

# Monday 23 September 2019

0730-1730 Registration and Exhibition | Foyer, Level 1

## 0830-0915 Opening Ceremony

Room Meeting Room 105 & 106, Level 1

Chair TBC

0830-0840 Welcome to ICEF13  
**Roman Buckow**

0840-0855 Welcome to Country

0855-0915 TBC

## 0915-1025 Plenary Session

Room Meeting Room 105 & 106, Level 1

Chair TBC

### Keynote Presentation

0915-0950 Riding the wave of new food trends: how to do research to the point?  
**Christoph Hartmann**

### Keynote Presentation

0950-1025 Food engineering for digestion tracts  
**Dong Chen**

1025-1100 Morning Tea | Foyer, Level 1

## 1100-1230 Concurrent Sessions

	Concurrent 1A	Concurrent 1B	Concurrent 1C	Concurrent 1D	Concurrent 1E	Concurrent 1F
<b>Session</b>	<b>Advances in nonthermal food processing in China</b>	<b>Beyond the farm gate: the role of the food engineer in addressing food security and humanitarian situations</b>	<b>Phase or state change and water dynamics in foods</b>	<b>Integrated sustainability assessment of global food systems and processing</b>	<b>Engineering solutions to control food digestion</b>	<b>Short oral 1 Advances in food process engineering</b>
Room	Meeting Room 106, Level 1	Meeting Room 105, Level 1	Meeting Room 104, Level 1	Meeting Room 103, Level 1	Meeting Room 102, Level 1	Meeting Room 101, Level 1
Chair	Baocai Xu Xin-An Zeng	Dominique Bounie Silvia Estrada-Flores	Nasser Al-Habsi Mohammad Shafur Rahman	Alexander Mathys Liz Specht	Paul Singh Ruud van der Sman	TBC
	The application of pulsed electric field (PEF) technology for food processing in China <b>Xin-An Zeng</b>	Sustainable food security for all: opportunities to enhance nutrition and decrease food waste in resource-limiting settings <b>Robyn Alders</b>	Food materials science importance in food process and product engineering <b>Yrjo Roos</b>	Holistic sustainability assessment of global food systems – challenges, needs and available tools <b>Alexander Mathys</b>	An application to understanding food digestion: Degradation mechanisms of phytometabolites of antibiotics <b>Silvia Keppler</b>	Refer to short oral program
	Enhancing the activity of superoxide dismutase by high pressure processing <b>XiaoJun Liao</b>	System engineering approach to design solutions for humanitarian food security situations <b>Dominique Bournie</b>	Applications of state diagram in food engineering: past, present and future <b>Mohammad Shafur Rahman</b>	The future of meat: sustainably meeting future demand with plant-based and cell-based meat <b>Liz Specht</b>	Role of oral processing in in vitro digestion: a case study of bread <b>Jing Gao</b>	
	The mechanism and application of ultrasound in food preservation and sterilization <b>Donghong Liu</b>	Towards a more food secure world – the role of postharvest technologists and engineers <b>Suzie Newman</b>	Impact of amorphous sugars ratio and fiber addition in crystallization, in model food systems as affected by different water activities <b>Vaios Karathanos</b>	Food supply chains as cyber-physical systems: engineering a path for more sustainable personalised nutrition <b>Sergiy Smetana</b>	Digestibility of milk proteins in elderly <b>Kataneh Aalaei</b>	
	Ultrasound-enhanced mass transfer in food processes <b>Yang Tao</b>	Food engineering and technology in humanitarian contexts <b>Carla Mejia</b>	Thermal characteristics and proton mobility of date-pits and hemicellulose extracted from date-pits <b>Nasser Al-Habsi</b>	Pathways to reducing water-scarcity impacts from Australian food consumption <b>Brad Ridoutt</b>	Engineering common beans for the generation of microstructures with specific in vitro nutritional functionality: a kinetic approach <b>Andrea Katherine Pallares Pallares</b>	
	Effect of magnetic field coupled with cold storage on the postharvest quality of fruits and vegetables <b>Zhao Yang</b>	Food security, income generation, through enterprise skills development for village level food processing <b>Alastair Hicks</b>	In situ characterization of crystal growth process in raisin: 3D image-based using micro-CT <b>Maria Moreno</b>	Quality-based life cycle assessment of protein dietary sources <b>Jen-Yi Huang</b>	Unlocking the functionality of sugar and its replacers for structuring of bakery products <b>Ruud van der Sman</b>	

