CoFE' 26 Technical Program

Monday, November 9, 2026

Abstr	Time	Title	Authors
Plenary Session 1. Health and Wellness. Monarchy Ballroom			
	8:30-8:35	Moderator: Sudhir Sastry	
	8:35-9:05	Sheyla Ramsay:From Better-for-You to Built-for-Wellness: How Health and Wellness Is Reshaping Food Innovation and Food Engineering	
	9:05-9:35	Yrjo Roos: Dispelling the Myth of Ultra Processed Foods	
	9:35-10:00	Q&A	
Session 1. Emerging Technologies in Food Processing. Co-chairs: Hao Feng/Yi-Cheng Wang. 10:20 am-12:00 pm. Queen 4			
686	10:20-10:40	Laser Photobiomodulation Enhances Growth, Bioactive Compounds, and Physical Quality of Brassica Sprouts	**Hao Feng**, Gulcin Yildiz, and Hanieh Sadeghi; North Carolina A&T State Unjiversity
931	10:40-11:00	Inactivation of Polyphenol Oxidase by 222-nm Far-UVC: Effects of pH, Sugars, and	J. Park, H. Zhang, **Yi-Cheng Wang**; University of Illinois Urbana-Champaign
814	11:00-11:20	Mechanically Flexible Devices and Elastic Robots for Food Packaging, Processing, and Safety	**Aaron Mazzeo**, Rutgers University
840	11:20-11:40	Development of a Continuous-Flow Thermo-Ultrasonic System for Liquid Pasteurizatio	Si Zhu, Y. Gao, **Guibing Chen**; North Carolina A&T State University
835	11:40-12:00	High-Pressure Processing of Poi: Applied Research and a Pathway for HPP Adoption in Hawai‘i’s Food Industry	**Hailey Zhou**, Leeward Community College, Wahiawā Value-Added Product Development Center
Session 2. Sustainable Food Design. Co-chairs: Alain Le Bail/Ferruh Erdogdu. 10:20 am-12:00 pm. Queen 5			
595	10:20-10:40	Microwave and baking; an overview of possible applications	Le-**Bail Alain**, Monteau, J.Y., Curet, S., Rannou C., Jury V., Boillereaux, L., Le-Bail P., Nantes France
635	11:20-11:40	Food Process Innovation for Sustainability: Simulations for Industrial Scale Infrared, Microwave and Radio Frequency Applications	**Ferruh Erdogdu**, Ankara University, Turkey
751	11:00-11:20	From Food Structure Design to Industrial and AI-Driven Innovation	**Pedro Bouchon**; Pontificia Universidad Católica de Chile
870	11:20-11:40	Process Less and Design More: Emerging Technologies for Plant Proteins and Oils	**Roman Buckow**, La Trobe University, Melbourne, Australia
758	11:40-12:00	Engineering Stable Low-Temperature Systems for Food Quality Preservation: Feedback-Controlled Supercooling and Superchilling	**Jin Hong Mok**, Dongguk University-Seoul; Taiyoung Kang, Chungnam National University
Session 3. Novel Technologies for Improving Food Quality. Co-chairs: Tao Wu/Roopesh Syamaladevi. 10:20 am-12:00 pm. Queen 6			
824	10:20-10:40	Effects of cooling rate, storage time, and thawing rate on ice crystal size in beef	Min Li, Heidi Busse, Ran Drori, **Tao Wu;** The University of Tennessee, Yeshiva University, New York
694	10:40-11:00	Cold Plasma technology to Improve the Techno-Functional Properties and 3D Printability of food proteins	P. Chan, M. T Fernández, A Pasagadi, S Menon, **M. S. Roopesh**.University of Alberta , Ca
881	11:00-11:20	Integrated Multiphysics and Microbial Kinetics Modeling of Fermentation and Drying of Sausages	**Jiajia Chen,** M. Taylor, W. Osbum, T.M. Bergholz, B. Ajayi, J. Nam, S. Saadat; U of Tennes
846	11:20-11:40	High-Barrier Food Packaging in Circular Economy: Myths, Facts, and Trade-offs	**Diana Maya** MSc. MBA, Kuraray America
928	11:40-12:00	High-Pressure Impregnation of Mineral Impregnation into Rice	Prerana Dodamani and **Hosahalli Ramaswamy**, McGill University, Canada
Session 4. Improving Shelf Life . Co-chairs:Ningjian Liang/Carmen Moraru . 10:20 am-12:00 pm. King 1			
937	10:20-10:40	Continuous Liquid Phase Plasma Processing Modulates Plasmin Activity and Peptide Profiles in Cheese Ripening	**Ningjian Liang**, Xiao Wu, Mary Katheryn Hoobery, Yuan Yuan;University of Idaho
655	10:40-11:00	Gentle processing approaches for improving food shelf life	**Carmen I. Moraru**, Cornell University
779	11:00-11:20	Vitamin stability in whey protein and RTM products	**Owen M McDougal**; Boise State University Food and Dairy Innovation Center
837	11:20-11:40	Technical Challenges and Analytical Considerations for Creatine and Bioactive Ingredients in Consumer Packaged Foods and Beverages	**Spencer Schow**; R&D Food Scientist at Glanbia
580	11:40-12:00	Energy-Efficient Salmonella Inactivation via Optimized Gas-Liquid Mass Transfer in Dielectric Barrier Discharge Plasma	Tejaswi Boyapati, Ren Yang**, Kasiviswanathan Muthukumarappan** South Dakota State University

