustainability and Food Security	State-of-the-art in precision farming in the UK	September, 2015, Semerang, Indonesia
International Workshop on Precision Environmental Control	Applications of CFD for modelling and design of livestock buildings	May 2015, UniCamp, Sao Paulo, Brazil
Belarusian State Agricultural Academy seminar on Agricultural Engineering	Precision farming (livestock & crop) in the EU, with focus on the UK	Gorki, Belarus, November, 2015

VI Latin American and Caribbean Congress of Students in Agricultural Engineering (CLEIA-2015)	1. Modelling & design of livestock housing in the EU 2. Precision Agriculture in the EU	Medellín, Colombia, Universidad Nacional de Colombia, September 2015
Research and Lecture Visit to Seoul National University	Research in livestock production environments in the EU and UK	Seoul National University, May 2013
Herman Ottó Intéze collaboration event	Smart Farming at Harper Adams University College	Budapest, 2012
I Seminar CFD and other modeling applied to the ambience in animal production	Computational Fluid Dynamics Modelling of Livestock Buildings	UniCamp, Campinas, Brazil June 2011

DOCTORAL TRAINEES:

PhD Student	University	Thesis title	Funder	Start-finish	Supervison role
Yuvraj Domun	Harper Adams University	Modelling/Design of hybrid ventilation system for pig buildings	Agricultural Charities (£90k)	April 2016-April 2019	Director of Studies
Olutobi Adeyemi	Harper Adams University	Development of irrigation scheduling and control framework for potatoes	Oldacre Trust (£100k)	April 2015-April 2018	Director of Studies
Ayoola Jongbo	Harper Adams University	Development of welfare friendly cooling system for broilers	Nigerian governmant (£50k)	July 2014-July 2018	Director of Studies
Deborah Piette	KU Leuven	Measuring and Modelling Bioresponse of Animals and Humans (inc mental state)	FWO	April 2016-	Co-promotor
Alberto Penz Fernandez	KU Leuven	Real-time modelling of Animal Bioresponses for Precision Livestock Farming	EU-PLF	April 2014-	Co-promotor
Lenn Carpentier	KU Leuven	Real-time Sound Analysis for Precision Livestock Farming	EU-PLF	April 2015-	Co-promotor

Projects

Title	Funder	Total grant	Period	Role	Reference code
EU-PLF: Bright Farm by Precision Livestock Farming	FP7	€5.8M	Nov 2012 - 2016	Day-to-day management @ M3-BIORES (supporting coordination) (since June 2016)	KBBE.2012.1.1-02: 311825
4D4F: Data Driven Dairy Decisions 4 Farmers	H2020	€2.1M	March 2016 - 2019	Co-Inv @ M3-BIORES: sensor systems and value creation for dairy farmers	ISIB-02-2015: 696367
COST ACTION: GroupHouseNet	COST	Travel Fund	October 2015 -	Co-Inv @ M3-BIORES Member of the Precision Livestock Farming WG	CA15134
Egg condition monitoring pre-incubation	IWT project		Nov 2015 - 2017	Co-Inv on M3-BIORES Support team + steering group	

Dairy Animal Sensor Integrated Engineering	IUK	£1.18M	Aug 2014 – July 2017	Co-Inv.- HAU Engineering lead	IUK: 101826
Cost effective ammonia sensor for the pig industry	BPEX	£17k	March 2013 – September 2013	P-Inv.- HAU Engineering lead	BPEX: 71255
Integrated Sensing and Support Platform for Irrigation Scheduling of High-Value Field Crops	IUK	£10k	June 2012 – Jan. 2013	HAU subcontractor to Blackroc Technologies to explore feasibiliy of UAV sensing platform	TSB: 22811-159178
High Pressure Processing for the Food Freezing			2009	Assistant Researcher at FRCFT Group, UCD	N/A
Computational modelling of livestock Building Environments	Walsh-Fellowship	€60k	October 2003-2008	Assistant Researcher @ Teagasc	N/A

SCIENTIFIC HONORS/AWARDS/FELLOWSHIPS/MEMBERSHIPS:

