Report of President 2013/2014 - Institute of Food & Health

>> Book Chapters
>> Books Edited
>> Peer Reviewed Journals
>> Other Journals
>> Conference Publications
>> Published Reports
>> Other Publications

Book Chapters

Professor Francis Butler


Dr Aoife Gowen


Professor Colin Scott


Professor Da-Wen Sun


Diego, California, USA: Academic Press / Elsevier. , pp.495-513 

Books Edited
**Dr Enda Cummins**

**Dr Tom Curran**

**Professor Nick Holden**

Peer Reviewed Journals
**Dr Tommy Boland**


Dr Lorraine Brennan


oocytes recovered from postpartum dairy cows'. *Genomics*.


**Dr Nigel Patrick Brunton**


Ignat, Alexandra, Manzocco, Lara, Brunton, Nigel P., Nicoli, Maria Cristina, Lyng, James G. (2014) 'The effect of pulsed electric field pre-treatments prior to deep-fat

Valverde, Juan, Reilly, Kim, Villacreces, Salvador, Gaffney, Michael, Grant, James, Brunton, Nigel (2014) 'Variation in bioactive content in broccoli (Brassica oleracea var. italica) grown under conventional and organic production systems'. *Journal of the Science of Food and Agriculture*. 


Aguiló-Aguayo, Ingrid, Downey, Gerard, Keenan, Derek F, Lyng, James G, Brunton, Nigel, Rai, Dilip K (2014) 'Observations on the water distribution and extractable sugar content in carrot slices after pulsed electric field treatment'. *Food Research International*. 


sugar contents'. *Innovative Food Science and Emerging Technologies, 23*:79-86.

**Professor Francis Butler**


Gibbons JF, Boland F, Buckley JF, Butler F, Egan J, Fanning S, Markey BK, Leonard FC. (2014) 'Patterns of antimicrobial resistance in pathogenic Escherichia coli isolates from cases of calf enteritis during the spring-calving season'. *Veterinary Microbiology*.


Mussida, A, Vose, D, & Butler, F (2013) 'Efficiency of the sampling plan for Cronobacter spp. assuming a Poisson lognormal distribution of the bacteria in powder infant formula and the implications of assuming a fixed within and between-lot variability'. *Food Control, 33 (1)*:174-185.


**Dr Enda Cummins**


**Dr Tom Curran**


**Professor Giuseppe De Vito**


**Dr Brendan Egan**


**Professor Séamus Fanning**


Dr Eileen Gibney


Fallaize R, Forster H, Macready AL, Walsh MC, Mathers JC, Brennan L, Gibney ER, Gibney MJ, Lovegrove JA (2014) 'Online dietary intake estimation: reproducibility and validity of the Food4Me food frequency questionnaire against a 4-day weighed food record'. Journal Of Medicine, 16 (8).


Fallaize R, Forster H, Macready AL, Walsh MC, Mathers JC, Brennan L, Gibney ER, Gibney MJ, Lovegrove JA (2014) 'Online dietary intake estimation: reproducibility and validity of the Food4Me food frequency questionnaire against a 4-day weighed food record'. Journal Of Medicine, 16 (8).


Fallaize R, Forster H, Macready AL, Walsh MC, Mathers JC, Brennan L, Gibney ER, Gibney MJ, Lovegrove JA (2014) 'Online dietary intake estimation: reproducibility and validity of the Food4Me food frequency questionnaire against a 4-day weighed food record'. Journal Of Medicine, 16 (8).
maternal characteristics and macronutrient intake in pregnancy with neonatal body composition. Archives of Disease in Childhood, 99 Suppl 1.

Horan M, McGowan C, Donnelly J, Gibney E, McAuliffe F (2014) 'Maternal diet and weight at 3 months partum following a pregnancy intervention with a low glycaemic index diet: Results from the ROLO randomised control trial'. Archives of Disease in Childhood, 99 Suppl 1:1-30.


