

*5<sup>th</sup> International Conference on*

# **Food Oral Processing**

**July 1<sup>st</sup> – 4<sup>th</sup>**

**University of Nottingham**



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## Programme for Food Oral Processing 2018

### Sunday July 1<sup>st</sup>

- Check in available at the Orchard Hotel from 2pm.
- Conference registration available in the hotel foyer from 5.30pm.
- A buffet dinner is available for delegates in the hotel restaurant between 6.30-8.30pm

**8pm-9.30pm Welcome reception at The Orchard Hotel, Nottingham – Mezzanine area**

### Monday July 2<sup>nd</sup>

<b>8.30am</b>	<b>Conference Opening and Introduction</b>	Dame Jessica Corner, Pro Vice-Chancellor, University of Nottingham	<i>Chair – Ian Fisk</i>
<b>9.00am</b>	<b>Progress and Challenges of Food Oral Processing – Looking Back and Forward</b>	Jianshe Chen, Chair of Food Oral Processing Committee	
<b>9.45am</b>	<p><b>Flash Posters (3 minutes each):</b></p> <p>P7 - The Influence of Salivary Metabolites on Oral Perception (Alexander Gardner, King’s College London Dental Institute)</p> <p>P13 - Saliva esterase activity during wine oral processing: inter-individual differences, effect of wine composition and impact on wine odorant esters (Maria Angeles Pozo-Bayón Instituto de Investigación en Ciencias de la Alimentación (CIAL), CSIC-UAM)</p> <p>P25 - How valid is 50 s<sup>-1</sup> for measuring viscosity of liquids? (Jane Jun Xin Ong, University of Guelph)</p> <p>P32 - Effect of mechanical contrast on sensory perception of heterogeneous liquid and semi-solid foods (Marco Santagiuliana, Wageningen University &amp; Research)</p> <p>P41 - Instrumental compression test of soft food gels between a soft artificial tongue and a hard plate (Kaoru Kohyama, Food Research Institute, NARO)</p> <p>P48 - The extent of oral processing determines the nutritional value of bread: an in vitro investigation (Jing Gao, National University of Singapore)</p> <p>P64 - Measuring baby’s oral motor patterns and trends with baby food snacks (Sarah Smith-Simpson, Nestle Nutrition, Fremont, MI)</p> <p>P65 - Role of food oral processing as a driver of pizza liking: a new insight into the design of healthy and appreciated ultra-processed food (Isabelle SOUCHON, INRA AgroParisTech)</p>		<i>Chair – Bettina Wolf</i>

<b>10.10am</b>	<b>Morning Break – networking and opportunity to view posters and visit exhibitors (located in The Gallery and Conference Room 3)</b>		
<b>10.35am</b>	<b>The Influence of Oral Processing on Food Perception</b>	Andries van der Bilt, University Medical Center, Utrecht	<i>Chair – Christopher Vinyard</i>
<b>11.05am</b>	<b>Theme 1 &amp; 2 - Oral Physiology and Dentistry (10 minutes each plus 5 mins questions):</b>		
11.05-11.20	1.1 - Inclusion of the initial phase of mastication for determining chewing efficiency using a solid test food (Hilbert W. van der Glas, Zhejiang Gongshang University)		
11.20-11.35	1.2 - Oral Peri-Receptor Events Affecting Salt Taste Sensitivity (Theresa Stolle, Technische Universität München)		
11.35-11.50	1.3 - Which variables should be controlled when measuring the granulometry of a chewed bolus? Results from a quantitative synthesis (Guillaume Bonnet, Université Clermont Auvergne)		
11.50-12.05	1.4 - Impact of oral health on masticatory efficiency and kinematics in young children (Natacha Linas, Centre de Recherche en Odontologie Clinique (CROC))		
<b>12.05pm</b>	<b>Lunch – networking and opportunity to view posters and visit exhibitors (located in The Gallery and Conference Room 3)</b>		
<b>1.05pm</b>	<b>Oral Food Processing: a Dental Perspective</b>	Nikolaos Giannakopoulos, University Clinic of Wurzburg, Germany	<i>Chair – Andries van der Bilt</i>
<b>1.35pm</b>	<b>Improving oral health or changing food texture: the challenge for persons with neuromotor disabilities</b>	Martine Hennequin, University of Clermont Auvergne, France	
<b>2.05pm</b>	<b>Theme 1 &amp; 2 - Oral Physiology and Dentistry (10 minutes each plus 5 mins questions):</b>		
2.05-2.20	2.1 - Exposure to chocolate almond milk likely increases human salivary expression of proline rich proteins (Cordelia Running, Purdue University)		
2.20-2.35	2.2 - Unravelling the effects of interindividual variability of human saliva on aroma compounds (Carolina Muñoz-Gonzalez, Centre des Sciences du Goût et de l'Alimentation)		
2.35-2.50	2.3 - Responses of the Salivary Proteome to Transient Receptor Potential Channel Agonists (Jack Houghton, King's College London)		
2.50-3.05	2.4 - Discrimination of chocolate texture varies with individual differences in oral somatosensation (John E Hayes, Penn State)		
3.05-3.20	2.5 - Linking oral processing behaviour to oral physiology of consumers varying in age, gender and ethnicity (Eva Ketel, Wageningen University)		

