3th ICPM

International Conference on Predictive Modelling in Food

1–3 Sept. 2025 Technopolis City of Athens





International Committee on Predictive Modelling in Food

PROGRAMME

Monday, September 1, 2025

♦ AMPHITHEATER | MAIN HALL

08:00-08:30 **REGISTRATIONS**

08:30-08:45 **OPENING - WELCOME**

PLENARY LECTURE

From Data to Al

József Baranyi: "Development of Predictive Modelling in Food Science. From Descriptive Statistics and Patterns to Predictive Models and Principles;

09:30-11:00 ORAL SESSION 1

09:30-**OP01**Growth kinetics of bacterial sporeformers isolated from plant-based ingredients: 09:45 Consequences for food safety and quality, Dr. Karin Beekmann-Metselaar

OP02 Incorporating Biochemical Composition 09:45-10:00 into Predictive Growth Models for Plant-Based Milk products, Ms. Maha Rockaya

OP03 Modelling microbial inactivation of 10:00 spoilage microorganisms as a tool to differentiate thermal and non-thermal effects during pulsed 10:15 electric field processing of plant-based milk alternatives, Mr. Vasilis Valdramidis

OP04 Application of Cold Atmospheric Plasma 10:15-(CAP) for fish fillets shelf-life extension: moving 10:30 from laboratory scale to industrial environment, Dr. George Katsaros 10:30-

OP05 Data-Driven Tools for Optimizing Microbiological Monitoring in Dairy Production 10:40 with a Risk-Based Approach, Dr. Fanny Tenenhaus-aziza **OP06** Estimation of kinetic parameters during 10:40-

microbial growth under dynamic temperature conditions, **Mr. Vasileios Kousiaris** 10:50 10:50 OP07 Evaluation of Heat-Treated Lactic Acid

11:00 Bacteria for Postbiotic Production in Food Biopreservation, Dr. Evrim Güneş Altuntaş

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09:30-11:00 WORKSHOP 1

Fady Mohareb A Blockchain-Enabled Platform for Real-Time Monitoring of Food Quality and Authenticity

11:00-11:30 COFFEE BREAK

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11.30-12.00 KEYNOTE SPEAKER

Fady Mohareb: "From Insight to Impact: Real-World AI Applications in Food Quality and Safety'

12:00-13:30 ORAL SESSION 2

OP08 Application of Machine learning with Food 12:00-Import Risk Explorer Risk (FIRE) model to support risk-informed program design, Dr. Ashwani Tiwari

12:15-OP09 "Multivariate Food Predictor": a tool for non-destructive assessment of microbial spoilage 12:30 of Meat, Ready-To-Eat meat products, and Freshcut salads, Prof. Panagiotis Skandamis

OP10 Microbial interactions between starter and 12:30adjunct cultures shape the metabolic potential 12:45 and flavour formation of cheese ripening, **Dr. Chrats Melkonian**

OP11 Multi-target prediction with deep neural networks in foodomics: a case study on 12:45-13:00 Brochothrix thermosphacta to predict volatile organic compounds linked to fresh meat spoilage, Mr. Linyun Chen

OP12 ResPathExplorer: A Python-Based Library 13:10 for Pathway Analysis and Resistance Gene Mapping through KEGG and CARD Integration, Ms. Laís Carvalho

OP13 Predictive Modelling of Escherichia 13:10coli and Lactic Acid Bacteria Growth in Fresh 13:20 sheep Cheese, Mr. Geoffrey Roudaut

13:20-**OP14** Natural Antimicrobial Strategies for Cultivated Meat: Predicting Salmonella Inactivation Through Physiochemical and 13:30 Formulation Parameters, Dr. Youssef Ezzaky

13:30-14:30 LUNCH BREAK

14:30-16:00 **SYMPOSIUM 1**

Artificial intelligence tools to optimise information gathering from scientific literature for feeding predictive microbiology and risk assessment

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14:30-16:00 WORKSHOP 2 Jozsef Baranyi

Efficient data-driven numerical techniques to aid decision making using ComBase

16:00-16:30 COFFEE BREAK

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16:30-18:00 ORAL SESSION 3 16:30-

OP15 A Decision Support Tool for Real time monitoring and Forecasting Fungal Growth in Grain Silos Based on Sensor Data and Climate Models, Mr. Constantine Richard Stefanou

16:45-OP16 The recent work from JEMRA and FAO on 17:00 microbiological risk assessment, Dr. Kang Zhou

OP17 Smart fermentation with digital twins: 17:00a support decision tool for managing, optimising 17:15 quality and energy performance, applied to the fermentation of plant-based products., **Mr. Louis Coroller**

