Report of President 2012/2013 - School of Biosystems Engineering

Books

**Professor Da-Wen Sun**


Book Chapters

**Professor Francis Butler**


**Dr Gerard Corkery**


**Dr Enda Cummins**


**Ms Liana Drummond**


**Professor Nick Holden**


**Dr Ultan McCarthy**


**Dr Kevin McDonnell**


**Professor Da-Wen Sun**


Professor Shane Ward


Professor Shane Ward


Books Edited

Dr Tom Curran


Peer Reviewed Journals

Mr Bas Boots


Boots, B,Clipson, N (2013) 'Linking ecosystem modification by the yellow meadow ant (Lasius flavus) to microbial assemblages in different soil environments'. European Journal of Soil Biology, 55 :100-106.

**Professor Francis Butler**


**Dr Rory Coffey**


**Dr Enda Cummins**


Tiwari U. and Cummins E*; (2013) 'Factors influencing levels of phytochemicals in selected fruit and vegetables during pre and post food processing operations'. *Food Research International*, 50 (2):497-506.


Tiwari, U,Cummins, E (2013) 'Factors influencing levels of phytochemicals in selected fruit and vegetables during pre- and post-harvest food processing operations'. *Food Research International*, 50 :497-506.


**Dr Tom Curran**


**Dr Ger Jason Devlin**


Ms Liana Drummond


Dr Carlos Esquerre Fernandez


Mr Juan Garcia Martin


Dr Aoife Gowen


Dr Phil Hemmingway


Professor Nick Holden


Jianjun Cao, E, Yeh, N.M. Holden, Yangyang Yang (2013) 'The effects of enclosures and land-use contracts on grassland degradation on the Qinghai Tibetan plateau'. *Journal of Arid Environments*, 97 :3-8.


Dr Kevin McDonnell


Galbally, P,Ryan, D,Fagan, CC,Finnan, J,Grant, J,McDonnell, K (2013) 'Biosolid and


**Professor Colm O'Donnell**


**Professor Da-Wen Sun**


D. Liu, Da-Wen Sun and X.-A. Zeng; (2013) 'Recent Advances in Wavelength Selection
Techniques for Hyperspectral Image Processing in the Food Industry'. *Food and Bioprocess Technology*.

P. Nie, D. Wu, Da-Wen Sun, F. Cao, Y. Bao and Y. He; (2013) 'Potential of Visible and Near Infrared Spectroscopy and Pattern Recognition for Rapid Quantification of Notoginseng Powder with Adulterants'. *Sensors*.


D. Wu, X. Chen, F. Cao, Da-Wen Sun, Y. He and Y. Jiang; (2013) 'Comparison of Infrared Spectroscopy and Nuclear Magnetic Resonance Techniques in Tandem with Multivariable Selection for Rapid Determination of ω-3 Polyunsaturated Fatty Acids in Fish Oil'. *Food and Bioprocess Technology*.


H.-J. He, D. Wu and Da-Wen Sun; (2013) 'Non-Destructive Spectroscopic and Imaging Techniques for Quality Evaluation and Assessment of Fish and Fish Products'. *Critical Reviews in Food Science and Nutrition*.


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.


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*.


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.


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.


S. Yu, Y. Ma, L. Menager and Da-Wen Sun; (2012) 'Physicochemical Properties of
Starch and Flour from Different Rice Cultivars'. *Food and Bioprocess Technology*, 5 (2):626-637.


**Dr Eilín Walsh**


**Mr Bas Boots**


**Conference Publications**

**Dr Gerard Corkery**


**Dr Enda Cummins**


**Dr Ger Jason Devlin**

Ger Devlin and Radomir Klvac (2013) Opportunities for developing excavator based cable logging operations in Ireland - A productivity analysis *Forest Operations in Mountaineous Conditions - IUFRO 3.06*, Oslo, Norway,

Ger Devlin (2013) Bioenergy - Strategies and obstacles - How to reach 2020 targets *Mendel University (guest lecturer)*, Mendel University, Brno, Czech Republic,
Dr Phil Hemmingway


Dr Kevin McDonnell

Ger Devlin and Radomir Klvac (2013) Opportunities for developing excavator based cable logging operations in Ireland - A productivity analysis Forest Operations in Mountainous Conditions - IUFRO 3.06, Oslo, Norway,

Ger Devlin (2013) Bioenergy - Strategies and obstacles - How to reach 2020 targets Mendel University (guest lecturer), Mendel University, Brno, Czech Republic,

