

**18th International Hydrocolloids Conference, Mar. 30-April 2,
Tokyo University of Marine Science and Technology
Shinigawa Campus, Tokyo, Japan**

Final Program as of March 8, 2026
(Colour Codes are explained at the bottom of this document)

Monday, 30th March, 16:00 - 19:00, Drop-in Registration and Welcome Reception.

Tuesday 31st March	
	Auditorium
8:40-9:00	Opening
9:00-9:40	Plenary1 Eiichi Saitoh The landscape of dysphagia management
9:40-10:20	Plenary2 David Julian McClements Adventures in food hydrocolloids: A sci-fi journey through food
10:20-10:40	----- Coffee break -----

	Room 1	Room 2	Room 3
10:40-11:10		Keynote1 Koichiro Matsuo Process Model of Feeding: Linking Oral Physiology, Bolus Properties, and Dysphagia Rehabilitation	Keynote2 Costas Nikiforidis Stimuli-responsive natural lipid droplets for selective lipid trafficking
11:10-11:30	Oral1 1033 Gelation mechanism and network structure of gellan gum in low and high concentration of sucrose solutions	Oral12 1099 Surface-Mediated Enzymatic Reactions of Banana Starches: Quantifying Amylase Interaction and Inhibition Effect	Oral23 1002 Preparation of size-controllable sustainable pulse protein microgels with high emulsifying performance
11:30-11:50	Oral2 1085 Macadamia husk phenolic-loaded liposomes: In vitro digestibility and potential as yogurt-based delivery systems	Oral13 1042 Disentangling viscosity from non-catalytic binding in α -amylase inhibition	Oral24 1220 Emulsifier-Free Stabilization of Low-Fat Whipped Cream via Clean-Label Starch-Hydrocolloid Network Engineering
11:50-12:10	Oral3 1095 Physicochemical and Functional Properties of Wet-Type Grinder-Treated Vegetables as Natural Hydrocolloids	Oral14 1184 Intact Legume Cells as Substitutes for Refined Flour: Implications for Glycaemic Control and Gut Health	Oral25 1202 High Internal Phase Emulsion of Sardine Oil Stabilized by Sodium Caseinate-Carrageenan Complexes: A Colloidal Approach to Omega-3 Enrichment in Freshwater Fish Surimi
12:10-14:10	---- LUNCH & Poster ----		
14:10-14:40		Keynote3 Tetsu Kamiya Simulation of Chewing and Swallowing: Experimental and Numerical Approaches to Bolus Formation and Flow	Keynote4 Kentaro Matsumiya Structuring Low- Smoke-Point MCTs for Aqueous Food Systems: Bulk Crystallization and Emulsification

14:40-15:00	Oral4 1015 Advanced optics and image analysis for food hydrocolloid gel characterization	Oral15 1071 Effect of adding thickened aqueous fluid to cooked, minced chicken breast meat on in vitro digestibility using human Gastric Digestion Simulator	Oral26 1197 Cellulose-based foam-mat freeze-dried clove essential oil nanoemulsion as a natural food preservative
15:00-15:20	Oral5 1005 Xanthan Gum–Driven Modulation of Physical Properties in Dairy Matrices for Enhanced 3D Food Printing	Oral16 1189 Effect of pectin on calcium release from acid-induced pea protein gels during dynamic in vitro digestion	Oral27 1167 Development of Emulsion-based Confectionery product: Understanding the Role of High Sugar Concentration in the Formation, Stability and Rheology of Emulsions
15:20-15:40	Oral6 1143 Evaluation of okra pectin as an alternative emulsifier in milk chocolate: Effects on rheological, textural and sensory properties	Oral17 1066 Impact of deep eutectic solvent–tailored nanocellulose on the stability and in vitro semi-dynamic digestion behavior of β -carotene conveying Pickering emulsions	Oral28 1112 High-yield and scalable preparation of lignin nanoparticles with uniform surface properties for stable Pickering emulsions
15:40-16:00	Oral7 1025 Maillard Reaction control in condensed biopolymer/co-solute model systems	Oral18 1177 Construction of a pH-driven self-assembled soy protein–lecithin microcage embedded in a κ -carrageenan hydrogel for weight-management	Oral29 1192 Fish Gelatin/Chitosan Microfiber-Based 3D Porous Scaffolds Constructed with Pickering Emulsion and 3D Printing for Cell-Cultivated Meat
16:00-16:20	----- Coffee break -----		
16:20-16:50	Keynote5 Lester Geonzon Linking Structure Across Multiple Scales to Macro-Properties in Hydrogels	Keynote6 Aaron Goh Suk Meng Hydrocolloids in Novel Foods for Dysphagia	