Professor Nick Holden


Dr Jean-Christophe Jacquier


Professor Cecily Kelleher


Emily Heery, Áine McConnon, Cecily C Kelleher, Patrick G Wall1 and Fionnuala M McAuliffe (2013) 'Perspectives on weight gain and lifestyle practices during pregnancy among women with a history of macrosomia: a qualitative study in the Republic of Ireland'. Bmc Pregnancy And Childbirth.

McGorrian C, Hamid NA, Fitzpatrick P, Daly L, Malone KM, Kelleher C (2013) 'Frequent Mental Distress in Irish travellers: Discrimination and bereavement negatively influence mental health in the all-Ireland traveller health study'. TRANSCULTURAL PSYCHIATRY.

Catherine McGorrian Noor Aman Hamid Patricia Fitzpatrick Leslie Daly Kevin M. Malone Cecily Kelleher (2013) 'Frequent mental distress (FMD) in Irish Travellers: Discrimination and bereavement negatively influence mental health in the All Ireland Traveller Health Study'. TRANSCULTURAL PSYCHIATRY.


Malone KM, Quinlivan L, Grant T, Kelleher CC (2013) 'Ageing towards 21 as a risk factor for Young Adult Suicide in the UK and Ireland'. PubMed-Indexed for MEDLINE.

Professor James Lyng


Lyng, JG; Arimi, JM; Scully, M; Marra, F (2014) 'The influence of compositional changes in reconstituted potato flakes on thermal and dielectric properties and temperatures following microwave heating'. *Journal of Food Engineering*, 124 :133-142.


Dr Kevin McDonnell


Fionnuala Murphy, Ger Devlin, Kevin McDonnell (2013) 'Energy requirements and environmental impacts associated with the production of short rotation willow (Salix sp.) chip in Ireland'. *Global Change Biology Bioenergy*.

Professor Frank Monahan


Contini C, Katsikogianni MG, O'Neill FT, O'Sullivan M, Boland F, Dowling DP and Monahan FJ (2014) 'Storage stability of an antioxidant active packaging coated with Citrus extract following a plasma jet pre-treatment'. *Food and Bioprocess Technology*, 7 :2228-2240.


**Dr Celine Murrin**


**Dr Anne Nugent**


**Professor John O’Doherty**

Moroney, NC and O’Grady, MN and Robertson, RC and Stanton, C and O’Doherty, JV and Kerry, JP (2014) 'Influence of level and duration of feeding polysaccharide (laminarin and fucoidan) extracts from brown seaweed (<i>Laminaria digitata</i>) on
quality indices of fresh pork'. *Meat Science*.


**Professor Colm O'Donnell**


Professor Dolores O’Riordan


Dr Aifric O'Sullivan


Mr Mick O'Sullivan


Contini C, Katsikogianni MG, O'Neill FT, O'Sullivan M, Boland F, Dowling DP and Monahan FJ (2014) 'Storage stability of an antioxidant active packaging coated with Citrus extract following a plasma jet pre-treatment'. Food and Bioprocess Technology, 7:2228-2240.

Dr Karina Pierce


Professor Helen Roche


**Dr Amalia Scannell**


**Professor Colin Scott**


**Professor Da-Wen Sun**


L. Wang, D. Liu, H. Pu, Da-Wen Sun, W. Gao and Z. Xiong; (2014) 'Use of Hyperspectral Imaging to Discriminate the Variety and Quality of Rice'. *Food Analytical Methods*.

N.-N. Wang, Y.-C. Yang, Da-Wen Sun, H. Pu and Z. Zhu; (2014) 'Shelf-Life Prediction of ¿Gros Michel¿ Bananas with Different Browning Levels Using Hyperspectral Reflectance Imaging'. *Food Analytical Methods*.

Y.-Y. Pu, Y.-Z. Feng and Da-Wen Sun; (2014) 'Recent Progress of Hyperspectral Imaging on Quality and Safety Inspection of Fruits and Vegetables: A Review'. *Comprehensive Reviews in Food Science and Food Safety*.


H.-J. He and Da-Wen Sun; (2014) 'Inspection of Harmful Microbial Contamination Occurred in Edible Salmon Flesh Using Imaging Technology'. *Journal of Food Engineering*.

