

PROGRAMME

Wednesday, June 16, 2004

9:00 - 9:20	Conference Welcome and opening Peter de Jong (Conference Chair), NIZO food research, Ede, The Netherlands	c	o	A
9:20 - 10:05	keynote: Industrial use of predictive modelling Solke Bruin, TUE, Unilever, The Netherlands	k	3	30
10:05 - 10:35	Coffee Break	-	-	B
SESSION 1: INDUSTRIAL EXPERIENCE WITH MODELING Chair: Maykel Verschueren				
10:35 - 11:05	invited: Role of Modelling and Model Simulation in Food Industry; a Dairy Case Anton Sweere, Campina Innovation, Wageningen, The Netherlands	i	3	1
11:05 - 11:35	invited: Computer simulation in industrial applications Julio Banga, CSIC, Vigo, Spain	i	3	24
11:35 - 12:05	invited: Use of computer simulation in the dairy industry Rudy de Wit, FCDF, Deventer, The Netherlands	i	3	28
12:05 - 12:35	invited: Use of modelling in flavours Tom Malik, ICI, UK	i	3	29
12:35 - 13:50	Lunch	-	-	C
SESSION 2: SIMULATION OF PROCESSES AND PRODUCTS (I) Chair: Marcel Zwietering				
13:50 - 14:15	Heat transfer in a high pressure vessel; impact of Pressure on the time food thawing A. Ousegui, N. Chapleau, A. Le Bail, and M. Havet, GEPEA UMR CNRS 6144, ENITIAA BP82225-44322 NANTES France	o	1	2
14:15 - 14:40	On the Use of CFD Modelling in Fluidised bed reactor Design Frédéric Depypere, Jan G. Pieters and Koen Dewettinck, Ghent University, Coupure Links 653, 9000 Gent, Belgium	o	1	6
14:40 - 15:05	Mathematical Modelling of Dough Development during Fermentation Process Gerardo Toraldo, Marina Marino, Paolo Mas and Annalisa Romano, Università di Napoli Federico II, Portici (NA), Italy	o	1	7
15:05 - 15:35	Coffee Break	-	-	B
15:35 - 16:00	Bread Chilling with Water Spraying Jean-Yves Monteau, Jean-François Cournil, Philippe Bransolle, Nasser Hamdami, Alain Le Bail	o	1	12
16:00 - 16:25	Experimental and CFD Study of Power Consumption with Gate Agitators – Effects of Bottom Clearance and Scale Up Guillaume Delaplace ^{1*} , Romuald Guérin ¹ , Anne Moreau ¹ , Claude Torrez ² , Christophe André ² and Jean-Claude Leuliet ¹ , I.N.R.A Villeneuve d'Ascq Cédex, and H.E.I., Lille, France	o	1	13
16:25 - 16:50	Combined thermodynamic and population balance model of the batch top-spray fluidized bed coating process of inert spheres F.Rousse, J.E.Pieters and K.Dewettinck	o	1	14
19:00 - 20:00	Get-together party			

Thursday, June 17, 2004

SESSION 3: TOOLS, TRAINING & SIMULATION

Chair: Tom Malik

8:30 - 9:00	invited: Use of predictive models in experimental design Jan van Impe, KUL, Leuven, Belgium	i	4	25
9:00 - 9:25	Constrained Optimization of Piecewise Constant Inputs for Optimal Square Root Model Parameters Estimation Kristel Gysemans, Kristel Bernaerts, Ifor Verhoeven, Jan F. Van Impe, Katholieke Universiteit Leuven, Leuven, Belgium	o	4	10
9:25 - 9:50	Towards the accurate Assessment of Non Loglinear Microbial Survivor Kinetics Development of a Freeware Userfriendly Tool in the Area of Predictive Microbiology Annemie H. Geeraerd, Vasilis P. Valdramidis and Jan F. Van Impe, Katholieke Universiteit Leuven, B-3001 Leuven, Belgium	o	4	11
9:50 - 10:15	Improvement of the Cooperation between the Operator and the Process an experimental Approach of the Imperfection Impact on a Cheese Ripening Fuzzy Model Nathalie Perrot, Irina Ioannou, Gilles Trystram, UMR Génie Industriel Alimentaire – Equipe Automatique et Qualité Alimentaire (Cemagref), Aubière cedex, and Gilles Mauris, LAMII Université de Savoie, Annecy, France	o	4	15
10:15 - 10:45	Coffee Break	-	-	B