OP18 A Framework for Assessing Microbial Risks

17:15-Related to Climate Change in Food Safety, 17:30 Mrs. Christina Kamarinou

OP19 Modelling the growth and growth 17:30boundaries of Listeria monocytogenes: focus on 17:40 strain variability and organic ácids, Mr. Yvan Le Marc

17:40-**OP20** Inhibition of non-proteolytic Clostridium botulinum germination in chilled food: model 17:50 development and application in food safety, **Dr. Louis Delaunay**

OP21 Accelerated Shelf Life Testing 17:50implementation in predicting the stability of High Pressure processed meat products, 18:00 Ms. Giannakourou Maria

Tuesday, September 2, 2025

♦ AMPHITHEATER | MAIN HALL 08:00-08:30 REGISTRATIONS

KEYNOTE SPEAKER

Jan Van Impe: "Could we predict the future: half a lifetime of predictive microbiology at KU Leuven/BioTeC+"

09:00-10:30 ORAL SESSION 4

OP22 Multi-agent Ouantitative Microbial 09:00-Risk Assessment for raw milk cheese: 09:15 A comprehensive modeling approach from farm to consumer, Mr. Laurent Guillier

09:15 OP23 sQMRA-R: a flexible and user-friendly tool for Quantitative Microbiological Risk Assessment 09:30 of foodborne pathogens, **Mr. Dante Spekken**

OP24 Microbial Risk Assessment of Ready-to-Eat 09:30 Fresh Produce, Mr. Vaibhav Bhatia

OP25 Developing a user-friendly risk assessment tool to assess the food safety risks of fresh 09:45-10:00 produce production and landscape use, **Dr. Alda Pires**

10:00 **OP26** Quantitative risk assessment of Bacillus cereus in roasted chicken combining predictive microbiology and real data from a major Spanish retailer, Dr. Arícia Possas

10:10 **OP27** Optimization of Conventional Hot-Air Drying of Peaches Using Ultrasonic Pretreatment: Modeling with MATLAB, **Mr. Dimitrios Fotiou**

OP28 ZooNotify - An interactive data tool for searching and visualizing zoonoses monitoring 10:30 results along the food chain in Germany, Dr. Tasja Crease

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09:00-10:30 WORKSHOP 3

Matthias Filter Making Models Interoperable - Leveraging Al-assisted Tools to Adopt the Harmonised Model. Exchange Format FSKX in Food Science and Risk Assessment

10:30-11:00 COFFEE BREAK

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11:00-11:30 KEYNOTE SPEAKER

Gianni Panagiotou: "Harnessing Diet to Engineer the Gut Microbiome: a two-way

11:30-13:00 ORAL SESSION 5

OP29 Thermal Resistance of Geobacillus spp. in 11:30 Oat-Based Beverages: Predictive Modeling for 11:45 Food Safety, Dr. Alessandra Regina Da Silva

11:45 OP30 Longitudinal analysis of microbial diversity and dynamics during storage of chicken products 12:00 towards early warning of risks posed by foodborne pathogens, Ms. Elisa Benincà

OP31 Dynamic modelling of Photobacterium 12:00 iliopiscarium and Photobacterium phosphoreum 12:15 growth in a modified atmosphere packaging seafood-food model as a function of dissolved gases and pH, Dr. Kirk Dolan

12:15-**OP32** Modelling the effects of food-intrinsic characteristics on the growth kinetics of 12:30 escherichia coli, Masaki Kato

OP33 Predictive Modeling of Curcuminoid 12:30 12:40

Bioaccessibility in Complex Food Matrices via Machine Learning, **Prof. Claire Rossi** OP34 An in-silico prediction pipeline for data mining of antifungal peptides for potential

applications as food preservatives

Ms. Selena Moirangthem **OP35** Leveraging ai for advanced querying 12:50and visualization of microbiological data: the 13:00 new pathogens-in-foods database, Mr. lucas ribeiro silva

13:00-14:00 LUNCH BREAK

14:00-15:30 SYMPOSIUM 2

Predictive Modelling for Modern and Sustainable Food System

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14:00-15:30 WORKSHOP 4

Nicolas Nguyen Van Long Standardisation protocols and Predictive Microbiology: Unveiling the use of ISO 23691 to ensure Microbiological Food Safety

15:30-16:00 COFFEE BREAK

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16:00-17:45 Y-ICPMF

OP36 Fluorescence microscopy for directly tracking the proliferation of Escherichia coli in 16:15 baby leaves of cultivated and wild lettuce, Dr. Marianna Arvaniti

OP37 Structural Modeling of Antimicrobial 16:15-Peptides from Lactic Acid Bacteria: Insights into 16:30 Conserved Motifs and Functional Diversity, Ms. Nathalia Fernandes

16:30-**OP38** Preparing for the next generation QMRA,

Dr. Yangtai Liu

OP39 Modeling Bacillus subtilis Sporulation 16:45-17:00 under dynamic pH and Assessing the Spore Properties for Food Safety and Quality Management, Mrs. Kaoutar Hafdane