Session 5. Green Extraction and Separation Technologies. Co-chairs: Sergio Martinez-Monteagudo/Felix Schottroff. 10:20 am-12:00 pm. King 2

725	10:20-10:40	Guided Ultrasound as a Process-Intensification Strategy for Falling-Film Evaporation	P. M. Zadeh, E. Dehghan-Niri, and **Sergio I. Martinez-Monteagudo**, New Mexico State University
695	10:40-11:00	Supercritical Carbon Dioxide Drying for Creating Porous Red Lentil Proteins: Effects of pH and Solvent Exchange	**Niveditha Asaithambi** and Ali Ubeyitogullari; University of Arkansas, Fayetteville, Arkans
952	11:00-11:20	Camelina Seed Valorization into High-Value Ingredients Using Integrated Green Biorefinery Approach	**Ilhami Okur**, Ozan N. Ciftci; Department of Food Science, Purdue University
663	11:20-11:40	Where Green Chemistry Meets Food Processing: Developing the Next Generation of Plant Protein Ingredients	**Samira Feyzi**, Department of Food Science, University of Arkansas
590	11:40-12:00	Pulsed Electric Fields (PEF) Processing for Improvement of Food-Grade Fungal Bioprocesses	**Felix Schottroff**, BOKU University and Benjamin Schmiedl, acib GmbH, Austria

Session 6. Processing for Enhanced Food Safety. Co-chairs: Deepti Salvi/Abani Pradhan. 1:20 pm-3:00 pm. Queen 4

930	1:20-1:40	UV-C Decontamination of Low-Moisture Foods: Role of Powder Redistribution and Wavelength	**Deepti Salvi**; Dept of Food, Bioprocessing and Nutrition Sciences North Carolina State Uni
815	1:40-2:00	Evaluation of Salmonella Stress Response Genes and Antimicrobial Resistance in Poultry Processing for Improved Food Safety	**Abani K Pradhan**; University of Maryland, College Park, Maryland
914	2:00-2:20	Emerging Food Safety Technologies combined with Machine Learning can Strengthen the Future of the Food Industry	**Amit More**y, Auburn University
639	2:20-2:40	Preparation of Zinc-Modified Chitin Nanofibers and Their Effects on Pathogen-Contaminated Microgreen Growth via Antimicrobial Activity and Oxidative Enzyme	Honglin Zhu, **Yangchao Luo**; Department of Nutritional Sciences, University of Connectic
588	2:40-3:00	Importance of engineering logistics in process validation to achieve food safety	Lakshmikantha H. Channaiah, University of Missouri

Session 7. Microbial Survival and Inactivation. Co-chairs: Qiao Ding/Juzhong Tang . 1:20 pm-3:00 pm. Queen 5

834	1:20-1:40	Understanding Bacterial Survival Mechanisms to Develop Effective Food Processing Technologies	**Qiao Ding**; Department of Food Science and Technology, Oregon State University
848	1:40-2:00	Engineering Plasma Micro/Nanobubbles for Next-Generation Pre- and Postharvest Food Safety and Sanitation	**Juzhong Tan**, Department of Animal and Food Sciences, University of Delaware
886	2:00-2:20	Estimation of Inactivation Parameters Under Dynamic Conditions: Listeria monocytogenes in Salami During Fermentation and Drying	**Kirk D. Dolan**, N. T. Faliarizao, J. H. Nam, T. M. Bergholz, Michigan State University
944	2:20-2:40	Staphylococcus aureus growth, toxin production, and toxin stability in dried sausage pr	**Joy Waite-Cusic**, Food Safety and Quality Systems, Oregon State University
656	2:40-3:00	Design, Fabricate, and Test a Pilot Scale (115 L) Vacuum Steam Pasteurizer for the Treatment of Low-moisture Foods	**Ewumbua Monono**, North Dakota State University

Session 8. Surface Disinfection and Modification. Co-chairs: Ren Yang/Yifan Cheng. 1:20 pm-3:00 pm. Queen 6

