

FINAL PROGRAM



26 – 28 June 2008

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FOODSIM'2008 FINAL PROGRAMME

Overhead and LCD Projector are standard
 The underlined authors are usually the presenters. Papers in grey boxes are candidates for the best paper award,
 Conference Site: The [Montrose Hotel](#) in Dublin, Stillorgan Road, Dublin 4, Ireland. 📠
 Tel: +353(0)1 2693311, 📠 Fax: +353(0)1 2693376 📧 Email: info@montrosehotel.ie The way to the meeting room will be signposted.

Thursday, June 26, 2008

08.15 - 16.00 **Registration in front of the meeting room**

08.45 - 10.10 **Welcome and Opening Session**
Welcome Address
Enda Cummins, University College Dublin, Dublin, Ireland
Prof. Maurice Boland, College Principal, University College Dublin, Dublin, Ireland
Daniel Thiel, ENITIAA, Nantes, France

09.05 - 10.10 **Session I**

**MODELLING OF HEAT TRANSFER AND
SIMULATION OF THERMAL PROCESSES**

09.05-10.10 Session Chairperson:
Olivier Vitrac, INRA-UMR FARE 614, Reims, France

FOODSIM_ENG_01
Global and local optimization of food quality in batch thermal processes
Taghi Miri, Serafim Bakalis, Burc Rustem, Angelos Tsoukalas, Efstratios Pistikopoulos and Peter Jonathan Fryer..... **17**

FOODSIM_ANA_02
Modelling of Heat Transfer to Foods Incorporating Uncertainty in the location of Experimental Temperature Measurement
Kevin Cronin and Jose Caro Corrales **20**

FOODSIM_TM_03
Optimization of drying kinetics of paneer with low pressure superheated steam using an artificial neural network
Shivamurti Shrivastav, B.K. Kumbhar and Amarjeet Kalra..... **25**

10.10 - 10.40 **Coffee Break/Posters**

Thursday, June 26, 2008

10.40 - 11.20

Session II

INVITED SPEAKER

10.40-11.20

Session Chairpersons:

Daniel Thiel, ENITIAA, Nantes, France and Enda Cummins, UCD, Dublin, Ireland

INV_01

Modelling and simulation of dynamical systems with a dynamical structure

Jean-Louis Giavitto..... **5**

11.20 - 13.05

Session III

MODELLING AND SIMULATION IN FOOD SCIENCES AND FOOD ENGINEERING

11.20-13.05

Session Chairperson:

Bjorn Johansson, Chalmers University of Technology, Sweden

FOODSIM_PROD_01

Modelling and simulation of bakery production lines for process analysis and optimization

Walid Hussein, Florian Hecker, Martin Mitzscherling and Thomas Becker **45**

FOODSIM_ANA_04

Sandwich Bread Cooling

Jean-Yves Monteau **49**

FOODSIM_SCI_01

Effect of the temperature and relative humidity in the respiration rate (RR) & transpiration rate (TR) in *Agaricus bisporus*

Leixuri Aguirre, Jesus M. Frías, Catherine Barry-Ryan and Helen Grogan **54**

FOODSIM_N_01

Time to Failure and Time to Repair Profiles Identification

Giuseppe Perrica, Cesare Fantuzzi, Andrea Grassi, Gabriele Goldoni and Federico Raimondi..... **59**

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FOODSIM_ENG_05
Expansion of the Whole Wheat Flour Extrusion
<u>Hongyuan Cheng</u> and Alan Friis 65

13.05 - 14.05 **Lunch**

14.05 - 14.55 **Session IV**

SIMULATION TOOLS FOR FOOD ANALYSIS

14.05-14.55

Session Chairperson:
Daniel Thiel, ENITIAA, Nantes, France

FOODSIM_SCI_07

Low-grade cane sugar crystallization. Study of the effects of operating conditions on the mass of crystal germs produced carried out by design of experiments

Brigitte Grondin-Perez, Michel Benne and
Jean-Pierre Chabriat 31

FOODSIM_ENERG_02

Determination of dielectric parameters of frozen materials via reverse technique

S. Curet, O. Rouaud and L. Boillereaux..... 36

14.55 - 15.25 **Coffee Break/Posters**

15.25 - 16.50 **Session V**

RISK ASSESSEMENT MODELLING IN FOOD AND BIOTECHNOLOGY

15.25-16.50

Session Chairperson:
Kristel Bernaerts, University of Leuven, Leuven, Belgium

FOODSIM_ENG_02

A Meta-Analysis Study of the Effect of Chilling on Prevalence of Salmonella SPP, on Pig Carcasses

