

**Monday 8 March**

- 08 h 00** Welcome / Poster installation / Registration
- 09 h 00** **Opening Ceremony**
- 10 h 30** **Break**
- 11 h 00** **Plenary lecture**  
**The importance of Engineering for Competitvity in the Food Industry.**  
Prof. Werner Bauer, Nestlé S.A., Executive Vice President, Technical, Production and R&D, Vevey, Switzerland
- 11 h 45** **Plenary lecture**  
**Designing Food Processing Systems for Long-Duration Space Explorations.**  
Prof. R. Paul Singh - University Davis, USA
- 12 h 30** **Lunch**
- 14 h 00** **Plenary lecture**  
**Emerging Technologies: Challenges and Opportunities.**  
Prof. D. Knorr, Berlin University of Technology, Germany
- 15 h 00** ***Thermal processing of foods (1)***
- 15 h 00** 308  
Determination of a quality equivalent point for mass average quality evaluation in canned foods.  
Stoforos N.G.
- 15 h 20** 390  
Effect of thermal processing on the cell membrane integrity of potato tissue.  
González-Martínez G., Ahrné L., Gekas V., Sjöholm I.
- 15 h 40** 528  
Thermo physical properties of cooked ham.  
Thomeo J.C., Oliveira G.S., Trivelin M.O.
- 16 h 00** 578  
The effects of ohmic heating on the quality of orange juice.  
Leizerson S., Shimoni E.
- 16 h 20** 707  
Modelling of bread dough proving using confocal microscopy and MRI.  
Grenier A., Hamiti K., Masgoret A., Le Bail A., Hayert M., Lucas T.
- 16 h 40** **Break**
- 17 h 10** ***Understanding and engineering of freezing***
- 17 h 10** 281  
Glass transition temperature of frozen camu-camu (*Myrciaria dubia* (HBK) Mc Vaugh) pulp with cryostabilizers.  
Silva M.A., Arévalo R.P., Sobral P.J.A., Habitante A.M.Q.B., Kieckbusch T.G.
- 17 h 30** 469  
Progressive freeze-concentration: principle and applications.  
Miyawaki O., Liu L., Ye G.X., Suzuki T., Takai R., Kagitani K.
- 17 h 50** 607  
Heat transfer model of commercial ice cream freezing.  
Cogné C., Laurent P., Andrieu J.
- 18 h 10** 842  
A model for prediction of ice crystal size distributions in a frozen food.

**ICEF 9**

**Session: Thermal processing of foods**

**18 h 30**

Van Sleuwen R.M.T., Heldman D., Lee T.C.  
End of the Day

## Tuesday 9 March

- 08 h 30**      **Plenary lecture**  
**Food Process Engineering for the purpose of tailored microstructure, rheology and related product characteristics**  
 Prof. Dr.-Ing. Erich J. Windhab - Swiss Federal Institute of Technology, Zurich, Switzerland
- 09 h 20**      **Presentation of ISFE**  
**G. Barbosa Canovas**
- 09 h 30**      **Other Parallel Oral Sessions**
- 09 h 30**      ***Poster session: Understanding and engineering of freezing***
- 147  
 Effect of frozen storage on quality and functional properties of osmo-dehydrofrozen tomato.  
 Dermesonlouoglou E.K., Giannakourou M.C., Taoukis P.
- 192  
 Freezing behavior and properties of dough products using cryoprotective agents.  
 Giannou V., Oreopoulou V., Tzia C.
- 309  
 Structuring capacity of ice crystals as affected by vitamin type substances in water solutions .  
 Cal-vidal J., Carneiro C.S.
- 362  
 Freezing of foodstuffs: experimental determination of calorimetric properties and freezing simulation using an enthalpy-temperature formulation.  
 Toumi S., Amarante A., Lanoisellé J.-L., Clause D.
- 406  
 Influence of vegetable shortening, CSL and polysorbate 80 on the unfrozen water content and texture of frozen French bread dough .  
 Matuda T.G., Parra D.F., Lugão A.B., Tadini C.C.
- 484  
 Immersion Freezing (IF) before candying: a pre-treatment as quality factor of candied cherries.  
 Avitabile-Leva A., Favier C., Chourot J.M.
- 485  
 Presence of histamine in freezing brine used in tuna boats.  
 Barba-Quintero G., González-Murillo A., García-Tapia G., Gallegos-Infante J.A., Ramírez J.A.
- 494  
 Apparent specific heat determination of potato puree at different temperatures.  
 Kumcuoglu S., Tavnam S., Gaukel V.
- 649  
 Effect of water re-crystallization in back of pork meat by modulated differential scanning calorimetry.  
 Meléndez P.R., Arjona R.J.L., Álvarez C.A.
- 650  
 Evaluation of physicochemical properties during heating in a MDSC of pork meat freezing and refreezing.  
 Arjona R.J.L., Meléndez P.R., Zambrano-Zaragoza M.L.
- 717  
 Effect of the freezing process on  $\alpha$ 1-casein breakdown and textural parameters in Port Salut argentino cheeses.  
 Verdini R., Zorrilla S.E., Rubiolo A.C.
- 804  
 Microwave characterisation for fish quality evaluation.  
 Clerjon S., Damez J.L., Lepetit J.