619	1:20-1:40	Engineering UV Surface Disinfection of Salmonella: From Penetration-Limited Kinetics to a Tunable High-Intensity Laser	**Ren Yang**, South Dakota State University
778	1:40-2:00	Defining Electrochemical Process-Structure Relationships for Passive Antibiofouling and Antimicrobial Stainless Steel	Babak Faraji, Wenjun Cai, **Yifan Cheng**, Virginia Tech, Blacksburg, VA
730	2:00-2:20	Comparative Evaluation of 222, 254, and 405 nm Light Processing for Safety and Shelf-Life Quality of Dried Fruits	Minghao He; **Hanyu Chen**; University of Minnesota Twin Cities
615	2:20-2:40	Establishing a processing window for high-irradiance 405-nm light treatment in paprika powder using Enterococcus faecium as a Salmonella surrogate	Martha Minor, Sergio I. Martínez-Monteagudo, **Luis Sabillón**, New Mexico State Universit
659	2:40-3:00	Catalytic Nonthermal Technologies for Disinfection of Low- and Intermediate-Moisture Foods	**Roger Ruan**, University of Minnesota

Session 9. Innovations to Advance Processing. Co-chairs: Balu Nayak/V.M. Balasubramaniam. 1:20 pm-3:00 pm. King 1

777	1:20-1:40	Ingredient Group Benchmarking: A New Framework for Predictive Engineering of Multi-Ingredient Food Systems	**Balu Nayak**, Pepsi Co.
762	1:40-2:00	Translating Food Engineering Research into Practice: Opportunities for Academic-Industry Collaboration	**V.M. Balasubramaniam**, University of Georgia
640	2:00-2:20	Extrudates and Shortbreads from Millet Blends and Their Fortification with Flavonoids	**Mukund Karwe**, Rutgers University

961	2:20-2:40	Structure-Texture Relationship in Ultrasonic Compression Nutrition Bars	Jamaka Thomas, **Gonul Kaletunc**, The Ohio State University
711	2:40-3:00	Food Engineering Innovations in the Year 2050	**Sudhir Sastry**, The Ohio State University

Session 10. Food Digestion and Health I. Co-chairs: Gail Bornhorst/Gulustan Ozturk. 1:20 pm-3:00 pm. King 2

819	1:20-1:40	Classifying Digestion Behavior: Modeling and Links to Food Structure	**Gail M. Bornhorst**, W. Sun, A. Kar, M. Smit;University of California Davis, Massey Unive
863	1:40-2:00	From Dairy Coproduct to Functional Foods: Unlocking the Potential of Whey Protein Phospholipid Concentrate	**Gulustan Ozturk**, et al.; Univ. of Wisconsin
820	2:00-2:20	Ohmic-assisted thermal sterilization of a solid-liquid ready-to-eat food: Process performance, product quality, and in vitro digestion	**Pitiya Kamonpatana** and Ek-Ak Ngennarksoontorn; Kasetsart University, Bangkok, Thai
662	2:20-2:40	Understanding the impact of hydrocolloid-protein interactions on nutrient supplementation of dysphagic beverages	**Andrew Akanno**, Audrey Girard, Richard Hartel, University of Wisconsin-Madison
804	2:40-3:00	Oligosaccharides-protein conjugates for selective targeting of proteins to probiotic bacteria in the colon	Stav Peled and **Yoav D. Livney**; Technion, Israel Institute of Technology, Haifa, Israel

Session 11. Food Quality and Postharvest Monitoring. Co-chairs: Sundaram Gunasekaran/Colm O'Donnell. 4:20 pm-6:00 pm. Queen 4

864	4:20-4:40	Biosensors for Detecting Food Contaminants	**Sundaram Gunasekaran**; University of Wisconsin-Madison
916	4:40-5:00	Application of advanced process analytical tools in milk powder processing	Ming Zhao, Jiani Luo, **Colm O'Donnell**, University College Dublin, Ireland
710	5:00-5:20	Sounds Cheesy - Dairy and Plant-Based cheese texture analysis with Non-Contact Ultrasound and AI	**Thomas A. Hazlehurst**, W. Feng & N. Watson; University of Leeds, UK
597	5:20-5:40	Post-Harvest Processing Under Extreme Constraints: Requirements and Conceptual Design for Cereal-Based Food Production in Lunar Habitats	**Cecilia Ricci**, Politecnico di Torino, Turin, Italy
770	5:40-6:00	Protecting Postharvest Food: AI-Powered Computer Vision Models for Stored-Product Insect Pest Monitoring	**Chetan Badgujar**, S. Tadiparthi, A. R. Gerken, The University of Tennessee, KS

Session 12. Encapsulation and Delivery Systems. Co-chairs: Fanbin Kong/Youngsoo Lee. 4:20 pm-6:00 pm. Queen 5