16:50-17:10	<p>Oral8 1011 Structural and mechanical characterisation of microgels fabricated using spray gelation method</p>	<p>Oral19 1159 Evaluation of polysaccharides from Malvaceae as sustainable excipients for sustained-release oral tablets</p>	<p>Oral30 1045 Designing Natural Co-Emulsifier Systems: Modified Porous Starch and Soy Lecithin for Egg-Yolk-Free Mayonnaise</p>
17:10-17:30	<p>Oral9 1145 Influence of thermal processing on extraction efficiency and properties of tamarind xyloglucans</p>	<p>Oral20 1007 Hybrid Carrageenans in Food and the Human Gut</p>	<p>Oral31 1178 Functional properties of cold-set agar-based emulsion gel for fat replacer in fish sausages</p>
17:30-17:50	<p>Oral10 1198 Multimodal Fusion of Image, Textural and Colorimetric Features for Prediction of Bread Shelf-Life and Texture Decay</p>	<p>Oral21 1115 Acorn flour enriched bread: in vitro starch digestion and colonic fermentation</p>	<p>Oral32 1003 Impact of various physical treatments on physicochemical and microstructural characteristics of vegetable oil-based whipped cream stabilised by faba bean protein</p>
17:50-18:10	<p>Oral 11 1166 Evaluating Cohesiveness of Hydrocolloid Solutions Using Filament Stretching Extensional Rheometry (FiSER): Insights and Literature Comparison with CaBER</p>	<p>Oral22 1050 Absorption of Enteromorpha prolifera Polysaccharides in Mice and the Protective Mechanism Against Alcohol-Induced Damage in L02 Cells</p>	<p>Oral33 1219 Encapsulation to interface engineering of hydrocolloids for optimal nutrition design and functional food applications</p>

18:10	----- Adjourn -----
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Wednesday 1st April	
	Auditorium
9:00-9:40	Plenary3 Erik van der Linden Physics ready to bite into complex soft matter.
9:40-10:20	Plenary4 Jianshe Chen Food oral processing: A colloidal perspective of eating and sensory perception
10:20-10:40	----- Coffee break -----

	Room 1	Room 2	Room 3
10:40-11:10		Keynote7 Pedro Fardim Pullulan-based gels for protein encapsulation and cell therapies	Keynote8 Hyun Jin Park Nano-encapsulation technology of functional food ingredients using by 3-D printer for improving bioavailability
11:10-11:30	Oral34 1004 Predicting food hydrocolloids techno-functionality: more accurate data & smarter physics-based models	Oral44 1136 Sol-gel like transition of semi-dilute suspension of rod-like cellulose nanoparticles	Oral54 1022 Developing functionally enhanced pea proteins as innovative food ingredients
11:30-11:50	Oral35 1200 Bigdata-driven approach for food texture analysis	Oral45 1147 Optimum compositions for shear-induced gel formation in model colloid-polymer systems	Oral55 1068 Enhancing Nutritional Value of Baked Products Using Fermented Lucerne (Medicago sativa) Flour as an Alternative Protein Source
11:50-12:10	Oral36 1053 Modeling and simulation of phase inversion processes going from fresh cream to butter via whipped cream by a complex systems approach with Coupled Map Lattice	Oral46 1194 Ultrafast gelation of hyaluronan hydrogels via alternate compression-decompression	Oral56 1034 Protein dry spinning as a bottom-up approach for the design strategy of anisotropic structures in plant-based meat analogues.
12:10-13:40	---- LUNCH & Poster ----		
13:40-14:10	Keynote9 Stefan Kasapis Controlled delivery of bioactive compounds from natural polymers across the concentration range of industrial application		Keynote10 Jin-Kyu Rhee Multi-Dimensional Food Fabrication: A Bottom-Up Approach to Structuring Alternative and Cultivated Meats