SESSION 4: PROCESS & PLANT CONTROL

Chair: Jan van Impe

10:45 - 11:10	Modelling and Control of Evaporators and Spray Dryers Peter Cunningham and Barry O'Connor, AMT Ireland, University College Cork, Cork, Ireland.	o	2	4
11:10 - 11:35	NIZO Premia and Premic Off-Line and In-Line Product and Process Control Tools for the Food Industry F. Smit, J. Straatsma, M.M.M. Vissers, M. Verschuere and P. de Jong	o	2	21
11:35 - 12:00	Towards an on-line measurement of the purity of cane sugar factory juices : a neural network approach Teddy Libelle*, Michel Benne*, Brigitte Grondin-Perez*, Jean-Pierre Chabriot*	o	2	8
12:00 - 12:25	Modeling and Control of a pH neutralization process: fuzzy clustering with a Gustafson-Kessel algorithm and Takagi-Sugeno type of fuzzy model. S. Beyou, B. Grondin-Perez, M. Benne*, R. Lorion, Industrial Engineering Laboratory, Faculty of Sciences and Technologies, University of La Reunion, Saint-Denis, France	o	2	9
12:25 - 12:50	Application of Neural Network Modeling for Supercritical Co2 extraction of Black Pepper Essential Oils Farzad Abdolahi and Mohammad Izadifar, Tehran University, Tehran, IRAN	o	2	22
12:50 - 14:05	Lunch	-	-	C

SESSION 5: SIMULATION OF PROCESSES AND PRODUCTS (II)

Chair: Julio Banga

14:05 - 14:35	invited: Modelling of food quality Marcel Zwietering, WUR, Wageningen, The Netherlands	i	1	26
14:35 - 15:00	Predicting taste development of cheese using hybrid modelling M. Verschuere, P. de Jong, J. Straatsma, M. Vissers, G. van den Berg, NIZO food research, Ede, the Netherlands	o	1	3
15:00 - 15:25	A quantitative risk assessment of butyric acid bacteria spores in silage and raw milk MMM Vissers ¹ , F Driehuis ² , MC te Giffel ¹ , P De Jong ¹ and JMG Lankveld, NIZO food research, WUR, Ede, The Netherlands	o	1	5
15:25 - 15:55	Coffee Break	-	-	B
15:55 - 16:20	Comparison of Models to describe Crystallization Kinetics of Fats Imogen Foubert ^{a,b} , Peter A. Vanrolleghem and Koen Dewettinck, Ghent University, Gent, Belgium	o	1	16
16:20 - 16:45	Enthalpy of frozen meat from composition data R.G.M. van der Sman, Agrotechnological Research Institute, Wageningen, the Netherlands	o	1	17
16:45 - 17:10	A Micromechanical Approach for Simulating Plant Tissue Jimmy Loodts, Engelbert Tijssens, Herman Ramon, K.U.Leuven, Leuven, Belgium	o	1	19
20:00	Conference dinner			18/

Friday, June 18, 2004

SESSION 6: SIMULATION OF PROCESSES AND PRODUCTS (II)

Chair: Solke Bruin

8:30 - 8:55 **Knowledge in Fuzzy Logic Modelling of the Multi-Stage High-Pressure Inactivation of Lactococcus lactis ssp. cremoris MG 1363** o 1 20
Klaus V. Kilimann, Christoph Hartmann Michael G. Gänzle, Technische Universität München Freising, Germany

8:55 - 9:20 **Combining Experimental Data and in Silico analysis to Model the metabolic Networks of Lactobacillus Plantarum** o 1 23
Bas Teusink^{1,2,3}, Frank JH van Enckevort^{2,3}, Arno Wegkamp^{1,2}, Jos Boekhorst³, Douwe Molenaar^{1,2}, Jeroen Hugenholtz^{1,2}, Eddy J Smid^{1,2} and Roland J Siezen^{1,2,3,1}, Wageningen Centre for Food Sciences, Wageningen, ²NIZO food research BV, Ede, The Netherlands, ³Centre for Molecular and Biomolecular Informatics, University of Nijmegen, Nijmegen, The Netherlands

9:20 - 9:50 **Coffee Break** - - B

SESSION 7: CHALLENGES IN MODEL APPLICATIONS

Chair: Caroline van der Horst

9:50 - 10:20 invited: **How models help to come to product innovations** i 4 27
Felix Janszen, INPAQT

10:20 - 10:50 invited: **The other use of modelling** i 4 31
Leon Rothkranz, TUD, Delft, The Netherlands

10:50 - 11:20 **Introduction to NIZO food research** - - D
Ad Juriaanse (Director NIZO food research)

11:20 - 11:40 **Concluding remarks** - - E
Peter de Jong (Conference Chair), NIZO food research, Ede, The Netherlands

11:40 - 12:55 **Lunch** - - C

12:55 - 15:25 **Excursion to NIZO food research** - - F

15:25 **Closing session**