OP40 A mathematical model to predict the effect of temperature and water activity on the growth of alternaria spp. in oats, **Dr. Jean Correia Costa**

OP41 Sensitivity analysis methods for effective 17:30decision-making, Ms. Cristina Serra-Castelló

17:45-18:30 POSTER SESSION IN PURIFIER HALL

SOUNIO TOUR & DINNER

Wednesday, September 3, 2025

♦ AMPHITHEATER | MAIN HALL 08:00-08:30 **REGISTRATIONS**

08:30-10:00 ORAL SESSION 6

09:30-

08:30-**OP42** Al-Driven System for Microbiological Alerting and Pattern Detection in the Pathogensin-Foods Database, Mr. Vasco Cadavez

OP43 How to create healthy aquatic food 08:45 systems and safe seafood in the context of increasing global temperatures and extreme weather phenomena, **Dr. Foteini Parlapani**

09:00-**OP44** Estimation of the size of foodborne outbreaks based on human genomic surveillance 09:15 data, Dr. Maarten Nauta

09:15 **OP45** Machine Learning-Based Analysis of Climate Trends and Foodborne Illness Risks in 09:30 Europe, Mr. Leonardos Stathas

growth rate and acidification capacity of Lactic 09:40 acid bacteria (LAB) isolated from sheep cheese, Mr. Muhammad Ahmed Ihsan 09:40-**OP47** Synergistic effect of lactic acid bacteria and 09:50 initial ph of a milk model on the control of listeria

OP46 Quantitative approaches to evaluate the

monocytogenes during fermentation, Mrs. Yara Loforte OP48 Pilot study to predict the occurrence of 09:50foodborne pathogens in milk microbiome testing 10:00 the animal sewage microbiome in a dairy cattle

KEYNOTE SPEAKER

farm, Dr. Valentina Indio

Qingli Dong: "Status and Future of Quantitative Microbial Risk Assessment in China"

10:30-11:00 COFFEE BREAK

11:00-12:00 **EU PROJECTS**

FoodigIT, SOSFOOD, FOODGUARD, AMBROSIA, QuiPack, FunShield4Med, **EXCEL4MED**

12:00-13:20 ORAL SESSION 7

OP49 From raw to ready: Quantitative 12:00-Microbiological Risk Assessment of spore-formers 12:15

in plant-based milks and yogurts, Dr. Soundarya Karamcheti **OP50** Application of Predictive Modelling in 12:15-

Artisanal RTE Meat Production for Listeriosis Risk Preventionriosis Risk Prevention, Dr. Olga María Bonilla Luque

OP51 Machine learning-powered uropathogenic 12:30-Escherichia coli (UPEC) growth model and microbial exposure assessment for evaluating the consumer risk of UPEC from ready-to-eat (RTE)

pork in Taiwan, Liu-Yean Goh **OP52** Tackling One Health risks: How Large 12:45-Language Models are leveraged for Risk 13:00 Negotiation and Consensus-building.,

Dr. M.sc. Alexandra Fetsch **OP53** Predictive Modeling of Salmonella 13:00-Enteritidis Behavior in Sunflower Microgreens Cultivation and Storage,

OP54 Growth of Listeria monocytogenes 13:10in goat's pasteurised milk cheese during maturation: Validating data from a milk model medium, **Dr. Ursula Gonzales-barron**

Dr. Veronica Ortiz Alvarenga

13:20-14:00 LUNCH BREAK

14:00-15:00 ORAL SESSION 8

14:45-

15:00-16:00

OP55 Non-invasive spoilage prediction of 14:00aerobically stored sea bream: A comparative 14:15 study of machine learning models using multispectral imaging for real-time quality assessment, **Ms. Angeliki Doukaki**

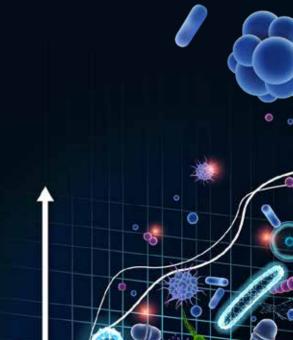
OP56 A probability-based growth/non-growth 14:15boundary model for bacterial populations at 14:30 single-cell level, Dr. Junpei Hosoe **OP57** Addressing metagenomic data 14:30-

compositionality and confounding factors in clinical studies for the safety assessment of 14:45 human microbiome perturbations, **Dr. Aline Metris**

Microbiological Models in Industry: A Fit for Purpose Approach for Food Safety Assessment, **Ms. Judith Fernandez-Piquer**

CLOSING CEREMONY

OP58 Application of Predictive



18:30 WELCOME RECEPTION