MaCKiE 2025

3-5 September 2025, Çeşme, İzmir/TÜRKİYE

Technical Program

		WEDNESDAY, Sep 3, 2025 **FOOD MaCKiE Workshop** **Probabilistic Engineering Product and Process Design** *INSTRUCTOR: J. Antonio Torres, Distinguished International Professor* *ASSISTANT: Gerardo Fernandez Villanueva, Doctoral candidate* *Tecnologico de Monterrey, Mexico* *INSTRUCTION HOURS: 10* *HELP SESSION HOURS: 4* **Room: Gerence 2**
08:00 – 10:00	WS Part 1	Introduction and Probabilistic Estimation Principles Application 1: Instructor-solved and output analysis (Excel template and solution provided before lecture)
10:00 – 11:00	WS Part 2	Application 2: Instructor-guided solution and output analysis (Excel template and solution provided before and after lecture, respectively)
10:45 – 11:00		**Stretch-your-legs + Coffee/Tea/Water Break in Workshop Room**
11:00 – 12:00	WS Part 3	Review session Application 3: Group Assignment due before Session 4 Support help sessions available (**Prior reservation required**)
		Small Groups in Hotel Cafeteria
14:30 – 16:30	Group 1	Application 4: Instructor-guided solution and output analysis (Excel template and solution provided before and after lecture, respectively)
14:30 – 16:30	Group 2	Application 4: Instructor-guided solution and output analysis (Excel template and solution provided before and after lecture, respectively)
16:30 – 18:30	Group 1	Application 5: Instructor-guided solution and output analysis (Excel template and solution provided before and after lecture, respectively)
16:30 – 18:30	Group 2	Application 5: Instructor-guided solution and output analysis (Excel template and solution provided before and after lecture, respectively)