1230-1345 Lunch | Foyer, Level 1

## 1345-1515 Concurrent Sessions

	Concurrent 2A	Concurrent 2B	Concurrent 2C	Concurrent 2D	Concurrent 2E	Concurrent 2F
<b>Session</b>	<b>Engineering food digestion: from understanding to consumer-oriented applications</b>	<b>Novel drying approaches and optimisation</b>	<b>Beyond 2020: the importance of refrigeration in the future food supply chains</b>	<b>Microwave processing of foods under batch and continuous flow conditions</b>	<b>Rheological, textural and structural properties of foods</b>	<b>Short oral 2 Engineering properties of food and packaging</b>
Room	Meeting Room 106, Level 1	Meeting Room 105, Level 1	Meeting Room 104, Level 1	Meeting Room 103, Level 1	Meeting Room 102, Level 1	Meeting Room 101, Level 1
Chair	Uri Lesmes Harjinder Singh	Sakamon Devahastin Patricia Le-Bail	Donald Cleland Silvia Estrada-Flores	KP Sandeep Juming Tang	Magdalena Kristiawan Minh Nguyen	TBC
	The effect of processing on the kinetics of digestion <b>Alan Mackie</b>	BRICE project: solutions to monitor and to mitigate checking and breakage of dry cereal products <b>Patricia Le-Bail</b>	Sustainability of refrigerated facilities <b>Donald Cleland</b>	Commercialization of continuous flow microwave processing of foods <b>KP Sandeep</b>	Artificial oral processing of extruded pea flour snacks <b>Magdalena Kristiawan</b>	Refer to short oral program
	Comparative performance of proteins and emulsion in adults and the elderly <b>Uri Lesmes</b>	Effect of drying methods on the quality and antioxidant activity of bitter gourd during storage period <b>Insha Zahoor</b>	Refrigerated seafreight of food products <b>David J Tanner</b>	Control viral and bacterial pathogens in ready-to-eat meals using microwave assisted pasteurization systems <b>Juming Tang</b>	Development of a marking methodology for X-Ray $\mu$ CT to describe the microstructure of cereal products <b>Sylvie Chevallier</b>	
	Role of food structures in lipid digestibility and absorption <b>Harjinder Singh</b>	Ultrasound assisted low temperature drying of food materials <b>Henry Sabarez</b>	Technologies for dynamic controlled atmosphere of fruit and vegetables <b>Pieter Verboven</b>	Mathematical modeling of microwave thawing: cavity geometry effect and design for scale-up of an industrial process <b>Torstein Skåra</b>	Grinding of sucrose particles influences the viscosity of the chocolate mass due to locally different amorphization of surface areas <b>Dana Middendorf</b>	
	Turning phytates into a natural iron delivery system <b>Edwin Habeych</b>	Making spray drying cool: a novel approach to low temperature electrostatic spray drying of probiotic microorganisms <b>Bogdan Zisu</b>	Safety and quality degradation of foods stored in residential refrigerators <b>Antonio Torres</b>	Combined prototype with ultrasounds, microwave, and spiral heat exchange in an industrial olive oil extraction plant: impact on olive oil quality and yield <b>Alessandro Leone</b>	Microstructural characterization of vacuum-fried matrices and its influence on the starch bioaccessibility <b>Ingrid Contardo</b>	