824

Heat transfer process analyses for the air blast freezing of fruit pulps in commercial boxes.  
Resende J.V. de, Silveira Jr. V.

838

The rate of non-enzymatic browning reaction in model freeze-dried food system under the glassy state.  
Kawai K., Suzuki T., Hagiwara T., Takai R.

977

Biochemical aspects of carrot processing.  
Gómez Galindo F., Sommarin M., Smallwood M., Knutsen S.H., Herppiche W., Sjöholm I.

10 h 50

**Break**

11 h 20

**Other Parallel Oral Sessions**

11 h 20

***Poster Session: Frying, quantification of fluxes and consequences for products***

28

Oil uptake reduction in potatoes using pre-frying treatments.  
Mcminn W.A.M., Magee T.R.A.

112

Variation in composition and mass transfer phenomenon in yeast-leavened donuts formulated with binary mixtures of flours during deep fat frying.  
Treviño-Cuevas R., Vélez-Ruiz J.F., Sosa-Morales M.E.

114

Effect of oil temperature on the transport phenomena and physical properties of meat plates during the deep-fat frying process.  
Orzuna Espiritu R., Sosa-Morales M.E., Vélez-Ruiz J.F.

121

An in-line measurement of deep-fat frying process of fried foods using dielectric properties.  
Hagura Y., Sasaki Y., Suzuki K.

164

Use of ultrasounds for quality assessment of sunflower frying oil.  
Benedito J., Rey A., Golas Y., Magraner L., Mulet A.

411

Numerical simulation of heat and mass transfer during frying of an edible coated dough system.  
Bertolini Suárez R.M.A., Garcia M.A., Zaritzky N.E.

538

Mass transfer during apple deep fat frying under reduced pressure.  
Torezan G.A.P., Querido A.F., Menezes H.C., Pallet J.P.D., Reynes M., Bohuon P.

641

Fry-drying of sewage sludge: an alternative for the disposal of recycled food oils.  
Peregrina C., Lecomte D., Arlabosse P.

12 h 30

**Lunch**

14 h 00

**Plenary lecture**

**Computers and processes engineering in food manufacturing : promises, challenges and realities. A subjective point of view**

P. Escure, P. Cornillon, A. Genovesi, A. Pajonk - Danone Vitapole, Palaiseau, France

15 h 00

***Frying, quantification of fluxes and consequences for products***

15 h 00

251

Development of a radiant heating process to mimic immersion frying.  
Farkas B., Lloyd B.J., Keener K.M.

15 h 20

476

The mechanisms controlling heat and mass transfer on frying of beef burgers in a double-sided pan fryer.  
Kovácsné Oroszvári B., Bayod Tejedor E., Sjöholm I., Tornberg E.

15 h 40

562

- Change in texture of potato slices during frying.  
Pedreschi F., Dejmek P., Segnini S.  
639
- 16 h 10 Internal coupled heat and mass transfer during deep-frying of materials with high water content: application to apple chips fried at atmospheric pressure.  
Vitrac O., Bohuon P.  
839
- 16 h 30 The effect of surface roughness on post-frying oil absorption in deep fat frying model food.  
Thanatuksorn P., Jantawat P., Pradistsuwana C., Hagiwara T., Takai R., Suzuki T.
- 16 h 50 **Break**
- 17 h 10 ***Thermal processing of foods (2)***
- 17 h 10 51  
Continuous phase selective sorption and heat treatment of the hetero phase food medium .  
Aliev M.R., Aliev R.Z., Aliev A.R., Bolshakov O.V.
- 17 h 30 731  
Phenomenological modeling of pasta cooking kinetics by image analysis techniques, mechanical tests and NIR.  
Riva M., Piazza L., Sinelli N.
- 17 h 50 822  
Aroma recovery during evaporation.  
Yanniotis S., Tszizloni K., Dendrinis G., Mallouchos A.
- 18 h 10 916  
Multi-functional system for particle flow monitoring and validation of continuous thermal processing for multiphase aseptic products.  
Simunovic J., Swartzel K., Palazoglu T.K., Sandeep K.P.
- 18 h 30 970  
The effect of refrigeration parameters on surface water activity and weight loss in beef samples.  
Delgado A.E., Quispe-Ramirez A.A., Butler F., Sheridan J., Rowe T., Kinsella K.
- 18 h 50 End of the day
- 21 h 00 **Concert for Voices and Organ**