772	4:20-4:40	Comparative Evaluation of Emulsification-Based Microencapsulation Techniques with Soy Protein Isolate for Enhanced Shelf-Life and Delivery of Lactobacillus Rhamnosus	T. Udo, Hwa Eun Lee, R. Singh, J. Chen, A. Stelzleni, **Fanbin Kong**, University of Georgi
866	4:40-5:00	Application of a three-fluid nozzle in spray drying for encapsulation	**Youngsoo Lee**, Ricardo Lopez; Washington State University
913	5:00-5:20	Influence of starch source and incorporation of microencapsulated astaxanthin on the extrusion of crawfish enriched extrudates	Mariel Benigno, Mario Melendez, and **Subramaniam Sathivel**; Louisiana State University
618	5:20-5:40	Harnessing Naturally Occurring Biopolymers to Encapsulate Curcumin for Improved Solubility and Stability	**Hualu Zhou**, Department of Food Science & Technology, University of Georgia
653	5:40-6:00	Engineering Protein-Polyphenol Nanoparticles as a Potential Encapsulation and Delivery System for Functional Foods	Ruiqi Wang, Zhenlei Xiao, **Yangchao Luo**; University of Connecticut

Session 13. Advances in 3D Food Printing. Co-chairs: Ali Ubeyitogullari/Viridiana Tejada-Ortigoza. 4:20 pm-6:00 pm. Queen 6

666	4:20-4:40	3D Food Printing for the Delivery of Functional Food Ingredients: A Step Toward Personalized Nutrition	Que-Anh Truong-Le, Sorour Barekat, and **Ali Ubeyitogullari**, University of Arkansas
709	4:40-5:00	Innovative strategies for 3D food printing: Novel materials and AI	**Viridiana T. Ortigoza**, R.M. Rosas, I.R. Fernández, E.C. Urquizo; Tecnológico de Monterrey, Mexico
919	5:00-5:20	A Unified Dimensional Framework for Structural Design and Stability Analysis in 3D Food Printing	**Paul Takhistov**, Rutgers University
689	5:20-5:40	Decoding 3D Food Printability: Separating Extrudability from Shape Fidelity in Soybean Meal-Xanthan Inks	**Minwei Xu**; North Dakota State University
957	5:40-6:00	From print to plate: Freeze-drying enables rapid reconstitution of multicomponent 3D-printed foods for dysphagia	**Sangeeta Prakash**, Shreya L. Y., B. Bhandari, B. Dayananda; The University of Queensland, Australia

Session 14. Food Digestion and Health II. Co-chairs: Michael Ngadi/Jiakai Lu. 4:20 pm-6:00 pm. King 1

769	4:20-4:40	Assessing Mechanical Properties of Air-Fried Chicken Nuggets Using Structured-Illumination Reflectance Imaging	Leshang Bai and **Michael Ngadi**; McGill University
732	4:40-5:00	Dietary Fibre based Fat Mimetic Systems for Large-scale Fat Reduction and Synergistic Modulation of Starch Digestion	A. P. Singh, **Anika Singh**, Y. D. Liang, A. Amiri, D. Eto; The University of British Columbia; Canada

842	5:00-5:20	Improving taste and antihypertensive activity of microalgal protein using atmospheric cold plasma coupled with enzymatic hydrolysis	**Armin Mirzapour Kouhdasht** and Jen-Yi Huang;, The Ohio State University, Utah State University
616	5:20-5:40	A Dysphagia Number for Physics-Based Design of Texture-Modified Fluids	**Jiakai Lu,** L.Corvalan, C. Corvalan; UMass Amherst; Indiana University, Purdue Universi
831	5:40-6:00	Impact of Gastric Acid Suppression on Protein Digestion in Dairy and Plant-Based	**Maria Luiza Tonetto**, W. Sun, A. Kar, and G. M. Bornhorst; University of California, Dav

Session 15. Rapid Pathogen Detection. Co-chairs: Soojin Jun/Hyeon Woo Park. 4:20 pm-6:00 pm. King 2

791	4:20-4:40	Rapid and sensitive detection of foodborne pathogens using bio-nanocomposites functionalized electrochemical immunosensor with dielectrophoretic attraction	**Soojin Jun, Inae Lee,** University of Hawaii
692	4:40-5:00	The potential of deep learning and big data for detecting microbial risks in food	**Hyeon Woo Park**; Korea University, Korea
645	5:00-5:20	Portable SERS and Impedance Sensing Systems for Rapid Detection of Salmonella in Poultry Products	K. B. Taas, A. F. Hasan, M. Almalaysha, M. Abuhelwa, A. Bandara, K. Allen, N. Fitzpatrick, J. Mack, A. Carlson, A. Morey, **Kate E. Trout**, A.Mustapha, S. Zhang, V.
859	5:20-5:40	Filter-assisted screening technologies as an engineering approach to detect low-level quantities of target bacteria from large sample volumes	**Rachel Cheng**, Diego Fredes-Garcia, Hyun Choi, Monica Ponder, Yifan Cheng; Virginia T
936	5:40-6:00	Toward the Self-Monitoring Food Plant: Integrating Rapid Molecular Sensing and Genomics into Food Process Control	V. R. Parreira, M. Precious, G. Taggar, D. Singh and **Lawrence Goodridge**, University of