	Formulation and processing factors affecting bioaccessibility of polyphenols <b>Avi Shpigelman</b>	Design of an automatic pumpkin-mud drying system <b>Yi-Chieh Chiu</b>		Transient localized changes in fresh-cut papaya microstructure as determined by environmental scanning electron microscopy (ESEM), confocal laser scanning <b>Gabriela Caez</b>
1515-1545 Afternoon Tea   Foyer, Level 1				
1545-1715 Concurrent Sessions				
	<b>Concurrent 3A</b>	<b>Concurrent 3B</b>	<b>Concurrent 3C</b>	<b>Concurrent 3D</b>
<b>Session</b>	<b>Insights into the scope of food engineering</b>	<b>Innovative technologies for product modification and process intensification</b>	<b>New technologies and models to enhance food processing</b>	<b>Technologies and sensors to improve quality and shelf-life of foods</b>
<b>Room</b>	Meeting Room 106, Level 1	Meeting Room 105, Level 1	Meeting Room 104, Level 1	Meeting Room 103, Level 1
<b>Chair</b>	Barry McGookin Keshavan Niranjan	Ferruh Erdogan Anet Režek Jambrak	Kasiviswanathan Muthukumarappan John Tobin	Torstein Skåra Paulo Sobral
	Strengthening food engineering education with courses on novel and emerging topics <b>Paul Singh</b>	Low pressure and moderate to high temperature are required for meat tenderization using high pressure processing <b>Robyn Warner</b>	The application of ecoefficient electrotechnologies for the production of biologically active peptides <b>Sergey Mikhaylin</b>	Supercooling technology for extended shelf life of perishable foods <b>Soojin Jun</b>
	Re-engineering bachelor's degree curriculum in food engineering: hypothesis and proposal <b>Keshavan Niranjan</b>	High voltage electrical discharges in extractions of bioactives from Oregon leaves ( <i>Origanum vulgare</i> L.): process control and impact on antioxidative properties of extract <b>Anet Režek Jambrak</b>	A nutrkinetic model linking broccoli processing conditions to ITC bioavailability <b>Matthijs Dekker</b>	Prediction of liquid loss from frozen and thawed cod by hyperspectral imaging <b>Torstein Skåra</b>
	Design of online food engineering courses for food industry personnel <b>Swamy Anantheswaran</b>	Factors influencing calcium infusion using high pressure processing <b>Noopur Gosavi</b>	Applications of hydrodynamic cavitation for instant rehydration of high protein milk powders <b>John Tobin</b>	Printed, flexible pH sensors for wet environments in food application <b>Fariba Dehghani</b>
	Simulation-based enhancement of education: food safety for engineers <b>Ashim Datta</b>	The use of pulsed electric fields technology for carrot texture modification on human oral processing and in vivo bioaccessibility of $\beta$ -carotene <b>SzeYing Leong</b>	Prediction of millet extrudates properties using response surface modelling and artificial neural networks <b>Kasiviswanathan Muthukumarappan</b>	Disintegrability under composting conditions of biopolymers-based films containing Boldo-of Chile extract <b>Paulo Sobral</b>
	Food and agribusiness engineers – how to play in 2030 <b>Barry McGookin</b>	Photopolymerization by UV and blue light in salmon gelatin with different molecular weight <b>Paulo Diaz-Calderon</b>		In-situ real-time measurement of respiration rate of fresh produce using newly developed modular respirometer <b>Nandita Keshri</b>
1715-1915 Welcome Reception   Foyer, Level 1				

## Tuesday 24 September 2019

0730-1730 Registration and Exhibition   Foyer, Level 1						
0745-0845 Breakfast Session						
<b>Sponsor</b>	Journal of Food Engineering by Elsevier					
<b>Room</b>	Meeting Room 103, Level 1					
0745-0800	Introduction <b>Paul Singh</b>					
0800-0845	Food Safety from Farm to Gut: Opportunities and Challenges <b>Nitin Nitin</b>					
0900-1015 Plenary Session						
<b>Room</b>	Meeting Room 105 & 106, Level 1					
<b>Chair</b>	TBC					
0900-0905	Welcome and housekeeping					
<b>Keynote Presentation</b>						
0905-0940	Paving the way to market for proteins from alternative sources <b>Lana Zivanovic</b>					
<b>Keynote Presentation</b>						
0940-1015	Microtechnology used as a tool for rapid development of new and sustainable food products <b>Karin Schroen</b>					
1015-1050 Morning Tea   Foyer, Level 1						
1050-1220 Concurrent Sessions						
	<b>Concurrent 4A</b>	<b>Concurrent 4B</b>	<b>Concurrent 4C</b>	<b>Concurrent 4D</b>	<b>Concurrent 4E</b>	<b>Concurrent 4F</b>
<b>Session</b>	<b>Advances in electromagnetic freezing technologies</b>	<b>Food industry 4.0 – current and future state</b>	<b>Food process modeling: across the scales, food-health linkages and enablers</b>	<b>Cold plasma functionalised liquids for food and agriculture</b>	<b>Innovation in food processing and value addition in Australasia</b>	<b>Short oral 3 Food engineering for nutrition and health</b>
<b>Room</b>	Meeting Room 106, Level 1	Meeting Room 105, Level 1	Meeting Room 104, Level 1	Meeting Room 103, Level 1	Meeting Room 102, Level 1	Meeting Room 101, Level 1
<b>Chair</b>	Alain Le-Bail Osato Miyawaki	Filip Janakievski Leonie Wong	John Bronlund Ashim Datta	Paula Bourke Patrick Cullen	Mohammed Farid Sandra Kentish	TBC
	Crystallization assisted by electric, magnetic, electromagnetic, microwaves and radio frequencies; a review <b>Alain Le-Bail</b>	Beyond blockchain – an overview of useful digital technologies for the food industry <b>Serafim Bakalis</b>	Coupling poromechanics, transport and kinetics as modeling framework for process, quality and safety <b>Ashim Datta</b>	Plasma functionalized water: from bench to prototype for fresh food safety <b>Uta Schnabel</b>	A novel ice encapsulated storage system-field trial on farm for cooling of milk <b>Mohammed Farid</b>	
	Progressive freeze-concentration and its application to new food products <b>Osato Miyawaki</b>	Industry 4.0 and digitalization in food and bev <b>Leonie Wong</b>	Large Scale modeling of food systems: from molecules to food quality and safety <b>Olivier Vitrac</b>	Technology advantages and challenges of plasma activated liquids in a circular bio-economy <b>Ximena Yopez</b>	Creamed pomace – a new process for a new product from an old waste <b>Richard Archer</b>	