**Wednesday 10 March****08 h 30****Plenary lecture****Active packaging for food processing and preservation**

Prof. Nathalie Gontard, Montpellier University II, France

**09 h 30****Other Parallel Oral Sessions****09 h 30*****Poster Session: Thermal processing of foods***

3

Spinning disc heat exchangers - opportunities in food processing.

Leadley C.E., Tucker G.S., Richardson P.S.

100

Production a croup of fast preparation and flaked grain, not demanding cooking.

Elkin N.V., Filatov V.V., Andreeva A.A.

101

Analytical researches of non-stationary fields of temperature and nomographic chart for their calculation.

Plaksin J.M., Filatov V.V., Azarskova A.V.

102

Influence of thermal handling of a grain by an infrared irradiation on its biochemical properties.

Andreeva A.A., Filatov V.V., Elkin N.V.

117

Characteristics of superheated steam treatment for food combined with far infrared heating .

Amatsubo T., Hagura Y., Suzuki K.

127

Development of free fat in falling film evaporators .

Downey M.C., Croy R.J., Trinh K.T.

128

Effect of temperature during recombination of time-dependent food products.

Trinh B., Haisman D., Trinh K.T., Prankerd B.

134

Effect of corrugation on the hydrodynamic and heat transfer behavior of beer flowing through rectangular corrugated channels.

Telis-Romero J., Cabral R.A.F., Telis V.R.N., Gabas A.L.

169

Aggregates formed on dry heating of soy protein isolates.

Ciamponi S., Diniz A.C.P., Silva L.B.C., Netto F.M.

200

Effects of cooling methods on cooling efficiency and quality of cooked rice.

Zhang Z., Sun D.W.

221

Effect of treatment with microwave energy on polyphenoloxidase and peroxidase activity in fruits.

Jimenez-Vieyra M.E, Zambrano-Zaragoza M.L., Aguilar-Rodríguez M.R.

236

Biological validation of apple nectar heating process in a UHT unit .

Massaguer P.R., Pacheco C. de P.

305

Study of the variables that affect the crystallization process in sugar crust liqueurs.

Queiroz M.B., Lanfredi M.A.G., Fadini A.L., Barbieri M.K.

320

Mechanical decontamination effects during a steam treatment of foods.

Müller U., Wilhelm P., Lilie M., Barbe S.