<b>3.20pm</b>	<b>Afternoon Break - networking and opportunity to view posters and visit exhibitors (located in The Gallery and Conference Room 3)</b>		
<b>3.45pm</b>	<b>From Food Texture to Global Perception: Respective Impacts of Food and Human Physiology</b>	Elisabeth Guichard, INRA Paris	<i>Chair – Gilles Feron</i>
<b>4.15pm</b>	<b>Theme 3 - Food Texture During Consumption (10 minutes each plus 5 mins questions):</b>		
4.15-4.30	3.1 - Toppings facilitate oral processing behavior of bread and crackers (Markus Stieger, Wageningen University)		
4.30-4.45	3.2 - Temporal aspects of cream cheese texture perception using Temporal Dominance of Sensations (TDS) tool (Dian Widya Ningtyas, The University of Queensland)		
4.45-5.00	3.3 - From first to last bite: Emotions change from high to low arousal and dominant sensations built-up during multiple bite assessment of yogurt (Roelien van Bommel, Wageningen University)		
5.00-5.15	3.4 - On relating rheology and oral tribology to sensory properties in hydrogels (Emma Krop, University of Leeds)		
5.15-5.30	3.5 - Evolution of bolus granulometry and bioaccessibility of proteins during mastication of chopped and non-chopped beef meat (Anne Duconseille, Université Clermont-Auvergne)		
5.30-5.45	3.6 - Carbonation as a novel taste-free thickener increases swallowing time (Jeyam Emmanuel, King's College London Dental Institute)		
5.45-6.00	3.7 - Modifying gluten-free bread structure by different baking conditions: impact on oral processing and sensory perception (Patricia Puerta, Institute of Agrochemistry and Food Technology (IATA-CSIC))		
6.00-6.15	3.8 - Temporal Dominance of Motions: a new concept to enlighten the links between texture perceptions and oral processing (Anne Saint-Eve, AgroParisTech)		
6.15-6.30	3.9 - Texture-dependent mastication behaviors of the elderly with a different dental status (Weon-Sun Shin, Hanyang University)		
<b>6.30pm</b>	<b>Close</b>		