	The effect of Cells Alive System (CAS) <b>Norio Owada</b>	Asahi 4.0 <b>Anna Reid</b>	Application of constrained optimization techniques in optimal shape design of a freezer to dosing lines splitter for ice-cream production <b>Fabrizio Sarghini</b>	PlaSmarter functionalised liquids for food safety and innovation <b>Paula Bourke</b> Scaling plasma technology for the food industry <b>Patrick Cullen</b>	Novel approaches to dairy processing <b>Sandra Kentish</b>	Refer to short oral program
	Pasteurization effects of food model during vacuum freeze drying combined with high frequency dielectric heating <b>Atsushi Hashimoto</b>	Future of agrifood industry and technologies that will disrupt it <b>Ingrid Appelqvist</b>	Modelling as a tool to link food structure to sensory experience and digestion <b>John Bronlund</b>	Ecotoxicological and Life Cycle considerations of cold plasma as an advanced oxidation process for contaminated wastewaters <b>Dana Zuzina</b>	From small computers to big data, food process analytical control and beyond <b>Brent R. Young</b>	
	Investigating the microstructure of frozen foods using X-ray microtomography: a comparative study <b>Fatou-Toutie Ndoye</b>	Development and validation at industry scale of a fluorescence and infrared backscatter fluorescence PAT tool to monitor rennet induced coagulation kinetics of milk <b>Colm O'Donnell</b>	Gas transfer modelling in foods with a heterogeneous porous microstructure <b>Siem Janssen</b>	Inactivation of <i>Listeria monocytogenes</i> and <i>Salmonella Typhimurium</i> planktonic cells and biofilms using plasma activated liquid (PAL) <b>Jan Van Impe</b>	Heating uniformity as a function of tray position in a MATS microwave food processing system <b>Ross Coad</b>	
1220-1335 Lunch   Level 1, Foyer						
1335-1505 Concurrent Sessions						
	<b>Concurrent 5A</b>	<b>Concurrent 5B</b>	<b>Concurrent 5C</b>	<b>Concurrent 5D</b>	<b>Concurrent 5E</b>	<b>Concurrent 5F</b>
Session	Next gen 3D printing of foods	Food packaging and biodegradable packaging materials	Resource recovery for nutritional food engineering and health	Advances in membrane filtration systems for food applications	Next generation sustainable food processing	Short oral 4 Food process systems engineering and modelling
Room	Meeting Room 106, Level 1	Meeting Room 105, Level 1	Meeting Room 104, Level 1	Meeting Room 103, Level 1	Meeting Room 102, Level 1	Meeting Room 101, Level 1
Chair	Bhesh Bhandari Claire Gaiani	Benu Adhikari	Fariba Dehghani Liping Zhao	Lilia Ahrné Olga Bakajin	Ourania Gouseti Sergiy Smetana	TBC
	Current situation, challenge and prospect of 3D food printing in China <b>Min Zhang</b>	Starch-polyurethane flexible packaging films: synthesis, compostability and application <b>Benu Adhikari</b>	Gut microbiome: a new target for managing human metabolic health <b>Liping Zhao</b>	Concentration of whey using cheese salt brine in direct forward osmosis using aquaporin-based hollow fiber membranes <b>Lilia Ahrné</b>	Heterotrophic microalgae as a sustainable source of highly technofunctional proteins <b>Lutz Grossman</b>	Refer to short oral program
	Structuring meat by 3D printing <b>Sangeeta Prakash</b>	Biopolymer applications in agriculture and packaging <b>Peter Halley</b>	Microbial engineering of carotenoids synthesis from waste substrates <b>William Chen</b>	Porifera forward osmosis technology and applications <b>Olga Bakajin</b>	Hard grain red sorghum and cowpea based tempeh as a sustainable alternative for the future in Indonesia <b>Indrawati Tanurdjaja</b>	
	Opportunity to design novel Indian dessert and sweets by 3D printing <b>Jatindra Sahu</b>	Analysis of dynamic changes in metabolites in green soybeans ( <i>Glycine max</i> (L.) Merr.) under modified atmospheres by statistical methods <b>Yoshio Makino</b>	Effects of technological treatments on dietary fiber structure, digestion of plant proteins and bioaccessibility of amino acids: cooking extrusion of brewer's spent grains <b>Emilie Korbel</b>	Opportunities and challenges in application of forward osmosis in food processing <b>Navin Rastogi</b>	Impact of thermal processing on the microbial diversity of cricket flour <b>Antje Fröhling</b>	
	Design and production of 3D printed food with desired textural properties <b>Antonio Derossi</b>			Concentration of coconut water using aquaporin-based hollow fiber and tubular forward osmosis membrane <b>Xuan Tung Nguyen</b>	Sustainable performance of nitrites reduction scenarios in ham production <b>Vanessa Jury</b>	
	Towards the 3D printing of artificial plant tissue for innovative food manufacturing <b>Pieter Verboven</b>	Sprayable biodegradable polymer membrane for agriculture systems <b>Raju Adhikari</b>	Processing strategies for enhancing the bioactive profile of Brassica vegetables <b>Netsanet Shiferaw Terefe</b>	Influence of spatial dependency on filtration performance of spiral-wound membranes <b>Martin Hartinger</b>	Increase sustainability in freeze-drying by processing less water <b>Ourania Gouseti</b>	
1505-1535 Afternoon Tea   Foyer, Level 1						
1535-1705 Concurrent Sessions						
	<b>Concurrent 6A</b>	<b>Concurrent 6B</b>	<b>Concurrent 6C</b>	<b>Concurrent 6D</b>	<b>Concurrent 6E</b>	<b>Concurrent 6F</b>
Session	A new aspect of food rheology: expansion from processing and eating stage to postprandial digestion	Advances in encapsulation engineering and delivery systems	Food supply chain engineering, sustainability, and world hunger	New opportunities of extrusion processing for functional foods and ingredients	Food engineering education: from undergraduate learning to doctoral research training	Short oral 5 Novel food processing technologies
Room	Meeting Room 106, Level 1	Meeting Room 105, Level 1	Meeting Room 104, Level 1	Meeting Room 103, Level 1	Meeting Room 102, Level 1	Meeting Room 101, Level 1
Chair	Yukiharu Ogawa Jaspreet Singh	Bhesh Bhandari Claire Gaiani	Dennis Heldman Jose Reyes	Dennis Forte Danyang Ying	Jan Van Impe	TBC
	A new aspect of food rheology on postprandial digestion <b>Yukiharu Ogawa</b>	A continuous alginate microencapsulation technique- an innovative technology <b>Bhesh Bhandari</b>	Sustainability of the food supply system; energy, water and waste <b>Dennis Heldman</b>	Extrusion: a tool for food innovation <b>Gilles Maller</b>	FOOD4S - towards a european master of science in sustainable food systems engineering <b>Jan Van Impe</b>	Refer to short oral program
	Foam performance measurement for beer based on the Helmholtz resonance phenomenon <b>Takahisa Nishizu</b>	Spray-drying as an encapsulation process to protect lactic acid bacteria in enzyme pre-treated dairy protein matrix <b>Claire Gaiani</b>	Food logistics and supply chain <b>Rodolfo Garcia-Flores</b>	Modulation of protein aggregation by extrusion mechanical energy <b>Bo Zhang</b>	Food process models for training purpose through knowledge engineering methods (MESTRAL) <b>Guy Della Valle</b>	
	Cooking methods altered the nutrition and digestibility of potato <b>Jinhu Tian</b>	Development of encapsulated air microparticles: Particle formation during sessile single droplet drying of mixed maltodextrin and gum Arabic solutions <b>Tengku F. I. Che Ku Jusoh</b>	Production and inventory optimization problems in food industry <b>Regina Berretta</b>	Challenges in development of extruded functional foods for improved food and nutritional security <b>Danyang Ying</b>	A digital library to aid curriculum internationalisation in biosystems and food engineering <b>Enda Cummins</b>	