- 375  
Understanding the heat and mass transfer of hygroscopic porous materials.  
Roberts J.S.
- 377  
Microwave heating of apple mash to improve juice yield and quality .  
Roberts J.S., Gerard K.A.
- 392  
Heat transfer analysis of canned high-viscosity liquid foods during sterilization.  
Sakai N., Tang J.W., Watanabe M.
- 398  
Vacuum cooling of cooked mussels.  
Huber E., Soares L.P., Carciofi B.A.M., Hense H., Laurindo J.B.
- 418  
Extraction of the essential oil of thyme by superheated steam.  
Rouatbi M., Duquenoy A., Giampaoli P.
- 665  
Steam jet agglomeration of maltodextrins with dextrose equivalent (DE) between 4 and 20.  
Collares F.P., Mei L.H.I., Kieckbusch T.G.
- 689  
Cooling rate is a determinant factor of the viability of different types of cells after freeze-thawing.  
Dumont F., Marechal P.A., Gervais P.
- 758  
A preliminary study on the effects of different cooking conditions  
on the electrophoretic profile of poultry meats.  
Barbanti D., Pasquini M.
- 827  
Effects of post-harvest treatments and roasting on the final quality of Mexican coffee.  
González-Rios O., Suárez-Quiroz M.L., Barel M., Guyot B., Guiraud J.P., Schorr-Galindo S.
- 901  
Heat pre-treatments effect on shelf-life of fresh-cut kiwi.  
Caracol T., Beirão-da-Costa S., Beirão-da-Costa M.L., Empis J., Moldão-Martins M.
- 961  
selection and thermal resistant characterization of the most heat resistant filamentous mold isolated  
from aseptically packed pineapple nectar.  
Masson L.M.P., Rosenthal A., Varanda L.L., Massaguer P.R.
- 972  
Effect of thermal processing on the functional properties of rice bran protein concentrate.  
Pacheco de Delahaye E.
- 09 h 30**     ***Poster Session: Baking***
- 184  
Experimental determination of heat and mass transfer parameters during baking: a realistic approach.  
Demirkol E., Erdođdu F., Palazođlu T.K.
- 273  
Experimental determination of tje times of cooking of tje "hallulla" type bread and  
their influence in the physical and sensory properties of the product.  
Cavieres E., Negrete C., Moraga N., Lorca A.M., Maldonado P.
- 274  
Empirical model to predict dough thickness (hallulla type) with cooking time.  
Negrete C., Cavieres E., Moraga N., Doberti C., Valdivia C.
- 329  
A comprehensive and graphical modeling tool for cooking meat products .  
Marcotte M., Chen C.R., Piette G., Grabowski S., Ramaswamy H.S.
- 352  
Prediction of bread crumb texture quality.  
Meretei A., Szedrei E., Fekete A.

- 368  
Cooking of frozen croissant.  
Douiri I., Dumoulin E., Sommier A., Trystram G.
- 372  
Application of wafer technology for the production of tortillas.  
Worlicek A., Tiefenbacher K., Berghofer E.
- 373  
Functional properties of bread produced from wheat and barley blends.  
Schloenlechner R., Colombo L., Berghofer E., Pagani M.A., Lucisano M.
- 605  
Refrigeration in the bread and pastry making industry; impact on quality and related thermomechanical problems.  
Le Bail A., Hayert M., Lucas T., Monteau J.Y.
- 702  
Shelf life of a low moisture and high fat content product: identification of a Critical index .  
Cianciulli A., Torrieri E., Cavella S., Masi P.
- 703  
Optimization and design of a gluten-free multi-purpose mix for baking use.  
Pizarro J.M., Rojas S.Z., Reveco J.G.
- 764  
Effect of the freezing and cooling technologies on quality and staling of the partially baked bread.  
Bárcenas M.E., Rosell C.M.
- 878  
Microwave-convective baking characteristics of oatmeal biscuits.  
McKee D.J., McMinn W.A.M., Magee T.R.A.
- 908  
Study of bread baking process: MRI experimental data.  
Wagner M.J., Lucas T., Davenel A., Broyart B., Trystram G.
- 909  
Use of Magnetic Resonance Imaging for the characterization of the bread process.  
Lucas T., Grenier A., Quellec S., Collewet G., Le Bail A., Davenel A.
- 937  
Thresholding techniques for measurement of bread crumb features by digital image analysis.  
Butler F., Gonzales-Barron U.
- 10 h 50      Break**
- 11 h 20      Other Parallel Oral Sessions**
- 12 h 20      Lunch**
- 14 h 00      Plenary lecture**  
**Predictive microbiology of foods: past, present and future.**  
Prof. Jan van Impe, University of Louvain, Belgium
- 15 h 00      *Baking***
- 15 h 00      74**  
Modelling and optimisation of a continuous industrial bread baking oven by a computational fluid dynamics approach.  
Therdthai N., Zhou W., Adamczak T.
- 15 h 20      201**  
A numerical model for cup cake baking.  
Sakin M., Kaymak-Ertekin F., Ilicali C.
- 15 h 40      330**  
A method for balancing heat fluxes validated for a newly designed pilot plant oven (PPO) .  
Marcotte M., Zareifard M.R., Dostie M.
- 16 h 00      533**  
A comprehensive thermo-hygro-viscoelastic model of bread baking.

- 16 h 20** Zhang J., Datta A.K.  
692  
Dough/crumb transition during French bread baking in an instrumented oven.  
Della Valle G., Chiron H., Colonna P., Lourdin D., Rouille J., Sommier A.
- 16 h 40** **Break**
- 17 h 20** **Other Parallel Sessions**
- 18 h 40** End of the day
- 19 h 00** **Gala Dinner**