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Plenary Session 2. Artificial Intelligence/Machine Learning , Monarchy Ballroom		
	8:30-8:35	Moderator: Hongwei Zhang
	8:35-9:05	Tim Andersen:From Chemometric Sensing to Decisions: AI/ML-Driven Analytics for Real-Time Food Quality Control
	9:05-9:35	
	9:35-10:00	Q&A

Session 16. Valorization of Food and Agricultural Byproducts. Co-chairs: Qingyang Wang/Kumar Mallikarjunan. 10:20 am-12:00 pm. Queen 4			
941	10:20-10:40	Valorization of Wine Grape Pomace into Bio-Based Antifungal Extracts for Botrytis cinerea Control	Yoko Clark, Makayla Bellino, **Qingyang Wang**, Oregon State University
721	10:40-11:00	Recent advances in valorization of dairy permeates	**Kumar Mallikarjunan**, University of Minnesota
668	11:00-11:20	Machine Learning-Guided Resource Recovery from Acid Whey via Chitosan Coagulation and Electrodialysis	Fei Long; **Hong Liu**; Oregon State University
915	11:20-11:40	Valorizing by-products from grain processing through the development of cross-linked arabinoxylans with tunable rheological properties	**Clay Swackhamer**, Da Chen, Bruce R. Hamaker; Pennsylvania State University
907	11:40-12:00	Processing-Assisted Valorization of Pumpkin Seed Flour and Its Fractions for Food Applications	Jonathan Chen, **Oguz Kaan Ozturk**, University of Illinois Urbana-Champaign

Session 17. Upcycling into High-Value Ingredients. Co-chairs: Kiruba Krishnaswamy/Prasanth PIllai. 10:20 am-12:00 pm. Queen 5			
951	10:20-10:40	Upcycling Indigenous Elderberries: Circular Food Processing and Development of High-Value Colorant Powders	K. S. Ravichandran and **Krishnaswamy, Kiruba,** University of Missouri
697	10:40-11:00	From Dairy Byproducts to Alternative Proteins: A Circular Fermentation Approach	**Prasanth K. S. Pillai** & Pin-Cheng Chen; University of Minnesota
688	11:00-11:20	Rethinking Seafood Waste: Engineering High-Value Products Through Upcycling of Underutilized Marine Resources	**Kevin E. Mis Solval**; University of Georgia
962	11:20-11:40	Fermintelligence, an AI platform for Sustainable Protein from Agri-food Side Streams	**Ryan O'Shea** and Nicholas Watson, School of Food Science & Nutrition, University of Leeds, UK
672	11:40-12:00	Cold Plasma-Modified Apple Pomace Fiber: Physicochemical Properties and Gut Microbiota Modulation Effect	**Tianming Yao;** Rutgers University

Session 18. Sustainable and Resilient Food Supply Chains. Co-chairs: Jen-yi Huang/Minliang Yang. 10:20 am-12:00 pm. Queen 6			
708	10:20-10:40	Closing the Loop in Inland Aquaculture: A Progressive Life Cycle Assessment of Microalgae-Integrated Recirculating Systems	Thomas Tsui & **Jen-Yi Huang**; Dept of Food Science and Technology, The Ohio State Un
877	10:40-11:00	LCA applications for sustainable food system: from product packaging to nutrition-integrated analysis	**Minliang Yang**, North Carolina State University
698	11:00-11:20	A Digital Atlas of Food and Agricultural Byproducts in California	**Edward Spang** and Ilias Tagkopolous; University of California, Davis
638	11:20-11:40	A Sensor-Enabled Decision-Support System for Safe, Efficient, and Sustainable Food Supply for All	**Haitao Li**, et. Al.; Univ of Missouri, Auburn Univ, Kennesaw State Univ
884	11:40-12:00	Food Safety Outbreaks, Market Responses, and Commodity Risk Profiles in U.S. Produce Markets	**Priyanka Sharma**, M. Adkins, K. Gibson, C.K Kwamikorkor; University of Arkansas

Session 19. Modeling and AI for Food Safety and Quality I. Co-chairs: Luyao Ma/Fabrizio Sarghini. 10:20 am-12:00 pm. King 1			
670	10:20-10:40	Rethinking AI for Food Quality: Moving Beyond Accuracy toward Explainable, Robust, and Data-Efficient Models	**Luyao Ma**; Oregon State University
657	11:00-11:20	Physics-informed neural networks for thermal lethality estimation in packaged foods: a simulation-first route to validation	**Fabrizio Sarghini,** Angela De Vivo; a University of Naples Federico II, Italy
649	11:20-11:40	Fusing Hyperspectral Imaging and Acoustic Sensing Data for Nondestructive AI-based Apple Pest Infestation Detection and Quality Evaluation	**Akinbode A. Adedeji**, Nader Ekramirad, Al Fadhl Al Khaled; University of Kentucky
939	12:00-12:20	Improving the Quality of Fried Foods Using Hybrid Mixture Theory-Based Modeling of Transport and Electromagnetic Equations During Microwave Frying	**Pawan S. Takhar** and Yash Shah, University of Illinois, Urbana-Champaign