Change of protein digestibility, protein availability, amino acids and antioxidant potential among digested fractions of raw, cooked and fermented soybeans <b>Sunantha Ketnawa</b>	Milk protein-based encapsulation of bioactive components and nutrients <b>Bimlesh Mann</b>	Food excess and by-product processing 'ecosystem' model <b>Paulomi Burey</b>	The use of dimensional analysis – modeling the direct expansion process <b>Dennis Forte</b>	Development of a multidisciplinary post-graduate educational activity on quantitative tools for sustainable food and energy in the food chain (Q-Safe): from problem based learning to e-learning <b>Serafim Bakalis</b>
Biomimetic plant foods: nature inspired food structures to control starch digestion <b>Jaspreet Singh</b>	Development of controlled delivery functional systems by microencapsulation of plants extracts with health benefits and food technological interest <b>Berta Estevinho</b>	The scale factor in food manufacture: a tool for the assessment of decentralised food production scenarios <b>Estefania Lopez-Quiroga</b>	Influence of thermomechanical treatment on the reaction behavior and functionality of highly concentrated whey proteins <b>Maria Gabriela Quevedo Barahona</b>	"Glow to make your plants grow": connecting discovery and community engaged research to the Undergraduate curriculum <b>Paula Bourke</b>
Physical property of fruits and vegetables and its implication on health benefits: a review <b>Olaniyi Amos Fawole</b>				