14:10-14:30	Oral37 1049 Sustainable active packaging from chitosan infused with extract from pulsed electric field-treated microalgae to preserve quality of chicken fillet	Oral47 1054 Polyphenols modulate faecal fermentation of dietary fibre depending on polysaccharide chemistry and supramolecular assembly	Oral57 1055 Modified marama bean concentrate as an alternative to gluten protein
14:30-14:50	Oral38 1087 Wet-type grinder-treated rice bran as a natural hydrocolloid alternative for improving gluten-free rice bread quality	Oral48 1067 Advances in understanding the metabolic and hydrocolloidal relevance of fiber-rich fraction from chia seeds	Oral58 1036 The physical properties and microstructure of hybrid processed cheese formulated with plant protein ingredients and rennet casein
14:50-15:10	Oral39 1117 Textural engineering of analog rice using sago and fermented kidney bean flour hydrocolloids	Oral49 1175 Short-soluble amylose chains inhibit long-term retrogradation and modulate in vitro digestion of waxy corn starch gels	Oral59 1199 Enhancing structure formation in pea protein systems through sequential thermomechanical processing for sustainable meat alternatives
15:10-15:30	Oral40 1181 Development of a Double-Network CaCO ₃ -GDL Crosslinked Bioink for Cell-Compatible and Edible Scaffolds in Cultivated Fish	Oral50 1191 Bioaccessibility of white mugwort (<i>Artemisia lactiflora</i>) polyphenol extract in the system with brown rice flour and inulin revealing by static in-vitro digestion model	Oral60 1031 Towards a Kinetic Understanding for Protein–Phenolic Interactions in the High Temperature Regime
15:30-15:50	----- Coffee break -----		
15:50-16:20		Keynote11 Yong-Cheng Shi Modulating starch digestion: strategies for healthier starch-rich food development	Keynote12 Toshihiro Nakamori Polysaccharide Gels and Soy Protein Gels: Molecular Origins of Hydration, Network Architecture, and Food Functionality

16:20-16:40	<p>Oral41 1182 Development of 3D-Printable Marine-Derived Gels for Senior-Friendly Seafood Analogues</p>	<p>Oral51 1082 Influence of apple pomace to modulate the starch and polyphenol bioaccessibility of wheat bread co-formulated with pomace and soluble polysaccharides</p>	<p>Oral61 1203 Ultrasound-assisted extraction and colloidal properties of protein isolates from neglected Sicilian black chickpeas</p>
16:40-17:00	<p>Oral42 1044 Fractionating cereal brans into functional polysaccharides through subcritical water extraction</p>	<p>Oral52 1131 Effects of Cowpea Protein Isolates and Stearic Acid on the Physio-chemical and In Vitro Starch Digestibility of High Amylose Maize Starch</p>	<p>Oral62 1169 Protein extraction of Pereskia aculeata leaves – effects of ultrasounds and Ohmic heating on their physical-chemical and acid gelling properties</p>
17:00-17:20	<p>Oral43 1138 Effects of debranching and ultrasound treatment on starch nanoparticles fabrication: a structure-functional analysis</p>	<p>Oral53 1103 Effect of chaotropic and kosmotropic natural deep eutectic solvents on the chitin separation and from <i>h. Illucens pupae</i> molt shells</p>	<p>Oral63 1186 Protein Composition and Purity Modulates Structural Transitions of Sunflower and Lupin Proteins During Hydrothermal Processing</p>
17:20	<p>----- Adjourn -----</p>		

17:50-20:35

**Dinner, Katsuyoshi Nishinari Honorary Speaker, Next Conference
Announcement, Poster Award**

Thursday 2nd April

Auditorium

9:00-9:40

**Plenary5 Sylvie Turgeon
From purified
hydrocolloids to
complex ingredients: a
sustainable alternative
in food applications**

9:40-10:20

**Plenary6 Hidemitsu
Furukawa From
Underutilized Biomass
to Digital Ingredients:
Freeze- Milled
Hydrocolloid Powders
and Scalable 3D Food
Printing**