- Teagasc Walsh Fellowship for PhD research
- Recognised as an excellent reviewer by editors of Computers and Electronics in Agriculture 2014

VISITING SCHOLARS

1. March 2015 - Visit Francisco Domingo Molina-Aiz Departamento de Ingenieria, Universidad de Almería, Spain – Focus on CFD modelling of Greenhouse structures: resulted in 1 conference and 1 Journal paper submission (May 2016)
2. September 2014 - Visit of Pavel Navitski, Head of Department of Agricultural Machines, Belarusian State Agricultural Academy, Gorki, Belarus – Focus on transfer of didactic approaches in the area of agricultural engineering: resulted in 1 conference (Feburary 2015)

Journal Reviewing

Transactions of ASABE

Applied Engineering in Agriculture (ASABE)

Computers and Electronics in Agriculture

Biosystems Engineering

Journal of Dairy Science

European Journal of Fluid Dynamics

Journal of Food Process Engineering

Journal of Food Engineering

ACADEMIC CONTRIBUTIONS

Book:

Sustainable Food Processing (2013), Brijesh K. Tiwari (Editor), Tomas Norton (Editor), Nicholas M. Holden (Editor) ISBN: 978-0-470-67223-5, Wiley, London.

Book Chapters:

Norton, T, Misiewicz P (2012) Ozone for Process Water Treatment Ozone in Food Processing, C. O'Donnell, B.K. Tiwari , P.J. Cullen, and Rip G. Rice (eds). Wiley UK

Norton, T, Cullen, PJ (2012) Ozone for Sanitation in the Food Industry Ozone in Food Processing, C. O'Donnell, B.K. Tiwari , P.J. Cullen, and Rip G. Rice (eds). Wiley UK.

Norton, T., Tiwari, B.K. (2013). Sustainable Cleaning and Sanitation in the Food Industry. In: Sustainable Food Processing, Tiwari, Norton, Holden, (eds) Wiley, London, UK.

Norton, T, Tiwari, B.K. (2012) HACCP, TQM and GMP in the food industry. Jasim Ahmed (eds). Handbook of Food Process Design. UK: Wiley.

Norton, T, Tiwari, B.K. (2012). The use of transfer modelling on thermal food processing microbial inactivation. Progress on Quantitative Approaches to Thermal Processing, Nova Publishers.

Norton, T, Tiwari, B.K. (2012). Computational fluid dynamics in food processing. In: Introduction to Advanced Food Process Engineering, J. Sahu (editor). CRC press, London, UK.

Gupta, M., Tiwari, B.K., Norton, T. (2011). Value addition and international trade. Biology and Breeding of Food Legumes, pp. 395-403.

Norton, T., & Sun, D-W. (2009). CFD: an innovative and effective design tool for the food industry. Food Engineering at Interfaces, Barbosa-Canovas, G. (editor), Springer Press

Norton, T., & Sun, D-W. (2009). Computational fluid dynamics in thermal processing. Simpson, R., (editor). Engineering Aspects of Thermal Processing. USA, CRC Press.

Norton, T., Sun, D-W. (2007). An overview of CFD applications in the food industry, Chapter 1 in Computational Fluid Dynamics in Food Processing, Da-Wen Sun (editor), CRC Press, USA

Special Section:

Guest Editor of Special Section: "Computational fluid dynamics in the agri-food industry". Computers and Electronics in Agriculture 2013 Vol. 93 pp. 149-228

Peer-reviewed Journal Publications:

In preparation/submitted

Fontana, I., Tullo, E., Berckmans, D., Butterworth, A., Carpentier, L., Norton, T., Vranken, E., Guarino, M. (2016). Sound analysis to model weight of broiler chickens. *In preparation*

Molina-Aiz, F.D., Norton, T., López, A., Reyes-Rosas, A., Moreno, M.A., Marín, P., Espinoza, K., Valera, D.L. (2016). Modelling of spatial variability of CO_2 inside horticultural greenhouses with Computational Fluid Dynamic. Abstract submitted to Special Issue in *Precision Agriculture* (May 2016)

Published

Osorio Saraz, J.A., Ferreira Tinôco, I., Olivera Rocha, K. S., Barreto Mendes, L. , Norton, T. (2016). A CFD based approach for determination of ammonia concentration profile and flux from poultry houses with natural ventilation. Revista Facultad Nacional de Agronomia-a Medellin; 69(1), 7825.