## Wednesday 25 September 2019

0800-1730 Registration and Exhibition   Foyer, Level 1						
0830-1020 Plenary Session						
Room Meeting Room 105 & 106, Level 1						
Chair TBC						
0830-0835 Welcome and housekeeping						
Keynote presentation						
0835-0910	A new paradigm for computer aided design of food processes at multiple scales <b>Bart Nicolai</b>					
Keynote presentation						
0910-0945	Food system development for the final frontier: challenges and integrative solutions <b>Grace Douglas</b>					
Keynote presentation						
0945-1020	Novel and future processing technologies for the food industry of the 21st century <b>Gustavo Barbosa-Canovas</b>					
1020-1055 Morning Tea   Foyer, Level 1						
1055-1225 Concurrent Sessions						
	<b>Concurrent 7A</b>	<b>Concurrent 7B</b>	<b>Concurrent 7C</b>	<b>Concurrent 7D</b>	<b>Concurrent 7E</b>	<b>Concurrent 7F</b>
Session	Global perspectives of food engineering: current status and vision	Engineering digestion: development and utility of dynamic digestion models	Advances in food sensors technologies	Pulsed electric field processing: New applications for the bio-based industry	Food structure engineering	Short oral 6 Novel food processing technologies
Room	Meeting Room 106, Level 1	Meeting Room 105, Level 1	Meeting Room 104, Level 1	Meeting Room 103, Level 1	Meeting Room 102, Level 1	Meeting Room 101, Level 1
Chair	Yrjö Roos Sam Saguy	Gail Bornhorst Erich Windhab	Jose Reyes Michael Ngadi	Leandro Buchmann Indrawati Oey	Simon Lawton Edgar Chavez Montes	TBC
	Food engineering vision and strategy towards 2050 <b>Sam Saguy</b>	Controlling satiety by tailored interfaces under consideration of gastric mixing in emulsion-based food systems <b>Erich Windhab</b>	To wire or not to wire that is the question <b>Jose Reyes</b>	Pulsed electric field use in food industry - application examples and equipment design <b>Oleksii Parniakov</b>	Process, structure and property relationships in food powder agglomeration and performance <b>Edgar Chavez Montes</b>	Refer to short oral program
	Global challenges and opportunities to inspire food engineers – millennials era to digital generations <b>Yrjö Roos</b>	Monitoring mixing during gastric digestion using the human gastric simulator (HGS) <b>Gail Bornhorst</b>	Predicting intramuscular fat quality in pork loin by hyperspectral imaging <b>Michael Ngadi</b>	Emerging pulsed electric field process development for the bio-based industry <b>Leandro Buchmann</b>	Drop break-up in rotor stator mixers <b>Fredrik Innings</b>	
	Food industry in the digital era: virtual tools, smart systems and connectivity <b>Francisco Marra</b>	An advanced "near real" dynamic in vitro human stomach system to study gastric digestion and emptying of beef stew and cooked rice <b>Peng Wu</b>	Predicting freshness quality and shelf-life of strawberries using visible and near-infrared spectroscopy technology <b>Fernando Mendoza</b>	Pulsed electric field systems and applications <b>Mike Kempkes</b>	Towards heuristics for food product design <b>Simon Lawton</b>	
	Food engineering in China – highlights and concerns <b>Xiao Dong Chen</b>	The use of oral processing models for food design <b>John Bronlund</b>	ITEX/GC-MS: an analytical method to a better detection of sulfur compounds in food products <b>Emilie Descours</b>	Effects of electric fields on enzymes: molecular dynamics simulations and experimental approaches <b>Sudhir Sastry</b>	A new gelation technology and its application in improving the edible quality and health value of dried noodles <b>Ying Yang</b>	
	New Zealand insights towards a new era of food engineers <b>Richard Archer</b>	In vitro investigation of the behavior of nanocellulose in human gastrointestinal tract and the influence on food digestion <b>Fanbin Kong</b>	Potential of fluorescence-based process analytical technologies as quality assurance tools for the dairy industry <b>Mark Fenelon</b>	Pulsed electric fields (PEF) as a pre-treatment for sous vide processing to improve the quality of tough meat cuts <b>Indrawati Oey</b>	Screw extrusion based 3D printing of soy and pea protein mixtures <b>Patrick Schüürmann</b>	
1225-1340 Lunch   Level 1, Foyer						
1340-1510 Concurrent Sessions						