703	11:40-12:00	Math and models to help people make better food safety decisions	**Matthew J Stasiewicz**; University of Illinois Urbana-Champaign

Session 20. Cellular Agriculture and Fermentation. Co-chairs: Reza Ovissipour/Nitin Nitin. 10:20 am-12:00 pm. King 2

825	10:20-10:40	Sequential enzymatic pretreatment and Saccharomyces boulardii fermentation of cactus cladode biomass for producing bioactive food ingredients and serum alternatives for	W. Thilakarathna, S. Shiroodi, D. K. Jha, V. Dadwal, B. Patil, **Reza Ovissipour**; Texas A&M Univ.
906	10:40-11:00	Hybrid Alt-Protein Products with Fungal Biomaterials	**Nitin Nitin**, Begum Koysuren, Mursalin Sajib, Andrew J. Gravelle;University of California
586	11:00-11:20	Chemical Hydrolysis of Brewers' Spent Grain for Mycoprotein Production: Deconstructing Pre-Concepts	F. P. Ribeiro, S. K. Panda, C. R. Malacrida and **Sun Ferreira,** University of Arkansas
953	11:20-11:40	Impact and Challenges for Cellular Agriculture	**David Kaplan**; Tufts University
611	11:40-12:00	Microbial Production of Value-Added Products in Biofilm Bioreactors	**Ali Demirci**, Pennsylvania State University

Session 21. Innovations in Protein Processing. Co-chairs: Mahfuzur Rahman/Belal Hasan. 1:20 pm-3:00 pm. Queen 4

651	1:20-1:40	Transforming Plant Proteins with Cold Plasma: Ingredient functionality to Film Perform	**Mahfuzur Rahman**; Department of Food Science University of Arkansas
920	1:40-2:00	Optimization of Hydrolysis Conditions for Lactose in Milk Permeate using Multi-Response Surface Methodology	**Md Asaduzzaman**, P. Peterson, H. Wartena and P. Sharma; Utah State University
622	2:00-2:20	Machine Learning and Molecular Modeling for Protein Solubility Prediction and Structure-Function Discovery	Hyukjin Kwon and **Yonghui Li**; Department of Grain and Food Science, Kansas State Univ
583	2:20-2:40	Extrusion Processing Strategies for High-Cheese Hybrid Snack Formulations	**Belal Hasan,** California State Polytechnic University, Pomona, California
756	2:40-3:00	Harnessing aggregates of plant protein hydrolysate as fat replacer: the role of degree of hydrolysis	**Da Chen**; Purdue University

Session 22. Innovative and Sustainable Food Packaging . Co-chairs: Kang Huang/Jooyeoun Jung. 1:20 pm-3:00 pm. Queen 5

715	1:20-1:40	Substrate-independent coatings for multifunctional food packaging applications	**Kang Huang**; Washington State University
641	1:40-2:00	Agri-Food Biowaste as a Resource for Sustainable Packaging: Bridging Extraction, Fiber Engineering, and Application	J. Lin, X. Bai, C. Hosaka-Hernandez, **Jooyeoun Jung**; Oregon State University
845	2:00-2:20	Catechol-Functionalized Biopolyesters as Sustainable and Innovative Anticorrosive Coatings for Aluminum Food Contact Materials	**Julie M Goddard**, J Hector Ramirez-Suarez, Gavin L Sacks; Cornell University
731	11:20-11:40	Cold Oxygen Plasma and Nanocellulose Reinforcement of Chitosan-Zein Composite Films for Sustainable Food Packaging	**Anubhav Pratap-Singh** and Xanyar Mohammadi;The University of British Columbia, Canad
673	2:40-3:00	Development of Thermoformed Molded Fiber Tray for Cheese Packaging	**Qing Jin et. al.**; U of Maine; Pineland Farms Inc.,Sappi North America Inc., U.S. Forest

Session 23. Transforming Food Engineering Education. Co-chairs: Sam Saguy/Jorge Welti-Chanes. 1:20 pm-3:00 pm. Queen 6

648	1:20-1:35	Transforming Food Engineering Education: AI, Sustainability and Innovation	**Sam Saguy**; The Hebrew University of Jerusalem, Israel
650	1:35-1:50	Competency Development and Challenge-Based Learning: Present and Future Educational Models for Food Engineering Programs	**Jorge Welti-Chanes**; School of Engineering and Science, Tecnologico de Monterrey, Mex
592	1:50-2:05	AI Can Coach-Experiments Still Teach: Take-Home Lab Kits for Resilient Food Engineering Education	**Yao Olive Li**, California State Polytechnic University
701	2:05-2:20	The seemingly unwieldy breadth of the science base supporting food engineering educa	**Keshavan Niranjan**; University of Reading, UK
911	2:20-2:35	Rethinking Food Engineering Education for Complex Materials and Societal Impact	**Osvaldo H. Campanella**, The Ohio State University
658	2:35-3:00	From Insight to Impact: Translating Human Needs into Scalable Food Engineering Solutions in the AI Era	**Mary Carunchia**, PepsiCo R&D