Zhou, H., Sun, Y., Cheng, Q., Schulze Lammers, P., Damerow, L., Schumann, H., Norton, T., Wen, B. (2014). In situ observation of thermal and hydraulic responses of sunflower stem to cold water irrigation using embedded thermocouples. Computers and Electronics in Agriculture, 109, 195-199.

Moses, J. A., Norton, T., Alagusundaram, K., & Tiwari, B. K. (2014). Novel drying techniques for the food industry. Food Engineering Reviews, 6(3), 43-55.

Joshi, K., Mahendran, R., Alagusundaram, K., Norton, T., Tiwari, B.K. (2013). Novel disinfectants for fresh produce, Trends in Food Science & Technology, 34(1), 54-61.

Norton, T. (2013). Computational Fluid Dynamics in the Agri-Food Industry: a maturing engineering design tool. Computer and Electronics in Agriculture, 93, 149-150. [Guest Editorial]

Bjerg, B., Norton, T., Banhazi, T., Bartzanas T., Cascone, G., Lee, I.-B., Liberati, P., Marucci, A., Zhang, G. (2013). Part one: Ammonia release modelling. Biosystems Engineering 116 (3), 232-245.

Bjerg, B., Banhazi, T., Bartzanas T., Cascone, G., Lee, I.-B., P. Liberati, Marucci, A., Norton, T., Zhang, G. (2013). Modelling of ammonia emissions from naturally ventilated livestock buildings. Part two: lumped parameter modelling. Biosystems Engineering 116 (3), 259-275.

Bjerg, B., Banhazi, Bartzanas T., Cascone, G., Lee, I.-B., Liberati, Marucci, A., Norton, T., G. Zhang. (2013). Modelling of ammonia emissions from naturally ventilated livestock buildings. Part three: computational fluid dynamics modelling. Biosystems Engineering 116 (3), 259-275.

Takai, H., Nimmermark, S., Banhazi, T., Norton, T., Jacobson, L.D., Calvet, S., Hassouna, B. M., Bjerg, B., Zhang, G., Kai, P., Wang, K., Berckmans, D. (2013). Airborne pollutant emissions from naturally ventilated buildings: proposed research directions Biosystems Engineering 116 (3), 214-220.

Norton, T. Kettlewell, P., Mitchell, M. (2013). Computational modelling of a fully-stocked dual-mode ventilated livestock vehicle during ferry transportation. . Computers & Electronics in Agriculture 93, 217-228.

Norton T., Grant, J., Fallon R., Sun D-W. (2010). Assessing the ventilation effectiveness of a naturally ventilated livestock building with different eave opening conditions. Computers and Electronics in Agriculture, 71(1), 7-21.

Norton T., Grant, J., Fallon R., Sun D-W. (2010). Improving the representation of thermal boundary conditions of livestock during CFD modelling of the indoor environment. Computers and Electronics in Agriculture, 73 (1), 17-36.

Norton T., Grant, J., Fallon R., Sun D-W. (2010). Optimising the ventilation configuration of naturally ventilated livestock buildings for improved indoor environmental homogeneity. Buildings and Environment, 45(4):983-988.

Norton T., Grant, J., Fallon R., Sun D-W. (2010) A computational fluid dynamics study of air mixing in a naturally ventilated livestock building with different porous eave opening conditions' Biosystems Engineering, 106 (2):125-137.

Norton, T., Tiwari, B.K., Sun, D-W (2010) Advances in the use of computational fluid dynamics in thermal processing' Critical Reviews in Food Science and Nutrition, 53(3):251-75.

Norton. T.; Tiwari, B. (2010) Aiding the understanding of novel freezing technology through numerical modelling. 21(3), 530-538.

Norton, T., Sun, D-W. (2006). Computational fluid dynamics (CFD) - an effective and efficient design and analysis tool for the food industry: a review. Trends in Food Science and Technology, 17(11), 600 - 620.