Z. Xiong, Da-Wen Sun, H. Pu, Z. Zhu and M. Luo; (2014) 'Combination of Spectra and Texture Data of Hyperspectral Imaging for Differentiating between Free-range and Broiler Chicken Meats'. *LWT -- Food Science and Technology*.


Quantitative Analysis of Sublethally Injured Saccharomyces cerevisiae Cells Induced by Pulsed Electric Fields. *LWT—Food Science and Technology*.

Thin-Layer Air Impingement Drying Enhances Drying Rate of American Ginseng (Panax quinquefolium L.) Slices with Quality Attributes Considered. *Food and Bioprocess Technology*.

Application of Wavelet Analysis to Spectral Data for Categorization of Lamb Muscles. *Food and Bioprocess Technology*.


Recent Advances in De-Noising Methods and Their Applications in Hyperspectral Image Processing for the Food Industry. *Comprehensive Reviews in Food Science and Food Safety*.

Modelling the Growth Parameters of Lactic Acid Bacteria and Total Viable Count in Vacuum-Packaged Irish Cooked Sausages Cooled by Different Methods. *International Journal of Food Science and Technology*.

Applications of Computer Vision for Assessing Quality of Agri-Food Products: A Review of Recent Research Advances. *Critical Reviews in Food Science and Nutrition*.


Applications of Near Infrared Spectroscopy in Food Safety Evaluation and Control: A Review of Recent Research Advances. *Critical Reviews in Food Science and Nutrition*.


Recent Advances in Data Mining Techniques and Their Applications in Hyperspectral Image Processing for the Food Industry. *Comprehensive Reviews in Food Science and Food Safety*, 13 (5):891-905.


operation and quality of Irish cooked sausages by using response surface methodology'.


D. Zhao, X.-A. Zeng, Da-Wen Sun and D. Liu; (2013) 'Effects of Pulsed Electric Field Treatment on the (+)-Catechin-Acetaldehyde Condensation'. *Innovative Food Science and Emerging Technologies*, 20 :100-105.


Y. Tao, D. Wu, Da-Wen Sun, A. Górecki, W. Błaszczyk, J. Fornal and T. Jeliński;


A. Iqbal, Da-Wen Sun and P. Allen; (2013) 'Prediction of Moisture, Colour and pH in Cooked, Pre-Sliced Turkey Hams by NIR Hyperspectral Imaging System'. *Journal of


Y.-Z. Feng and Da-Wen Sun; (2013) 'Determination of Total Viable Count (TVC) in Chicken Breast Fillets by Near-Infrared Hyperspectral Imaging and Spectroscopic Transforms'. Talanta, 105 :244-249.


G. Su, J. Ren, M. Zhao and Da-Wen Sun (2013) 'Comparison of Superdex Peptide HR 10/30 Column and TSK Gel G2000 SWXL Column for Molecular Weight Distribution Analysis of Protein Hydrolysates'. Food and Bioprocess Technology, 6 (12):3620-3626.


F. Zhu, D. Zhang, Y. He, F. Liu and Da-Wen Sun; (2013) 'Application of Visible and Near Infrared Hyperspectral Imaging to Differentiate Between Fresh and Frozen-Thawed Fish Fillets'. Food and Bioprocess Technology, 6 (10):2931-2937.


**Professor Torres Sweeney**


**Dr Paul Whyte**

Bullman, S., Kearney, K., O'ÓMahony, M., Kelly, L., Whyte, P., Fanning, S., Morgan,


**Other Journals**

**Dr Aoife Gowen**

- Aoife A. Gowen and Colm P. O'Donnell (2013) 'Near infrared hyperspectral imaging for foreign body detection and identification in food processing' *Spectroscopy Europe*.

**Professor James Lyng**


**Dr Anne Nugent**


**Professor Colm O'Donnell**

A.A. Gowen, C.P. O'Donnell (2013) 'Near infrared hyperspectral imaging for foreign body detection and identification in food processing' *Spectroscopy Europe*.