	Concurrent 8A	Concurrent 8B	Concurrent 8C	Concurrent 8D	Concurrent 8E	Concurrent 8F
Session	Commercialisation case studies of foods and ingredients in Australasia	The new era for food engineering	High-pressure separation processes using green solvents	Innovative processes and approaches for enhanced food safety and product quality	Food process modeling: state-of-the-art	Short oral 7 Food engineering properties, nutrition and packaging
Room	Meeting Room 106, Level 1	Meeting Room 105, Level 1	Meeting Room 104, Level 1	Meeting Room 103, Level 1	Meeting Room 102, Level 1	Meeting Room 101, Level 1
Chair	Filip Janakievski Christian Ruberg	Peter Fryer Yrjö Roos	José M. del Valle Antonio Torres	Elena Castell-Perez Netsanet Shiferaw Terefe	Ashim Datta Francesco Marra	TBC
	In pursuit of the world's best steak – advanced robotics and x-ray technology to transform an industry <b>Christian Ruberg</b>	Emerging food processing techniques to target more sustainable food systems <b>Alexander Mathys</b>	Pressurized fluid options to produce cannabis-containing products for the food industry <b>Jerry W. King</b>	The international regulatory environment of novel food processing technologies <b>Dominique Taeymans</b>	Hybrid mixture theory based framework for modeling unsaturated transport in poroviscoelastic biopolymers <b>Pawan S. Takhar</b>	Refer to short oral program
	Unmanned ingredient handling and processing with robotics in bakery and prepared food <b>Jake Norman</b>	Food engineering to deliver health, satiety and pleasure <b>Uri Lesmes</b>	Sustainable extraction of bio-actives: the mini-biorefinery concept applied to food industries <b>Maria Angela Meireles</b>	Synergistic antimicrobial effects of ultrasound and natural compounds against foodborne pathogens <b>Hongchao Zhang</b>	From Hz to GHz: electro-assisted processes in food industry <b>Francesco Marra</b>	
	Food beverage and pharmaceutical applications of Spinning Cone, Centriferm and other Flavourtech technologies <b>Leon Skaliotis</b>	Food structure engineering: the product design principles revisited <b>Azad Emin</b>	Assessing the impact on scale-up of “nonidealities” in supercritical CO2 extraction of solid food materials: mathematical simulation and experimental verification <b>José M. del Valle</b>	A comparison study on the effects of radio frequency electric fields (RFEF) and thermal treatments on orange juice processing <b>Ernest Tse</b>	Modeling of UV light processing of liquid products and surfaces <b>Tatiana Koutchma</b>	
	Australian tales of the future of sustainable nutrient recycling <b>James Sackl</b>	New processes for new products? <b>Peter Fryer</b>	High value-added products obtained by processing with subcritical water and supercritical carbon dioxide <b>Marleny Saldaña</b>	Update on engineering aspects of electron beam irradiation of fresh produce <b>Elena Castell-Perez</b>	High pressure thermal processing – modelling case studies <b>Kai Knoerzer</b>	
	From innovative concept to commercialisation of high pressure processing – the Presha Fruit story <b>Alastair McLachlan</b>	Engineering products of the future <b>Christoph Hartmann</b>	Supercritical fluid: a green technology to recover/produce bioactive molecules within novel delivery systems as functional ingredients for food industry <b>Daniel Guajardo Flores</b>	Utilisation of clean steam in food processing <b>Spirax Sarco</b>	Modelling ultrasound processing based on acoustic cavitation <b>Francisco Trujillo</b>	
1510-1540 Afternoon Tea   Foyer, Level 1						
1540-1710 Concurrent Sessions						
	Concurrent 9A	Concurrent 9B	Concurrent 9C	Concurrent 9D	Concurrent 9E	Concurrent 9F
Session	Alternative proteins and food supplements: processing and consumption challenges	Advances in polymer packaging	Encapsulation and powder technologies for healthy food ingredients	Radio frequency applications for innovative thermal food processing: from thawing to pasteurization – sterilization	Modeling quality, safety and sensory aspects	Short oral 8 Sustainability, security, and supply chains
