SCIENTIFIC PROGRAMME

1st Day – Thursday, 20th of September, 2018

9:00–9:20  Opening of the conference
Dr. Milan HOUSKA  (Food Research Institute Prague)
Prof. Heinz-Dieter ISENGARD  (University of Hohenheim, Germany)

Session Ia:  Water structure and interactions in food and biological systems
Chaired by: Prof. Mohamed MATHLOUTHI
(University of Reims and Association EFW, France)

9:20–10:00  PL1: INNOVATIVE FREEZING PROCESSES ASSISTED BY EXTERNAL ELECTRO – MAGNETIC FIELDS AND ASSESSMENT OF FREEZE DAMAGE IN FROZEN FOODS; AN OVERVIEW.
Le-BAIL Alain, JHA Piyush Kumar, SADOT Mathieu, JURY Vanessa, CURET Sébastien, CHEVALLIER Sylvie, ROUAUD Olivier, HAVET Michel, ELIASSON Lovisa, XANTHAKIS Epameinondas, HUEN Julien, MATULLAT Imke

10:00–10:20  OC1: PREDICTIVE INVESTIGATION OF THE INTERACTIONS IN AQUEOUS SOLUTIONS CONTAINING POLYOLS
Oumar TOURE, Baptiste BOIT, Claude-Gilles DUSSAP, Olivier BAUDOHN, Louis CAMPAGNOLO

10:20–10:40  OC2: KINETICS OF AROMA SORPTION AND ITS IMPACT ON EDIBLE FILM PROPERTIES AS A FUNCTION OF RELATIVE HUMIDITY
Benbettaieb, N., O’Connel C., Seuvre, A.M and Debeaufort, F.

10:40–11:20  Coffee break, Posters & Exhibition
(Czech Chemical Society Hall)
**SESSION Ib:**  
*Water structure and interactions in food and biological systems*

*Chaired by: Assoc. Prof. Daniel HĂDĂRUGĂ*  
(Polytechnic University of Timişoara, Romania)

11:20–11:40  
**OC3:** **BIOACCESSIBILITY STUDY OF CALCIUM AND VITAMIN D3 CO-MICROENCAPSULATED IN W/O/W DOUBLE EMULSIONS**  
*Cristian Dima, Stefan Dima*

11:40–12:00  
**OC4:** **ROLE OF SACCHARIDES ON THERMAL STABILITY OF PHYCOCYANIN IN AQUEOUS SYSTEMS**  
*Marco Faieta, Alessandro Di Michele, Lilia Neri, Paola Pittia*

12:00–12:20  
**OC5:** **FROM QUANTUM CHEMISTRY TO THE QUALITATIVE UNDERSTANDING OF THE INTERACTIONS IN COMPLEX AQUEOUS MIXTURES**  
*Oumar TOURE, Claude-Gilles DUSSAP*

12:20–12:40  
**OC6:** **INTRINSIC FUNCTIONAL PROPERTIES PREDICTION OF AQUEOUS SOLUTIONS OF MALTODEXTRINS - A MOLECULAR WEIGHT DISTRIBUTION APPROACH**  
*Nicolas Descamps, Maciej Starzak, Jean-Michel Roturier, Maryline Guillemant*

12:40 – 14:00  
**Lunch**

**Session IIa:**  
*Water activity and the shelf-life of Food products*  
*Chaired by: Prof. Lisa MAUER*  
(Purdue University, USA)

14:00–14:40  
**PL2:** **WATER IN FOOD STRUCTURES – WATER ACTIVITY AND IMPACT**  
*Yrjö ROOS*

14:40–15:00  
**OC7:** **PHYSICAL STABILITY OF SOLID FOOD PRODUCTS: DEVELOPMENT AND APPLICATIONS OF MATERIAL SCIENCE WITHIN NESTLÉ SINCE 30 YEARS**  
*Vincent MEUNIER*
15:00–15:20 **OC8:** SPRAY-DRYING OF PROTEIN / POLYSACCHARIDE COMPLEXES: DISSOCIATION OF THE EFFECTS OF SHEAR AND DEHYDRATION

**Jian Wang, Faydi Maoulida, Chedia Ben Amara, Emilie Dumas, Adem Gharsallaoui**

15:20–15:40 **OC9:** EFFECT OF WATER ACTIVITY AND PHYSICAL STATE OF SUGARS AND POLYOLS ON THEIR PROCESSABILITY

**Mohamed MATHLOUTHI** and Pierrick DUFLOT

15:40–16:20 **Coffee break, Posters & Exhibition**

(*Czech Chemical Society Hall*)