Session 24. Modeling and AI for Food Safety and Quality II. Co-chairs: Hongwei Zhang/Xu Zhou. 1:20 pm-3:00 pm. King 1

608	1:20-1:40	Engineering Starch Digestibility via Processing: Evidence from Experiments and AI-Assisted Review	Yaskin -Harush, M., Shani Levi, C. and **Lesmes, U**.;Technion, Haifa, Israel
685	1:40-2:00	From AI-Based Machine Vision to Closed-Loop Data-Driven Optimisation of Rice Milli	**Hongwei Zhang**, Fuyao University of Science and Technology (FYUST), China
632	2:00-2:20	From literature to database to discovery: agentic AI for food property	**Xu Zhou**; The Pennsylvania State University
776	2:20-2:40	Too Many Cooks? Physics, Data-Driven and Hybrid AI in Food	**Nik Watson**; University of Leeds, UK
746	2:40-3:00	Non-invasive ultrasonic imaging for internal food quality assessment: Application to tomato firmness	**Jose V. Garcia-Perez et al.**; U Politècnica de València, Spanish National Research Council, Spain.

Session 25. Kinetic Modeling of Food Quality and Safety. Co-chairs: Maria Corradini/Bruno Carciofi. 1:20 pm-3:00 pm. King 2

900	1:20-1:40	Beyond Single-Parameter Shelf Life: A Multiparameter Kinetic Framework for Heterogeneous Food Spoilage and Waste Reduction	**M. G. Corradini**, A. K. Homez Jara, D. Onwude; University of Guelph, Canada
924	1:40-2:00	Modeling and Simulation Strategies for Pork Loin Roasting Kinetics in an Electric Oven	**Bruno Carciofi**, UC Davis, J.P. Ferreira, J.T. Teleken, M. Wolf, J.B. Laurindo Universidade Federal
717	2:00-2:20	Blue LED Light Reduces Salmonella spp. and Listeria monocytogenes on the Surface of Pecan Kernels	**Rabin Gyawali**, Hema L. Degala, and Ajit K. Mahapatra, Fort Valley State University, GA
612	2:20-2:40	Linking Fruit Microstructure, Mechanics, and Failure Using 4D X-ray Imaging and Discrete Element Modelling	H.V. Cauteren, B. Dequeker, B. Smeets, B. Nicolai, **Pieter Verboven**, University of Leuven, Belgium
889	2:40-3:00	Inactivation Kinetics of Thermophilic Sporeformers in High Protein Beverages	H. Kaur, A. Singh, F. Ozadali, P. Benyathiar, **Dharmendra Mishra**; Purdue University

Wednesday, November 11, 2026

Plenary Session 3. Technology Commercialization Monarchy Ballroom		
	8:00-8:05	Moderator: Gonul Kaletunc
	8:05-8:20	Stefan Toepfl : Pulsed Electric Field Processing: From Scientific Concept to Industrial Reality – The ELEA Story
	8:20-8:35	Kristi Spence:Beyond the Grant: What It Takes to Move University Research to Market: A Founder's Perspective on Commercializing PEF Technology at Boise State
	8:35-8:50	Changmou Xu:From Research to Market: The A+ Berry Commercialization Journey
	8:50-9:15	Q&A

Session 26. Circular Bioeconomy . Co-chairs: Ozan Ciftci/Zeynep Boz. 10:20 am-12:00 pm. Queen 4			
955	10:20-10:40	Designing the Future of Food in a Circular Bioeconomy: Supercritical Fluids as Enablers	**Ozan Ciftci**, Purdue University
943	10:40-11:00	Regenerative Robust Gasification with Steam Methane Reforming (RRG+SMR): A carbon-negative pathway for circular mixed plastics recycling	**Bruce Welt**, Ryan Ames, Cesar Moreira, Ziynet Boz; University of Florida
805	11:00-11:20	Digital Twin-Enabled Life-Cycle Assessment of Reusable Transport Packaging in U.S.–EU Transatlantic Food Supply Chains	**Ziynet Boz**, M. Canatan, R. Periyaswamy, J. Lozano, R. Lozano, University of Florida
836	11:20-11:40	Valorizing Agri-Food Processing Byproducts into Plasma-Modified Biochar for Rare Earth Element Recovery	**Rongge Zou**, Juzhong Tan, University of Delaware
654	11:40-12:00	On the Economics of the Transition to more Circular Food Systems	A. Chennak, **Konstantinos Giannakas**, T. Awada; University of Tennessee, University of Nebraska