Room	Meeting Room 106, Level 1	Meeting Room 105, Level 1	Meeting Room 104, Level 1	Meeting Room 103, Level 1	Meeting Room 102, Level 1	Meeting Room 101, Level 1
Chair	Myriam Loeffler Brijesh Tiwari	Shyam Sablani Deniz Turan	Nitin Nitin Cordelia Selomulya	Ferruh Erdogdu	Mukund Karwe Petros Taoukis	TBC
	Transformational strategies to address current and future protein deficit <b>Brijesh Tiwari</b>	High Gas-barrier Polymer Packaging for Advanced Food Processing Technologies <b>Shyam Sablani</b>	Improving fat encapsulation in spray-dried dairy powders <b>Cordelia Selomulya</b>	Radio frequency for innovative thermal processing – mathematical modeling for process optimization and industrial scale-up <b>Ferruh Erdogdu</b>	Crack in rusks: modelling and simulation of stress and displacement fields <b>Jean-Yves Monteau</b>	Refer to short oral program
	Influence of protein source on the functionality and the digestibility of infant formulas <b>Linda le Roux</b>	Innovations in Recyclable Polymers <b>Claire Koelsch Sand</b>	Milk fat globules- A universal delivery systems for bioactives <b>Nitin Nitin</b>	Recent development of radio frequency treatments for pasteurizing agricultural products <b>Shaojin Wang</b>	Engineering coffee aroma: the steam stripping of roast and ground coffee for instant coffee manufacture <b>David Beverly</b>	
	Multi-functional mixed plant cell wall fibers from natural food colors side streams <b>Kai Reineke</b>	Alternative testing method for water vapor permeability of packaging materials based on polar polymers: thermoplastic polyurethane <b>Deniz Turan</b>	Tuning the intrinsic stress tolerance of probiotic cells for enhanced survival ratio in spray drying for production of active dry probiotics <b>Meng Wai Woo</b>	Recent advances in the radio-frequency tempering and thawing of frozen foods <b>Yvan Llave</b>	Impact of shelf life models kinetic parameter uncertainty on predictions and management of the frozen fruits and vegetables cold chain <b>Petros Taoukis</b>	
	Mechanisms to functionalize or restructure alternative proteins for future application in meat-based products <b>Corina Reichert</b>	Novel humidity-controlled chlorine dioxide-superabsorbent polymer technologies for military textiles (uniforms, parachutes, shelters), packaging, and ballistic and blast protection <b>Christopher Doona</b>	Effect of various encapsulation methods on the stability of probiotic bacteria <b>Jeyan Moses</b>	Pasteurization of dehydrated food powders with radio frequency heating <b>Fanbin Kong</b>	Microbial inactivation by cold atmospheric pressure plasma: a numerical study <b>Mukund Karwe</b>	
	Using agricultural residues and side streams of food processing for the conversion of biomaterial into high value food supplements <b>Robert Sevenich</b>	Surface modification of cellulose nanofibers for developing packaging film for food products <b>Balunkeswar Nayak</b>	Continuous process using protein-carbohydrate matrices for structuring and encapsulation <b>Mackenzie Hansen</b>	Recent developments and future innovation challenges in radio frequency (RF) assisted heating of food products <b>Tesfaye Bedane</b>	3D simulation of oxidation reactions in real deep-fryers: interactions with anisothermal oil flow and design <b>Maxime Touffet</b>	
1900-2300 Gala Dinner   Aerial						

## Thursday 26 September 2019

0830-1330	Registration and Exhibition   Foyer, Level 1
0900-1015	Plenary Session
0900-0905	Welcome and housekeeping
0905-0940	<b>Keynote Presentation</b> Resolving conflicting drivers in global food security through agri-food innovation <b>Silvia Estrada-Florides</b>
0940-1015	<b>Keynote Presentation</b> Innovations at Fonterra <b>Tristan Hunter</b>
1015-1050	Morning Tea   Foyer, Level 1
1050-1240	Closing Ceremony
1050-1105	ICEF13 highlights
1105-1115	IAEF lifetime achievement awards
1115-1135	ICEF13 oral and poster awards
1135-1155	Other awards
1155-1210	TBC
1210-1225	Announcement and introduction of ICEF14
1225-1240	Closing remarks and farewell
1240-1330	Lunch   Foyer, Level 1
1330-1700	Technical Tours