**Session IIb:** Water activity and the shelf-life of food products

*Chair*: **Prof. Bo JIANG**

(Jiangnan University, Wuxi, China)

16:20–16:40 **OC10:** MOISTURE-MEDIATED INTERACTIONS IN COMPLEX INGREDIENT BLENDS: CASE STUDIES OF SEASONING BLENDS

**Lisa J. MAUER,** Abigail Sommer

16:40–17:00 **OC11:** WATER ACTIVITY VARIATION OF SUGAR ISOMERS AND ASSOCIATED BENEFITS IN FOOD APPLICATION

**Leon Zhou,** Leslie Kleiner, Chandani Perera

17:00–17:20 **OC12:** THE EFFECT OF WATER VAPOR ON SPRAY-DRYED DAIRY POWDERS: SURFACE AND BULK.

**V. Maidannyk,** D. McSweeney, S. Montgomery, N. McCarthy, M. Auty

17:20–17:40 **OC13:** ALTERING THE CRYSTALLIZATION TENDENCY OF AMORPHOUS SUCROSE UTILIZING POLYMERS, POLYPHENOLS, EMULSIFIERS, SUGARS, SALTS, AND OTHER CO-FORMULATED ADDITIVES

**Adrienne Voelker,** Collin Felten, Alpana A. Thorat, Laurent Forny, Vincent Meunier, Lynne S. Taylor, Lisa J. Mauer

18:00 – 19:30 **CULTURAL VISIT IN PRAGUE**

19:30 **CONFERENCE DINNER**
2nd Day – Friday, 21st of September, 2014

Session IIIa: Water analysis and identification of food

Chaired by: Heinz-Dieter ISENGARD (University of Hohenheim, Germany)

9:00–9:40 PL3: ILLEGAL WATERING OF WINE – SOPHISTICATED TECHNIQUES REQUIRED TO ADDRESS AN HISTORIC ISSUE
Alexander BERNREUTHER

9:40–10:00 OC14: ANALYSIS OF WATER BY ISOTOPES IN ORDER TO DETERMINE THE AUTHENTICITY OF SUGAR & SPECIALITY SUGARS – DETERMINATION OF CARBOHYDRATE SOURCE & GEOGRAPHICAL ORIGIN
Andreas G. Degenhardt

10:00–10:20 OC15: MOISTURE CONTENT EVALUATION FOR HIGHLY HYDROPHOBIC NATURAL COMPOUND MIXTURES / CYCLODEXTRIN COMPLEXES BY THERMAL METHODS
Daniel I. Hădăru, Nicoleta G. Hădăru, Geza N. Bandur

10:20–11:10 Coffee break, Posters & Exhibition,

Session IIIb: Water analysis and identification of food

Chaired by: Dr. Alexander BERNREUTHER
European Commission, DG Joint Research Centre, JRC Unit F.4 (Fraud Detection & Prevention), Geel, Belgium

11:10–11:30 OC16 UNVEILING THE MECHANISM OF THE OCCURRENCE OF BREAKAGE IN BISCUITS DURING STORAGE AND MEANS TO MITIGATE THIS RISK
LE-BAIL Patricia, BEDAS Marion, JONCHERE Camille, RIBOURG L., COURCOUX Philippe, JAILLAIS Benoit, OGE Anthony, GUIHARD Luc, LE-BAIL Alain

11:30–11:50 OC17: IMPACT OF ENRICHMENT WITH EGG - DERIVED MATERIALS ON WATER STATUS OF GLUTEN-FREE RICE PASTA STUDIED BY LOW-FIELD NMR AND THERMOGRAVIMETRIC ANALYSIS
Magdalena Witek, Ireneusz Maciejaszek, Krzysztof Surówka
11:50 – 12:10  **OC18:** KINETIC ANALYSIS OF POULTRY FREEZE-DRYING USING INFRARED THERMOGRAPHY  
*Fito, P.J.,* Tomas-Egea, J.A.; Castro-Giraldez, M.

12:10 – 14:00  *Lunch*

14:00–14:20  **OC19:** IMPACT OF BROAD BEANS ADDITION ON RHEOLOGICAL BEHAVIOR OF WHEAT FLOUR BASED SOURDOUGHS  
*Livia Patrascu, Ina Vasilean, Iuliana Aprodu*

14:20 – 15:00  *Presentation of selected posters*

15:00 – 15:15  *Concluding remarks & closing of the conference*