		THURSDAY, Sep 4, 2025
		SESSION F1 **Room: Denizkızı 1** **Co-chair: Semanur Yildiz,** *Sakarya University* **Co-chair: Jorge Saraiva,** *University of Aveiro*
08:30 – 08:40		FOOD MaCKiE Opening: Semanur Yildiz
08:40 – 09:10		**Keynote 1:** Internet of things (IoT) nonthermal extraction of proteins from plant by-products: Process optimisation and sustainability aspects Anet Režek Jambrak, *University of Zagreb, Croatia*
09:10 – 09:30	F122	CFD Dataset generation and surrogate modeling for temperature dynamics in chicory storage rooms Pieter Verboven, *KU Leuven*
09:30 – 09:50	F103	The logarithmic equation for modeling the enzymatic hydrolysis of byproducts proteins: Empirical or theoretical? Pedro L. Valencia, *Pontifical Catholic U of Valparaíso*
09:50 – 10:10	F106	Deep learning-based estimation of chicken freshness using RGB image analysis Serife Simsek, *IZTECH*
10:10 – 10:30	F123	Artificial intelligence (AI) in functional food development Şükrü Güleç, *IZTECH & DynamisBIO*
10:30 -11:00		**30 minutes break – coffee and snacks**
		SESSION F2 **Room: Denizkızı 1** **Co-chair: Carlos Pinto,** *University of Aveiro* **Co-chair: Sibel Uzuner,** *Izmir Institute of Technology*
11:00 – 11:30		**Keynote 2:** Design and modeling of radiofrequency treatments for foods Maria Elena Sosa Morales, *U. of Guanajuato, Mexico*
11:30 – 11:50	F124	FOODOMICS: An evolving holistic approach in food quality, food safety and human health Pinar Balkir, *Ege University*
11:50 – 12:10	F105	Alteration in fatty acid profile of freshwater crayfish Pontastacus leptodactylus after dietary substitution of fish meal with insect meal Maria V. Alvanou, *Aristotle University of Thessaloniki*
12:10 – 12:30	F101	Extraction of corn starch and corncob cellulose and their application in the formulation of food emulsion systems Muhammad Bilal Sadiq, *Forman Christian College/University*
12:40 – 14:00		**Lunch break (complementary – Altın Yunus)**
		SESSION F3 **Room: Denizkızı 1** **Co-chair: Carlos Pinto,** *University of Aveiro* **Co-chair: Pedro L. Valencia, Pontifical Catholic U of Valparaíso**
14:10 – 14:30	F108	The effects of novel thawing techniques on quality of frozen beef liver Nazlıcan Avsar, *IZTECH*
14:30 – 14:50	F119	Influence of rice bran on the physicochemical and functional properties of low glycemic FOOD model systems Filiz Başer, *IZTECH*
14:50 – 15:10	F102	Kinetic modeling of the antifungal activity of silver nanoparticles obtained from the fungus Trametes flavida Edwin Vera, *National Polytechnical School*
15:10 – 15:30	F114	Coupled thermal–mass transfer modeling of bioactive extraction from berry fruit: Integrating COMSOL-based diffusion kinetics with BOX-BEHNKEN experimental design Ece Yildiz-Ozturk, *Yaşar University*
15:30 – 15:50	F117	Effects of pulsed electric fields and ultraviolet processing on quality characteristics, microbial inactivation and shelf life of licorice sherbet Sibel Uzuner, *IZTECH*
15:50 – 16:20		**30 minutes break – coffee and snacks**
		SESSION F4 **Room: Denizkızı 1** **Co-chair: Pieter Verboven,** *KU Leuven* **Co-chair: J. Antonio Torres,** *Tecnologico de Monterrey*
16:20 – 16:50		**Keynote 3:** High pressure for nonthermal processing and hyperbaric storage of food Jorge Saraiva, *U. of Aveiro, Portugal*
16:50 – 17:10	F113	Modeling and experimental validation of frequency-dependent sound level distribution in airborne ultrasound Ömer Faruk Çokgezme, *Ege University*
17:10 – 17:30	F118	Enhancing tomato seed vigor and microbial safety through pulsed electric field (PEF) technology: A sustainable pre-sowing approach Sibel Uzuner, *IZTECH*
17:30 – 17:45		**15 minutes Stretch-your-legs Break**
17:45 – 18:45		**Joint Roundtable Conversation** Navigating the Crisis of Scientific Publishing Ethics: What Can Authors Do Now?
		MODERATORS
		Marc-Olivier Coppens, Ramsay Memorial Chair of Chemical Engineering, University College London Editor in Chief, Chemical Engineering and Processing - Process Intensification (Elsevier)
		Ferruh Erdogdu, Food Engineering, Ankara University Co-Editor in Chief, Journal of Food Engineering (Elsevier)
		Necip Berker Üner, Chemical Engineering Middle East Technical University
		SITUATION ANALYSIS
		J. Antonio Torres, Distinguished International Professor, Tecnologico de Monterrey Chief Editor, CYTA J of Food (Taylor & Francis) Editor, Innovative Food Science & Emerging Technologies (Elsevier)
17:30 – 19:00		**Poster session** Conference Hallway
20:00 – 21:00	Help Session 1	Workshop Group Assignment Assistance (Prior reservation required)
21:00 – 22:00	Help Session 2	Workshop Group Assignment Assistance (Prior reservation required)