**Professor Da-Wen Sun**


**Dr Paul Whyte**


Conference Publications

**Dr Enda Cummins**


**Professor Frank Monahan**


**Dr Celine Murrin**


C Murrin, A Shrivastava, C Kelleher (2013) The dietary patterns of mothers during pregnancy, their child at age five years and child weight status *International Congress of Nutrition*

**Professor Da-Wen Sun**

Y.-Y. Pu, Y.-Z. Feng, M. Kamruzzaman and Da-Wen Sun; (2014) Detection of Adulteration in Minced Lamb Meat using NIR Hyperspectral Imaging *Hyperspectral Imaging and Applications Conference*, Coventry, UK,

H. He and Da-Wen Sun; (2014) Emerging Hyperspectral Imaging for Rapid and Real-Time Monitoring of Main Spoilage Bacteria in Farmed Salmon Fillets *18th World Congress of CIGR on Agricultural and Biosystems Engineering Upgrading the Quality of Our Life*, Beijing, China,

Da-Wen Sun; (2014) Recent Developments in Hyperspectral Imaging for Quality and Safety Evaluation of Agricultural and Food Products *the 18th World Congress of CIGR on Agricultural and Biosystems Engineering Upgrading the Quality of Our Life (Keynote speech)*, Beijing, China,
Da-Wen Sun; (2014) Recent Advances in Hyperspectral Imaging Technology ¿ Applications for Food Quality and Safety Evaluation and Inspection the Workshops on Computer Image Analysis in Biosciences (Invited speech), Olsztyn, Poland,
Da-Wen Sun; (2014) Recent Applications of Hyperspectral Imaging for Food Safety and Quality Control 8th Food Science International Symposium (Keynote speech), Chengdu, China,
C.-H. Feng, L. Drummond, Da-Wen Sun and Z. H. Zhang; (2014) Evaluation of Natural Hog Casings Modified by Surfactant Solutions Combined with Lactic Acid by Response Surface Methodology and Sausage Performance Stuffed in Modified Casing during Immersion Vacuum Cooling 18th World Congress of CIGR on Agricultural and Biosystems Engineering ¿ Upgrading the Quality of Our Life, Beijing, China,
Z. Liu, X.-A. Zeng, Da-Wen Sun and Z. Han; (2014) Synergistic Effect of Thermal and Pulsed Electric Field Treatment on the Permeability of Vesicles ¿ A Cell Membrane Simulation 18th World Congress of CIGR on Agricultural and Biosystems Engineering ¿ Upgrading the Quality of Our Life, Beijing, China,
Y.-C. Yang, N.-N. Wang, D. Liu, Da-Wen Sun and X.-A. Zeng; (2013) Rapid Detection of Water Content Changes of Pericarp During Browning Process of Postharvest Litchi by Hyperspectral Imaging 8th International CIGR Technical Symposium on Advanced Food Processing and Quality Management, Guangzhou, China,
M.-S. Wang, X.-A. Zeng, Da-Wen Sun and Z. Han; (2013) Quantitative Analysis of Sublethal Saccharomyces Cerevisiae Cells Induced by Pulsed Electric Field 8th International CIGR Technical Symposium on Advanced Food Processing and Quality Management, Guangzhou, China,
Z.-W. Liu, X.-A. Zeng, Da-Wen Sun and Z. Han; (2013) Effects of Pulsed Electric Fields on the Permeabilization of Calcein-Filled Soybean Lecithin Vesicles 8th International CIGR Technical Symposium on Advanced Food Processing and Quality Management, Guangzhou, China,
F. Hu and Da-Wen Sun; (2013) Factors of Pre-presence Bubbles Influencing Ultrasound Assisted Nucleation of Liquid Models during Freezing 8th International CIGR Technical Symposium on Advanced Food Processing and Quality Management, Guangzhou, China,
H.-J. He, D. Wu and Da-Wen Sun; (2013) Hyperspectral Imaging Technique for Rapid Detection of Enterobacteriaceae Loads in Raw Salmon Fillets 8th International CIGR Technical Symposium on Advanced Food Processing and Quality Management, Guangzhou, China,