D. Bergin, U. Gonzales-Barron and F. Butler..... 71

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FOODSIM_SCI_05

A Preliminary Simulation Model for the Prevalence of *Salmonella* 4 spp during Pork Processing in Ireland

Ursula Gonzales Barron, Francis Butler, Donal Bergin, Sharon Duggan, Deirdre Prendergast and Geraldine Duffy..... **74**

FOODSIM_SCI_06

A comparison of Deterministic and Stochastic Epidemic Models for the Risk Assessment of Salmonella at the Preharvest level of Pork Production

Ilias Soumpasis and Francis Butler..... **80**

FOODSIMSCI_04

A Comparison of a Simple Spreadsheet Tool for Risk Assessment and a Fuzzy Risk Assessment Tool for Ranking of Food-borne Pathogens in Poultry Meat

Beatriz Aybar-Barboza and Francis Butler..... **86**

FREE EVENING

Friday, June 27, 2008

08.30 - 17.00 **Registration in front of the meeting room**

09.00 - 10.25 **Session VI**

PREDICTIVE MICROBIOLOGY APPLIED TO FOOD AND BIO-INDUSTRIES

09.00-10.25

Session Chairperson:
Francis Butler, University College Dublin, Dublin, Ireland

FOODSIM_SCI_02

**Individual Based Modelling and Flow Cytometry: Two Suitable
Tools for Predictive Microbiology**

Clara Prats Soler, Jordi Ferrer Savall, Daniel López Codina and
Josep Vives Rego **91**

FOODSIM_ANA_06

**Predictive modelling of *Listeria monocytogenes* in Irish smoked
salmon**

S.D. Chitlapilly, N. Abu-Ghannam and E.J. Cummins .. **96**

FOODSIM_SCI_08

Assessment of the Sensorial Shelf Life of Cultivated Mushrooms

Debabandya Mohapatra, Fernanda A. Rodrigues and

Jesus M. Frias **99**

FOODSIM_ENG_04

**Optimal dynamic experiment design as a tool for accurate esti-
mation of microbial growth cardinal temperatures**

Eva Van Derlinden, Lyn Venken, Kristel Bernaerts and

Jan F. Van Impe **102**

10.25 - 10.55 **Coffee Break/Posters**

10.55 - 11.35 **Session VII**

INVITED SPEAKER

Friday, June 27, 2008

10.55-11.35

Session Chairs:

**Enda Cummins, University College Dublin, Dublin, Ireland and
Daniel Thiel, ENITIAA, Nantes, France**

INV_02

**Predictive Microbiology Tools for Evaluating the Compliance of
RTE Foods with the New European Union Safety Criteria for Lis-
teria monocytogenes**

Kostas Koutsoumanis..... **7**

11.35 - 13.00

Session VIII

CHEMICAL RISK ASSESSMENT AND FOOD SAFETY

11.35-13.00

Session Chairperson:

Kostas Koutsoumanis, Aristotle Univ.of Thessaloniki, Greece

FOODSIM_ANA_03

**An Exposure Assessment of Mycotoxins from Feed to Food in
Dairy Milk**

Rory Coffey and Enda Cummins **113**

FOODSIM_ANA_09

**Preliminary Quantitative risk ranking and prioritisation of chemi-
cal contaminants in skim milk powder chain**

A.Adekunte, F. Butler and C.O'Donnell **120**

FOODSIM_TM_04

**A Methodology for predicting Barley β Glucan levels during Pre-
Harvest Stages**

Uma Tiwari and Enda Cummins **125**

FOODSIM_SCI_03

**Exposure assessment to phycotoxins in recreative shellfish har-
vesters: a sampling plan**

Cyndie Picot, François-Gilles Carpentier, Alain-Claude Roudot and
Dominique Parent Massin **130**

13.00 - 14.00

Lunch

Friday, June 27, 2008

14.00 - 15.05

Session IX

**MODELLING AND SIMULATION IN FOOD SCIENCES
AND BIOTECHNOLOGY**

14.00-15.05

Session Chairperson:

Enda Cummins, University College Dublin, Dublin, Ireland

FOODSIM_ENG_03

A tendency model for dynamic simulation of an industrial crystallisation process

Michel Benne, Brigitte Grondin-Perez and

Jean-Pierre Chabriat **135**

FOODSIM_ANA_05

Prediction of partition coefficients of plastic additives between food simulants and polyethylene films