Norton, T., Sun, D-W., Grant, J., Fallon, R., & Dodd, V. (2007). The use of computational fluid dynamics (CFD) to model and design agricultural buildings. Bioresource Technology, 98(12), 2386-2414.

Norton, T., & Sun, D-W. (2008). Recent advances in the use of high pressure processing as an effective technology in the food industry. Food and Bioprocess Technology, 1(1), 2-34.

Norton, T., Sun, D-W., Grant, J., Fallon, R., & Dodd, V. (2009). Assessing the ventilation effectiveness of naturally ventilated livestock buildings under wind dominated conditions using computational fluid dynamics. Biosystems Engineering, 103(1), 78-99.

Norton, T., Delgado, A. Hogan, E., Grace, P. & Sun, D-W. (2009). Simulation of high pressure freezing processes by enthalpy method. Journal of Food Engineering, 91(2), 260-268.

Papers in conference proceedings:

Norton, T., Berckmans, D. (2016). Novel Precision Dairy Farming Technologies. Proceedings of the Precision Dairy Farming Conference, Leewarden, 23-26 June 2016

Norton, T., Exadaktylos, V., Vranken, E., Berckmans, D., Lehr, H., Vessier, I., Blokhuis, H., Berckmans, D. (2016). Implementation of Precision Livestock Farming (PLF) technology on EU farms: results from the EU-PLF project. International Conference on Agricultural Engineering, CIGR-AgEng 2016, June 2016.

Adeyemi, O., Norton, T., Grove, I., Peets, S. (2016). Performance Evaluation of Three Newly Developed Soil Moisture Sensors. I nternational Conference on Agricultural Engineering, CIGR-AgEng 2016, June 2016.

Molina-Aiz, F.D., Norton, T., López, A., Reyes-Rosas, A., Moreno, M.A., Marín, P., Espinoza, K., Valera, D.L. (2016). Preliminary modelling of spatial variability of CO_2 inside horticultural greenhouses with Computational Fluid Dynamics. HortiModel2016: V International Symposium on Models for Plant Growth, Environment Control and Farming Management in Protected Cultivation

Piette, D., Norton, T., Exadaktylos, V., Berckmans, D. (2016). Real-Time Monitoring of the Horse-Rider Dyad Using Body Sensor Network Technology. IEEE 13th International Conference on Wearable and Implantable Body Sensor Networks. June 2016.

Carpentier, L., Norton, T. Exadaktylos, V., Hemeryck, M., Berckmans, M., Earley B., Fontana, I., Tullo, E., Guarino, M., Berckmans, D. (2016). The Calf Cough Monitor: Preliminary Investigation of Classification in Real-Life Farm Conditions. International Conference on Agricultural Engineering, CIGR-AgEng 2016, June 2016.

Peña Fernández, A., Sloth, K-H., Norton, T., Klimpel, S., Berckmans, D. (2016). Monitoring of behavioural activities and milk yield of dairy cows as an indicator of health status. International Conference on Agricultural Engineering, CIGR-AgEng 2016, June 2016.

Peña Fernández, A., Van Hertem, T., Exadaktylos, V., Norton, V., Vranken, E., Berckmans, D. (2016). Monitoring of broiler activity on commercial farms using camera-based technology. 2016 International Conference on Agricultural Engineering, CIGR-AgEng 2016, June 2016.

Peña Fernández, A., Van Hertem, T., Exadaktylos, V., Norton, V., Vranken, E., Berckmans, D. (2016). Monitoring of litter quality in broiler commercial farms using camera-based technology. 2016 Annual International Meeting. Date: Jul 17-20, 2016.

Peña Fernández A., Van Hertem, T., Norton, T., Exadaktylos, V., Vranken, E. and Berckmans, D. (2016). Activity and distribution time-series analyses for monitoring broiler behaviour and welfare. ITISE 2016 (International work-conference on Time Series), June 2016.

Ntinas, G., Zhang, G., Fragos, VP, Norton, T., Martzopoulos, GG. (2015). Turbulent Flow around a Rib: Numerical vs. Wind Tunnel Experiments. Proceedings of 18th World Congress of CIGR

Navitski P., Norton T., Clare D., Peets S. (2015). Mechatronics teaching in preparing agricultural engineers for precision farming technology development. пленарное заседание Международная научно-техническая конференция. Belarusian Conference on Developments in Mechatronics, March 2015.