**6.30-7.30pm - FOP Committee meeting**

**7.30pm – Dinner at the Orchard Hotel**

## Tuesday July 3rd

8.30am	<b>Nuts Just Take Up Space Where Chocolate Ought to Be: Food Complexity and Oral Breakdown</b>	Bryony James, University of Auckland	<i>Chair – Bettina Wolf</i>
9.00am	<b>Theme 4 - Food Physics during consumption (10 minutes each plus 5 mins questions):</b>		<i>Chair – Marco Morgenstern</i>
9.00-9.15	4.1 - Chewing behavior of high-protein expanded pea flour (Christian Salles, INRA)		
9.15-9.30	4.2 - Mechanical properties affect detectability of perceived texture contrast in heterogeneous food gels (Marco Santagiuliana, Wageningen University & Research)		
9.30-9.45	4.3 - Modulation of taste intensity using heterogeneous distribution of taste active molecules in liquid foodstuffs (Benjamin Le Révérend, Nestlé Research Center)		
9.45-10.00	4.4 - Oral processing behavior of composite foods: interplay between carrier and topping properties (Arianne van Eck, Wageningen University)		
10.00-10.15	4.5 - Dynamic flavor release from chewing gum: mechanisms of release (Igor Bodnar, Firmenich S.A)		
10.15am	<b>Morning Break - networking and opportunity to view posters and visit exhibitors (located in The Gallery and Conference Room 3)</b>		
11.00am	<b>Theme 4 - Food Physics during consumption (10 minutes each plus 5 mins questions):</b>		<i>Chair – Bettina Wolf</i>
11.00-11.15	4.6 - Tribological Study on Saliva-Tea Compound Mixture: Correlation between Hui Gan (Sweet Aftertaste) Perception and Friction Coefficient (Chong Pik Han, Zhejiang Gongshang University)		
11.15-11.30	4.7 - Oral tribology of protein microgel particles: Influence of hydrophobicity of contact surfaces (Dr. Anwasha Sarkar, University of Leeds)		
11.30-11.45	4.8 - Clustering of oil droplets in o/w emulsions enhances sensory perception of oil related attributes (Elke Scholten, Wageningen University & Research)		
11.45am	<b>Individual Variation in Taste Perception: What Happens When We Thermally Stimulate the Tongue?</b>	Joanne Hort, Massey University	
12.30pm	<b>Lunch – networking and opportunity to view posters and visit exhibitors (located in The Gallery and Conference Room 3)</b>		

<b>2.00pm</b>	<b>Using Functional MRI to Understand Individual Variations in Taste Perception</b>	Sue Francis, University of Nottingham	<i>Chair – Markus Stieger</i>
<b>2.30pm</b>	<b>Theme 5 - Food Texture Insights through Analytical Assessment in-vivo, ex-vivo, in-vitro (10 minutes each plus 5 mins questions):</b>		
2.30-2.45	5.1 - Biomechanical characterization of tongue-food interface during oral processing: an in vitro study with Quantitative Ultrasound (Vincent Mathieu, AgroParisTech, INRA)		
2.45-3.00	5.2 - Mechanical insights into the textural perceptions of model beverages – a multivariate approach (Piyali Chakraborty, University of Queensland)		
3.00-3.15	5.3 - Relating acoustic tribology to in vitro tribology, oral coating and sensory perception (Ann Stijnman, NIZO, TIFN)		
3.15-3.30	5.4 - Can in vitro and in silico studies help us understanding the motor control of swallowing? (Marco Marconati, University of Surrey)		
<b>3.30pm</b>	<b>Afternoon Break - networking and opportunity to view posters and visit exhibitors (located in The Gallery and Conference Room 3)</b>		
<b>4.00pm</b>	<b>Oral Processing and Its Impact on Metabolic Outcomes</b>	Jeyakumar Henry, Clinical Nutrition Research Centre, National University of Singapore	<i>Chair – Ann-Marie Williamson</i>
<b>4.30pm</b>	<b>Theme 5 - Food Texture Insights through Analytical Assessment in-vivo, ex-vivo, in-vitro (10 minutes each plus 5 mins questions):</b>		
4.30-4.45	5.5 - Probing the in-mouth texture perception with a biomimetic tongue (Jean-Baptiste Thomazo, Sorbonne Université/Nestlé)		
4.45-5.00	5.6 - Effect of $\alpha$ -Amylase on Instantaneous Rheological Properties of Tapioca Starch (Shen Siung Wong, Tate & Lyle)		
5.00-5.15	5.7 - Estimation of physical quantities on human organ surface during oral and swallowing process using novel measurement system “F-bology® analyzer” (Tetsu Kamiya, Meiji Co. Ltd.)		
5.15-5.30	5.8 - In-vitro characterisation of bolus pressure, velocity and internal shear of non-Newtonian gelled liquid in a tongue-palate simulator (Andrew Redfearn, University College London)		
<b>5.30pm</b>	<b>Journal of Texture Studies announcements re 50 year celebration (Jianshe Chen)</b>		
<b>5.40pm</b>	<b>Close</b>		