Guillaume Gillet, Olivier Vitrac and Stéphane Desobry **140**

FOODSIM_TM_02

Reaction Engineering for Sponge Cake Baking: Development of a Methodology to extract an Apparent Identifiable Reaction Scheme

Souad Fehaili, Barbara Rega, Pierre Giampaoli, Mathilde Courel, Catherine Bonazzi, Cedric Brandam and Xuan Meyer. **147**

15.05 - 15.35

Coffee Break

15.35 - 16.20

Session X

ENERGY EFFICIENCY IMPROVEMENT

15.35-16.20

Session Chairperson:

Lionel Boillereaux, UMR GEPEA CNRS 6144, Nantes, France

FOODSIM_ENERG_01

An Application for Energy Diagnosis in Sugar Plants

A. Merino, R. Alves, L.F. Acebes, R.Mazaeda and

C. de Prada **153**

Friday, June 27, 2008

FOODSIM_ENERG_03

Computer-Aided Energy Efficiency Evaluation of Microwave Thawing

L. Boillereaux, C. Josset, B. Auvity, E. Akkari and
C. Castelain **156**

16.20 - 17.20 **Session XI**

COST ACTION PROPOSAL

16.20-17.20

Session Chairperson:
Daniel Thiel, ENITIAA, Nantes, France

18.05 - 23.00 **Conference Dinner**

Bus departs for conference Dinner at **18.05**





The conference dinner or shindig will be held at the [Old Jamesons distillery](#) in Dublin centre. This involves a tour of the famous Jamesons whiskey distillery followed by a four course meal, followed by traditional Irish entertainment (Irish dancing and music)

[The Old Jameson Distillery](#)

Bow Street Distillery

Smithfield, Dublin

 Tel: 00 353 1 8072355

 Fax: 00 353 1 8072369



Saturday, June 28, 2008

08.30 - 09.30 **Registration in front of the meeting room**

08.30 - 09.00 **Session XII**

ROUND-TABLE DISCUSSION-SUSTAINABLE DEVELOPMENT

08.30-09.00 **Session Chairperson:**
Karen Ostergren, Swedish Institute of Food and Biotechnology,
Gothenburg, Sweden

09.30 - 10.05 **Session XIII**

SIMULATION OF FOOD PRODUCTION SYSTEMS AND THE SUPPLY CHAIN

09.00-10.05 **Session Chairperson:**
Jean-Yves Monteau, ENITIAA, Nantes, France

FOODSIM_PROD_02
Discrete Event Simulation with Life Cycle Assessment Data at a
Juice Manufacturing System
Biörn Johansson, Johan Stahre, Johanna Berlin, Karin Östergren,
 Barbro Sundström and Anne-Marie Tillman **165**

FOODSIM_PROD_03
Dynamic Simulation of the Chicken Meat Supply Chain Facing
Avian Influenza Crisis
 Thi Le Hoa Vo and Daniel Thiel **170**

FOODSIM_TM_01
Web-based predictive models for process optimization in small
and medium-sized dairy enterprises
 M. Schutyser, F. Smit, H. Straatsma and P. de Jong ... **175**

10.05 - 10.35 **Coffee Break**

Saturday, June 28, 2008

10.35 - 11.20 **Session XIV**

SUSTAINABLE FOOD PRODUCTION

10.35-12.20

Session Chairperson:

Bjorn Johansson, Chalmers University of Technology, Sweden

FOODSIM_SUS_01

Integrated Simulation Technology for safe sustainable Food Processes

Karin Östergren, Hans Janestad, Johanna Berlin and

Ulf Soresson **181**

FOODSIM_PROD_04

Modelling product quality in food supply chains

Martin Grunow, Renzo Akkerman and Aiying Rong **186**

11.20 - 11.50 **Session XV**

CLOSING SESSION AND BEST PAPER AWARD

11.20-11.50

Session Chairperson:

Enda Cummins, University College Dublin, Dublin, Ireland

SEE YOU ALL AT

FOODSIM 2010

(LOCATION WILL BE ANNOUNCED LATER THIS YEAR)

**Proposals for special tracks/tutorials/demos
can be sent in by March 30th 2009**

CONFERENCE LOCATION



NOTES

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EUROSIS was borne out of discussions with the European Community to set up a new kind of Society, which would be project-driven instead of driven by pure membership and conferences.

The aim of the Society is to set up topic related Technical Committees which will link directly to European Projects in the field of computer simulation and related areas and to act as a knowledge pool for future European Networks of Excellence, like MOSAIC.

If you would like to receive more information about EUROSIS, please contact

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