10:20-10:40

----- Coffee break -----

	Room 1	Room 2	Room 3
10:40-11:10		Keynote13 Sushil Dhital Structure Matters: Tailoring Plant Proteins for Functional Food Applications	Keynote14 Chaiwut Gamompilas Harnessing Mung Bean Proteins for Future Foods: Extraction, Modification, and Techno-functionality
11:10-11:30	Oral64 1023 Soft Lubrication of Model Absorbing Polysaccharide Solutions	Oral72 1158 Microwave- assisted extraction of chickpea protein isolate:Impact on structural and physicochemical properties	Oral80 1012 Canola Proteins at the Air–Water Interface
11:30-11:50	Oral65 1026 Effects of Drying Methods on Physicochemical and Functional Properties of Lemon Basil Seed Mucilage	Oral73 1104 Tailoring bilayer structure of nanoliposomes with whey isolate protein for enhanced stability and prolonged release of curcumin	Oral81 1157 Exploration of electrospinning technique for producing food-grade nanofibers from legume protein concentrates and pullulan
11:50-12:10	Oral66 1056 Modulation of interfacial and foaming properties of cow milk under non- rancid lipolytic conditions	Oral74 1076 Rheological, structural, and functional properties of β -glucan from barley and oat	Oral82 1016 From cow to bioreactor: physicochemical properties of native and precision fermentation- derived bovine β -casein for dairy analogue applications
12:10-13:20	---- LUNCH ----		
13:20-13:50			Keynote 15 S.Savadkoohi Designing Texture in Plant-Based Foods: Protein–Hydrocolloid– Process Synergies

13:50-14:10	<p>Oral67 1057 Physicochemical properties of barley lipid transfer protein 1 contributing to beer foam quality</p>	<p>Oral75 1059 Transforming Watermelon Rind and Pea Protein into a Functional Snack</p>	<p>Oral83 1156 Bio-impact reformulation of “Caldo verde” soup with microalgae incorporation</p>
14:10-14:30	<p>Oral68 1060 Characterization of gel-forming components derived from mushrooms</p>	<p>Oral76 1171 Fermentation-assisted extraction and structural characterization of β-glucans from shiitake mushroom by-products</p>	<p>Oral84 1183 Tensile-Spun Gelatin-Chitosan Composite Scaffolds for Exploring Architecture-Cell Interaction Relationships</p>
14:30-14:50	<p>Oral69 1073 Investigating covalent interactions between 11S glycinin and genistein following thermal treatment</p>	<p>Oral77 1164 Enhancing the bioaccessibility of lutein and anthocyanins by loading into food-grade biopolymer gels using 3D food printing</p>	<p>Oral85 1017 Toward meltable plant-based cheese: mechanistic insights for product innovation</p>
14:50-15:05	<p>Short Break</p>		
15:05-15:25	<p>Oral70 1092 Interactions of whey protein isolate and sodium caseinate with different kinds of mild preheating treatments</p>	<p>Oral78 1029 Plant cell wall-polyphenol interactions modulate starch functionality, digestibility and the prebiotic outcomes of the tertiary system</p>	<p>Oral86 1180 Chlorella Polysaccharides as Compositional Modulators of Network Organization in Edible Fiber Scaffolds</p>
15:25-15:45	<p>Oral71 1075 Role of globulins and albumins in oil-water interface properties of coconut meal proteins</p>	<p>Oral79 1030 Enhanced delivery and bitterness masking of appetite-suppressing hop bioactives using hydrocolloid microgels: A structure-function design for enhanced palatability, stability, and bioaccessibility</p>	<p>Oral87 1150 Influence of ultrasound treatment on the emulsifying properties of Tenebrio molitor-based ingredients displaying different protein content</p>

15:45-16:10	Closing
16:20-20:20	Excursion

Colour Codes refer to the following program themes:

Innovative hydrocolloid design for delivering optimal nutrition and functional foods
Bioactive polysaccharides for human health
Physical properties of food hydrocolloids for enhanced product development
Role of hydrocolloids in pharmaceuticals and health/personal care products
Behavior of food biopolymers during digestion
Polysaccharide structures and their impact on gut microbiome
Functional hydrocolloids for plant-based dairy and meat alternatives.

Innovating with alternative proteins in new product development.

Hydrocolloids in emulsions and as emulsifiers