Bartzanas, T., Zhang, G., Norton, T. (2014). Improving ventilation efficiency in dairy cattle buildings using computational fluid dynamic tools. First DairyCare conference: Health and Welfare of Dairy Animals, Copenhagen, August 22nd and 23rd 2014.

Bartzanas, T., Zhang, G., Norton, T., Wu, W., & Papanastasiou, D. K. (2013). Numerical and experimental assessment of the airflow field and ventilation rates in a naturally ventilated free cubical cattle house with large openings. 6th European Conference on Precision Livestock Farming 2013, Leuven, Belgium

Papanastasiou, DK., Zhang, G, Bartzanas, T., Panagakis, P., Norton, T., Kittas, C. (2013). Development of models to assess potential sheep heat-stress during heat waves. 6th European Conference on Precision Livestock Farming 2013, Leuven, Belgium

Saraz, J.A.O., Rocha, K.S.O., Tinôco, I.D.F.F., Gates, R.S., Mendes, L.B., Norton, T., Hernandez, R.O. CFD modeling of air quality inside naturally ventilated broiler barns as a function of barn spatial arrangement (2012) American Society of Agricultural and Biological Engineers Annual International Meeting 2012, ASABE 2012.

Norton, T., Peter Kettlewell, Malcolm Mitchell, Jairo Saraz (in press). A computational analysis of a fully-stocked dual-mode ventilated livestock vehicle during ferry transportation. For presentation at CIGR-AgEng 20212, Valenica

Norton, T, Tiwari, B. (2012) Thermo-Fluid Dynamics Modelling: Predicting Food Safety and Nutritional Quality during Food Processing. International Conference on Food Safety, Quality and Nutrition (ICFSQN)

Norton, T., Grant, J., Fallon, R. and Sun, D-W. A computational fluid dynamics approach to predicting the ventilation efficiency and thermal comfort in naturally ventilated livestock buildings. International Conference on Agricultural Engineering (AgEng2008), Hersonissos - Crete, Greece, 23-25 June 2008.

Norton, T., Grant, J., Fallon, R. and Sun, D-W. Towards an optimally ventilated calf house (b) isothermal optimisation with computational fluid dynamics (CFD). Paper presented at the Agricultural Research Forum 2006, 15-16 March 2006, Tullamore, Co Offaly, Ireland.

Norton, T., Grant, J., Fallon, R. and Sun, D-W. Towards an optimally ventilated calf house (a) predesign evaluation. Paper presented at the Agricultural Research Forum 2006, 15-16 March 2006, Tullamore, Co Offaly, Ireland.

Norton, T., Grant, J., Fallon, R. and Sun, D-W. and Dodd, V.A. Ensuring the accurate prediction of airflow patterns in a climatic calf house by CFD, in Proceedings of 2005 EFITA/WCCA Joint Congress on IT in Agriculture, 25-28 July 2005, Vila Real, Portugal, pp. 310-317.

Norton, T., Grant, J., Fallon, R., Lenehan, J.J., and Sun, D-W. Qualitative and quantitative assessment of airflow within and around a naturally ventilated calf house using computational fluid dynamics (CFD). Paper presented at the Agricultural Research Forum 2005,15-16 March 2005, Tullamore, Co Offaly, Ireland.

Norton, T., Grant, J., Fallon, R. and Sun, D-W., Analysis of the efficiency of natural ventilation in a climatic calf house using computational fluid dynamics (CFD), in Proceedings of 2004 CIGR International Conference, 11-14 October 2004, Beijing, China (CD-ROM).

Norton, T., Grant, J., Fallon, R. and Sun, D-W. (2007). Towards a decision support system to improve the design of livestock buildings as a function of the local environment. Making Science Work on the Farm: A Workshop on Decision Support Systems for Irish Agriculture, Holden, N.M., Hochstrasser, T., Schulte, R. P. O., Walsh, S. (editors).