Da-Wen Sun; (2013) Hyperspectral Imaging Technology: A Non-destructive and Effective Tool for Food Quality and Safety Evaluation and Control BIT’s 1st Annual International Conference of Emerging Industry 2013 (Keynote speech), Shenzhen, China,
D. Liu, J.-H. Qu, J. Ma, Da-Wen Sun, X.-A. Zeng and H. Pu; (2013) Rapid Determination of Sodium Chloride in Salted Meat by Visible and Near-Infrared Hyperspectral Imaging 8th International CIGR Technical Symposium on Advanced Food Processing and Quality Management, Guangzhou, China,
H. Liu, Y. Feng and Da-Wen Sun; (2013) Fast Assessment of Microbial Spoilage in Lamb Meat by Near-Infrared (NIR) Hyperspectral Imaging 8th International CIGR Technical Symposium on Advanced Food Processing and Quality Management, Guangzhou, China,
H.-W. Xiao, L. Zhao, Da-Wen Sun and Z.-J. Gao; (2013) Hot Air Impingement Drying Characteristics of Corn and Its Effects on Solubility and Electrophoretic Patterns of Corn Albumin and Globulin 8th International CIGR Technical Symposium on Advanced Food Processing and Quality Management, Guangzhou, China,
Q. Yu, X.-A. Zeng, Q.-J. Wang and Da-Wen Sun; (2013) Effects of Pulsed Electric Field on Selected Properties of L-tryptophan 8th International CIGR Technical Symposium on Advanced Food Processing and Quality Management, Guangzhou, China,
Da-Wen Sun; (2013) Using Hyperspectral Imaging as an Effective Tool for Food Quality and Safety Evaluation International Symposium of Food Science and Human Wellness (Keynote speech), Guangzhou and Hong Kong, China,
Y.Z. Feng and Da-Wen Sun; (2013) Use of Near-Infrared Hyperspectral Imaging in Meat Microbiology: Visualization of Bacteria on Chicken Fillets as an Example Food Structure and Functionality Conference, 15 Years Later, Stare Jablonki, Poland,
H.-J. He and Da-Wen Sun; (2013) Hyperspectral Imaging for Visualizing the Spatial Distribution of Moisture, Drip Loss and Color in Salmon Fillets Food Structure and Functionality Conference, 15 Years Later, Stare Jablonki, Poland,
C.-H. Feng, L. Drummond, Z.-H. Zhang and Da-Wen Sun; (2013) Technological Properties Study of the Modified Casing for Better Performance of Casing During Immersion Vacuum Cooling Food Structure and Functionality Conference, 15 Years Later, Stare Jablonki, Poland,
Da-Wen Sun; (2013) Hyperspectral imaging as a Tool in Food Quality Evaluation Food Structure and Functionality Conference, 15 Years Later (Plenary lecture), Stare Jablonki, Poland,
Y.-Z. Feng and Da-Wen Sun; (2013) Non-Destructive Determination of Pseudomonas in Chicken Using Near-Infrared Chemical Imaging and Chemometrics NIR2013, the 16th International Conference on Near Infrared Spectroscopy, La Grande-Motte, France,
H. Kiani, Z. Zhang and Da-Wen Sun; (2013) Mathematical and Experimental Analysis of Ultrasound Assisted Freezing of Potato Spheres FaBE 2013, International Conference on Food and Biosystems Engineering, Skiathos Island, Greece,
Y. Tao and Da-Wen Sun; (2013) Modelling and Optimization of Ultrasound-Assisted

Published Reports

**Dr Tom Curran**

Hill, Richard; Bealey, Bill; Johnson, Claire; Ball, Angela; Simpson, Kate; Smith, Andrew; Theobald, Mark; Braban, Christine; Magaz, Ivan; Curran, Tom (2014) *SCAIL-Agriculture Update*. Sniffer, Edinburgh, UK.

**Dr Celine Murrin**


Other Publications

**Professor Joseph Andrew McMahon**