Session 27. Digitalization of Food Processing. Co-chairs:Amir Malvandi/Ashim Datta. 10:20 am-12:00 pm. Queen 5			
903	10:20-10:40	Geometry-Aware Graph Neural Operators for Real-Time Multiphysics Modeling in Food Processing Digital Twins	Saeed Nazari and **Amir Malvandi**; University of Illinois at Urbana-Champaign
784	10:40-11:00	Real-Time Design Use of Complex Models: AI-Based Surrogates as Enablers	D. Ghosh, S. Miller, and **Ashim Datta**, Cornell University
630	11:00-11:20	Extrusion of ElastoViscoPlastic Food Materials	**Ruud van der Sman**; Wageningen University & Research
600	11:20-11:40	Opportunities and Value in Using Factory Digital Twins for Food Processing	**Steve Lombard**o, PMFSI LLC , AZ, Joseph F. Pekny, Advanced Process Combinatorics,
883	11:40-12:00	Assessment of the cold chain food preservation performance and the T-TAP cold chain management platform	**Torres, J. Antonio;** Tecnologico de Monterrey, Monterrey, Mexico

Session 28. Modeling and AI for Food Safety and Quality III. Co-chairs: Jordan Pennells/Timothy Andersen. 10:20 am-12:00 pm. Queen 6			
605	10:20-10:40	The Intelligent Extrusion Platform, Two Years On: Building and Using Hybrid Intelligence in Food Manufacturing	**Jordan Pennells**, Kai Knoerzer; CSIRO Agriculture and Food, Werribee, Victoria, Australi
893	10:40-11:00	Rapid Quantification of Vitamins C, B5, and B9 in Ethyl Cellulose-Coated Formulations Using Near-Infrared Spectroscopy and Automated Machine Learning	**Habeeb Babatunde**, Mia Toronto, Timothy Andersen, Owen M McDougal, Boise State University
646	11:00-11:20	Engineering Sprayable Structured Network-Forming Surfactant Coatings for In Situ Active Food Packaging	**Zipei Zhang**; University of Missouri
926	11:20-11:40	Cell Growth and beta-glucan content of microalgae Euglena gracilis as influenced by Agitation during Heterotrophic Fermentation Using Corn Steep Liquor	Weijia Pang, Zhiyou Wen, **Buddhi Lamsal,** Iowa State University
719	11:40-12:00	Deep learning-enabled rapid detection and classification of bacteria in food systems	**Shyam K Singh**, H. W. Park, H. Min Son, X. Liu, and Nitin Nitin, University of California

Session 29. Advances in Food Processing. Co-chairs: Job Ubbink/Jenshinn Lin. 10:20 am-12:00 pm. King 1			
880	10:20-10:40	Study on the Collet Extrusion of Brown Rice and Foxtail Millet for Functional Puffed Sn	Qandeel Zahra and **Jenshinn Lin**; National University of Science and Technology, Taiwan
707	10:40-11:00	Materials Science of Whey Permeate Powders	**Job Ubbink**, Tsung-Yueh Benjamin Peng, Didem Sözeri Atik, University of Minnesota
669	11:00-11:20	Twin-Screw Extrusion Texturization of Kafirin-Rich Sorghum Protein Concentrate for Meat Analogue Applications: Process Optimization and Critical Control Points	**Mohammad Zarei**, B. Hasan , Z. Shi, J. Larin, E.A. Groenheim; California St Polytechnic Univ, Pomona
702	11:20-11:40	One-Step Solvent-free Mechanochemical Esterification Strategy for Hydrophobizing Fibers Extracted from Agricultural Byproducts	**Chieh-Yi Lin,** J. Jung, Yanyun Zhao, Oregon State University
960	11:40-12:00	RGB-to-Hyperspectral Reconstruction for Sweet Potato Inspection: Spectral Accuracy and Generalization Across Cultivars	Md Al M. Provath, **Mohammed Kamruzzaman**, University of Illinois at Urbana-Champai

Session 30. Food Structure Modeling. Co-chairs: Filiz Koksel/Haotian Zheng. 10:20 am-12:00 pm. King 2			
589	10:20-10:40	Gas-Assisted High-Moisture Extrusion of Meat Analogues: Insights into Extrudate Structure Using Low-Intensity Ultrasonics	Irene Rangira and **Filiz Koksel**, University of Manitoba, Canada
921	10:40-11:00	Rational design of protein ingredients for clean label food formulations: foam, emulsion, and gel aspects	**Haotian Zheng**; North Carolina State University
681	11:00-11:20	From Food Microstructure to Material Function: Foundation Models and Machine Learning for Quantitative Food Engineering	**Zhi Yang**; University of Hawaii at Manoa
750	11:20-11:40	Understanding the mechanism of cold gel formation in reconstituted micellar casein disp	Jasper Shekin; Md Asaduzzaman; **Prateek Sharma**, Utah State University
603	11:40-12:00	Engineering Natural Blue Color and Digestive Fate in Yogurt Using Pectin-Iron-Anthocyanin Ternary Complexes	Valeria Weiss, Or Peretz, Zoya Okun, **Avi Shpigelman**;Technion - Israel Institute of Technology, Israel