**7.00 pm - Drinks reception and photograph**

**7.45 pm - Gala Dinner in the Banqueting Suite, East Midlands Conference Centre – to include award of poster prizes and speech by Chair of FOP Committee**

## Wednesday July 4<sup>th</sup>

<b>8.30am</b>	<b>Rheology and Swallowing of Food</b>	Mats Stading, Research Institute of Sweden and Chalmers University of Technology	<i>Chair – Allen Foegeding</i>
<b>9.00am</b>	<b>Theme 6 - Impact of Food Oral Processing on health benefits (10 minutes each plus 5 mins questions):</b>		
9.00-9.15	6.1 - Impact of semolina food structure on mastication and bolus properties – prospects to postprandial glycaemia (Saara Pentikäinen, VTT Technical Research Centre of Finland Ltd.)		
9.15-9.30	6.2 - Variation in chewing behaviour among consumers and its impact on digestion (Esther Kim, The New Zealand Institute for Plant & Food Research Limited)		
9.30-9.45	6.3 - Can oral processing behaviour explain the satiating capacity of yogurts with small texture differences? (Ana Carolina Mosca, Wageningen University, European Sensory Network)		
9.45-10.00	6.4 - Nutrient bioavailability is reduced in elderly with oral deficiency: interest of combining in vitro mastication and digestive approaches (Marie-Agnès Peyron, Université Clermont Auvergne, INRA)		
10.00-10.15	6.5 - Relationship between nutritional sucking habits, taste sensitivity, food consistency and body mass index in children: a multivariate analysis (Paula Midori Castelo, Federal University of São Paulo (UNIFESP, Brazil))		
10.15-10.30	6.6 - Impact of food formulation and processing on saltiness perception (Miroslaw Kasprzak, University of Nottingham)		
<b>10.30am</b>	<b>Morning Break - networking and opportunity to view posters and visit exhibitors (located in The Gallery and Conference Room 3)</b>		
<b>11.00am</b>	<b>Interventions for Dysphagia: Modifications of Diet Texture, Head Position and Tongue Strength</b>	Catriona Steele – Toronto Rehabilitation Institute	<i>Co-Chairs – Mats Stading and Jianshe Chen</i>
<b>11.30am</b>	<b>Theme 7 - Designing Foods for Enhancing Sensory and Consumer Experience – Oral Processing for Specific Consumer Groups (10 minutes each plus 5 mins questions):</b>		
11.30-11.45	7.1 - Chewing efficiency in 6 to 18 months old children: evolution with age and relationships with food texture acceptance (Carole Tournier, CSGA)		
11.45-12.00	7.2 - A mathematical model of the bolus formation of starch-based foods during oral processing (Muhammad S. How, Riddet Institute, Massey University)		

12.00-12.15	7.3 - Exploring the use of sensory tools to classify commercial dairy products for dysphagia sufferers (Maeva Cochet-Broch, C.S.I.R.O)	
12.15-12.30	7.4 - Exploring temporal methods to assess dynamic product profiles (Louise Hewson, PepsiCo)	
12.30-12.45	7.5 - Parent-reported food texture preferences and texture sensitivity in young children with and without Down syndrome (Charles Ben Bernhard, Washington State University/Sarah Smith-Simpson, Nestle Nutrition)	
12.45-1.00	7.6 - Oral processing behaviour of liquid, semi-solid and solid foods differs between consumers varying in age, gender and ethnicity (Monica Aguayo Mendoza, Wageningen University)	
1.00-1.15	7.7 - Does the portion size matter for the evaluation of sensory perception, hedonic and emotional rates for a regular and a low sugar vanilla ice cream? (Marion Doyennette, Unilever)	
<b>1.15pm</b>	<b>Conference close</b>	

**Lunch available in the Conference Centre**