		FRIDAY, Sep 5, 2025
		FOOD MaCKiE Workshop **Room: Denizkızı 1**
08:00 – 08:30 08:30 – 10:00	WS Part 4 WS Part 5	Review of assignment solution ASSESSMENT: Excel-based open notes test
		SESSION F5 **Room: Denizkızı 1** **Co-chair: Anet Režek Jambrak,** *University of Zagreb* **Co-chair: Jorge Saraiva,** *University of Aveiro*
10:00 – 10:30		**Keynote 4:** Assessment of the cold chain food preservation performance and the cloud T-TAP cold chain management platform J. Antonio Torres, *Tecnologico de Monterrey, Mexico*
10:30 – 11:00		**30 minutes break – coffee and snacks**
11:00 – 11:30		**Keynote 5:** Virtualization in food engineering with mechanistic modeling approach for food industry beyond x.0 Ferruh Erdogdu, *Ankara University, Türkiye*
11:30 – 11:50	F116	Innovative ambient temperature hyperbaric inactivation of *Alicyclobacillus acidoterrestris* spores and effects of pasteurization pre-treatments Carlos Pinto, *University of Aveiro*
11:50 – 12:10	F139	Mechanistic insights into the impact of medium chain fatty acids on biofilm formation in *Salmonella* Typhimurium Runrun Zhang, *Zhejiang University*
12:40 – 14:30		**Lunch break**
		SESSION F6 **Room: Denizkızı 1** **Co-chair: Ferruh Erdogdu,** *Ankara University* **Co-chair: Tian Ding,** *Zhejiang University*
14:30 – 15:00	F138	Food matrix Interactions and phytochemical stability: Experimental and modelling approaches to predict bioaccessibility Esra Çapanoğlu Güven, *Istanbul Technical University*
15:00– 15:20	F121	Harnessing carotenoids from squash for clean-label food innovation: Green extraction, microencapsulation, and application in nutritionally enriched foods Carlos Alberto Fuenmayor, *National University of Colombia*
15:20 – 15:40	F137	Optimization and validation of ultrasound-assisted solvent extraction of olive leaf polyphenols using Box-Behnken experimental design Semanur Yildiz, *Sakarya University*
15:40 – 16:00	F129	Environmentally friendly packaging solutions for the food system Adnan Cenker Ege, *IZTECH*
15:40 – 16:00		**20 minutes break – coffee and snacks**
		SESSION F7 **Room: Denizkızı 1** **Co-chair: Carlos Alberto Fuenmayor,** *Universidad Nacional* **Co-chair: Edwin Vera,** *National Polytechnical School*
16:00 – 16:30		**Keynote 6:** Big-Data driven microbial risk identification and prediction across the food supply chain Tian Ding, *Zhejiang University, China*
16:30 – 16:50	F125	Production of a healthy snack enriched with beech nut (*Fagus orientalis* L.) powder Ahsen Rayman Ergün, *Ege University*
16:50 – 17:10	F130	Modeling microbial spoilage of untreated & ohmic heat treated mango pieces Gerardo Fernandez Villanueva, *Tecnologico de Monterrey*
17:10 – 17:30	F147	Biosynthesized silver nanoparticles: A sustainable alternative for *Moniliophthora roreri* control in cacao Sofia I. Trujillo, *Escuela Politécnica Nacional*
17:30 – 18:00		FOOD MaCKiE Closure Support staff recognition, Review of CYTA J of Food paper competition procedures
18:00 – 18:45		**Epilogue** Time: The Main Mystery of Chemical Kinetics Gregory S. Yablonsky, *Washington University in St Louis, USA*
18:45 – 20:00		**Break**
20:00 – 23:00		**Gala Dinner, Award ceremony &** **Birthday Celebration of Prof. Grigoriy S. Yablonsky**

Poster Session		**Thursday,** 4th **of September**
Conference Hallway		
F104		Predictive microbial modelling in dried fruit processing: Current approaches and future potential Ali Nalbant, *K.F.C. GIDA R&D Center*
F131		Microbial preservation performance of a residential refrigerator: A multiple product, storage location and temperature setting case study J. Antonio Torres, *Tecnologico de Monterrey*
F132		Novel tools to assess the preservation performance of fresh-cut mango transported under refrigeration Gerardo Fernandez Villanueva, *Tecnologico de Monterrey*
F133		Dielectric properties of shelled walnut (*Juglans regia* L.) using the thru-reflect-line method Maria Elena Sosa Morales, *U. of Guanajuato*
F134		Impact of radiofrequency treatment on the physicochemical quality of pine nuts (*Pinus cembroides*) Mitzi G. Flores-Sánchez, *U. of Guanajuato*
F135		Advanced Machine Learning and Statistical Modeling of Drying Kinetics and Ultrasound-Assisted Protein Extraction from Mosambi (*Citrus limetta*) Peel Khwaja Osama, Kaiser Younis, *Integral University*
F136		Kinetic Modeling and Machine Learning Optimization of Citrus limetta Peel Valorization for Functional Food Applications

	Alvina Farooqui, *Integral University*
F137	Decoding Honey Origins: ML and DL Methods for Botanical Classification Nathan Mekuria Solomon, *IZTECH*