Professor Da-Wen Sun

Y. Tao and Da-Wen Sun; (2013) Modelling and Optimization of Ultrasound-Assisted Extraction of Phenolics from Wine Lees Food Structure and Functionality Conference, 15 Years Later, 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,

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,

M. Kamruzzaman, Y.-Z. Feng, G. ElMasry, Da-Wen Sun and P. Allen; (2013) An Appraisal of NIR Hyperspectral Imaging for Authentication of Minced Lamb Meat NIR2013, the 16th International Conference on Near Infrared Spectroscopy, La Grande-Motte, France,

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,

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,

Da-Wen Sun; (2013) Computational Fluid Dynamics (CFD): An Effective Tool for Food Process Design and Optimisation FaBE 2013, International Conference on Food and Biosystems Engineering, 30 May - 2 June 2013, (Invited speech), Skiathos Island, Greece,
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.


Da-Wen Sun; (2012) Computer Vision Technology - a Non-Destructive Tool for Food Quality Evaluation and Classification *7th Food Science International Symposium*
(Keynote speech), Urumqi, China,
Da-Wen Sun; (2012) Development of Hyperspectral Imaging Technology for Quality and Safety Evaluation and Inspection of Agricultural and Food Products 2012 CSAM International Academic Annual Meeting on Innovation, Win-Win, Development (Plenary lecture), Hangzhou, China,
H.-J. He, D. Wu and Da-Wen Sun; (2012) Non-Destructive Analysis of Shear Force of Farmed Salmon Fillets Using Hyperspectral Imaging 7th International CIGR Technical Symposium on Innovating the Food Value Chain, Stellenbosch, South Africa,
D. Zhao, X.-A. Zeng, Da-Wen Sun and D. Liu; (2012) Effect of Pulsed Electric Field Treatment on (+)-Catechin-Acetaldehyde Condensation 7th International CIGR Technical Symposium on Innovating the Food Value Chain, Stellenbosch, South Africa,
Y. Tao, D. Wu, Da-Wen Sun, A. Gąki, W. Błaszczak, J. Fornal and T. Jeliński; (2012) Modeling of Evolution of Tannins Content in Wine during High Hydrostatic Pressure Processing: Comparison of Response Surface Methodology and Artificial Neural Network 7th International CIGR Technical Symposium on Innovating the Food Value Chain, Stellenbosch, South Africa,
C.-H. Feng, L. Drummond, Z.-H. Zhang and Da-Wen Sun; (2012) Investigation into the Effects of Increased Food Load during Immersion Vacuum Cooling of Pork Ham 7th International CIGR Technical Symposium on Innovating the Food Value Chain, Stellenbosch, South Africa,
Da-Wen Sun; (2012) Recent Developments of Hyperspectral Imaging Technology for Food Quality and Safety Evaluation and Control 7th International CIGR Technical Symposium on Innovating the Food Value Chain (Plenary lecture), Stellenbosch, South Africa,
Da-Wen Sun; (2012) Applications of Computer Vision Technology for the Food Industry 137th Chinese Engineering Science Forum of Chinese Academy of Engineering on Chinese Food Safety Science and Technology (Keynote speech), Beijing Conference Centre, Beijing, China,

Professor Shane Ward

Ger Devlin and Radomir Klvac (2013) Opportunities for developing excavator based cable logging operations in Ireland - A productivity analysis Forest Operations in Mountaineous Conditions - IUFRO 3.06, Oslo, Norway,
Ger Devlin (2013) Bioenergy - Strategies and obstacles - How to reach 2020 targets Mendel University (guest lecturer), Mendel University, Brno, Czech Republic,

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Ger Devlin and Radomir Klvac (2013) Opportunities for developing excavator based cable logging operations in Ireland - A productivity analysis Forest Operations in Mountaineous Conditions - IUFRO 3.06, Oslo, Norway,
Ger Devlin (2013) Bioenergy - Strategies and obstacles - How to reach 2020 targets Mendel University (guest lecturer), Mendel University, Brno, Czech Republic,
Coffey R., Kline K., Ball. M and Benham B. (2013) *Bacteria Total Maximum Daily Load Development for Hat Creek, Piney River, Rucker Run, Mill Creek, Rutledge Creek, Turner Creek, Buffalo River and Tye River in Nelson County and Amherst County, Virginia*. VA DEQ, Richmond, Virginia, USA.