

Final Program



6 - 10 April 2020
Organized by



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General Information

1.1 Conference Location

The Conference itself is held at



[University of Leuven/Campus Ghent](#)

BUILDINGS L/M - ROOMS L226 and M228

Gebroeders de Smetstraat 1
9000 Ghent

Tel: +32.9 265 86 10

Email: iw.gent@kuleuven.be

See the [Campus map](#) for more info at the back of the programme.

The meeting rooms are in the buildings M & L located to the LEFT of the main entrance of the campus. (the way to the meeting rooms will be signposted) Registration will start on Sunday at 4.00 p.m. and end at 5.30 p.m. On Monday from 8.00 a.m. till 5.00 p.m. On Tuesday from 8.30 a.m. till 5.00 p.m. On Wednesday from 8.30 a.m. till 4.00 p.m. The registration desk will be located in front of room **L226** on the same level as the meeting rooms in **Building L/M**.

Reaching the University Leuven – Campus Ghent

By Plane:

Ghent lies some 40 km to the west of the airport of Brussels and some 70 kms from Charleroi-(Brussels South Airport) if you fly [Ryanair](#). See below how to get reach Ghent from these different airports.

On arrival at [Brussels Airport](#), probably with [Brussels Airlines](#) take a train towards Brussels, where you can change trains for Ghent at either Brussels North, Central or South (Midi). At each of these stations you can take the IC-Train either to Ostend, Knokke-Blankenberge or De Panne and exit in Ghent Sint-Pieters station. First stop after Brussels. (travel time approx. 35 mins)

From [Charleroi airport](#) you can take a bus to Charleroi Station. From there you take the train to Brussels South and change trains there for Ghent. At this station you can take the IC-Train either to Ostend, Knokke-Blankenberge or De Panne and exit in Ghent Sint-Pieters station. First stop after Brussels. (travel time approx. 35 mins)

By Train:

From Germany see the [German Railway Information Site](#) and also check the information on the [ICE train](#) from Cologne to Brussels.

From London see the [EUROSTAR Information Site](#) for information on trains between London and Brussels.

From Paris see the [THALYS Information Site](#) for information on trains between Paris and Brussels.

General Information

From Amsterdam see the [THALYS Information Site](#) for information on trains between Amsterdam (Schiphol Airport) and Brussels. If you take this train then you can also change trains in Antwerp and take the Ostend or Lille bound trains to reach Ghent Sint-Pieters station.

More information about timetables of [trains in Belgium](#).

By Tram:

Ghent has an excellent network of trams and busses run by the [De Lijn](#) company which cover everywhere you could wish to go. You can buy tickets from De Lijn offices, some newsagents, ticket machines at the bus/tram stops, by SMS or from the drivers. Tickets bought before boarding are substantially cheaper than those bought from the drivers and the present-time cost of a single ticket, bought in advance, is 1.20 Euro (2 Euro if bought on the vehicle). Single tickets must be validated in the machine on board and are then good for 60 minutes. There are also day tickets (dagpas) valid for 24, 72 or 120 hours costing respectively 5, 10 and 15 Euros. These also must be validated at the start of the first journey. The machines are quite simple to use and those at the train station have several language options. Payment can be credit/debit card or cash and the machines give change for notes up to 10 Euro. To view the tram network go to this [webpage](#). The tram to take is line 4 direction Rabot/Moscou from Ghent Sint-Pieters Station.

By Bus:

You can reach Ghent from anywhere in Europe by [EUROLINES](#). The EUROLINES coach stops at Ghent St.Pieters Station and at Ghent Dampoort. Within to use a bus Ghent see the information on [De Lijn](#) website.

ALL OTHER MAPS ARE AT THE BACK OF THIS PROGRAMME

1.2 Badges

Each registrant will receive a name badge upon registration. The badge must be worn in order to be admitted to the technical sessions, lunches and social event.

1.3 Tickets

Extra tickets for the social event and lunches are available from the Registration desk. (**at conference prices**)

Price: (or equivalent in another currency) for extra tickets. All participants will be issued with tickets for lunch and the conference dinner. **Or just the badge will apply.**

General Information

conference dinner:	€ 60
lunch	€ 25/lunch
conference visit	€ 20

1.4 Registration

The **FOODSIM'2020** Registration Desk will be open for information and registration **in front of meeting room L226** on the second floor of **BUILDING L** in the same hallway as the meeting rooms:

Sunday, April 6.....4.00 p.m. to 05.30 p.m.
Monday, April 78.00 a.m. to 05.00 p.m.
Tuesday, April 88.30 a.m. to 05.00 p.m.
Wednesday, April 9.....8.30 a.m. to 04.00 p.m.

1.5 Conference Proceedings

Each fully paid registrant will be provided with a copy of the Conference Proceedings (printed format and/or electronic format) after the conference. Price: (or equivalent in another currency) for an extra printed copy

FOODSIM'2020 Proceedings	€ 50 plus shipping costs and VAT* (*when required)
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Other Proceedings can be ordered from the EUROSIS website.

1.6 Meeting Rooms

The meeting rooms are rooms **L226** and **M228**, located to the left of the main entrance of the University entrance in **BUILDING L/M on the second floor**. To enter the buildings use the ground floor entrance for Building L. Directions to the rooms will be signposted. The **SCIFI-IT'2020** sessions are in **ROOM M210**

1.7 Internet Connection

There is full free WIFI at the conference site. Participants are advised to log in using their EDUROAM account.

1.8 Need Help?

Please see the conference desk in front of **ROOM L226** for your questions

1.9 Social Events and Lunches

All registrants are invited: To the **Welcome Drink** on **Sunday April 6th**. **Coffee Breaks** and the **lunches** for 3 days and the **Conference Dinner** on **Tuesday the 9th of April** at **De Foyer**. All meals will be COVID compliant.

General Information



[University of Leuven/Campus Ghent](#)

Gebroeders de Smetstraat 1
9000 Ghent

Tel: +32.9 265 86 10

To the **Conference Dinner**



The conference dinner will be held on **Tuesday the 9th of April** in the evening at the **Brasserie de Foyer**

Sint-Baafsplein 17
9000 Gent

Tel: + 32.9 234 13 54

Email: info@foyerntgent.be

Website: <http://foyerntgent.be>



General Information

General Information

1.10 Best Paper Award

During the conference the papers, which were accepted as extended papers will be judged by the committee and participants in order to choose the best paper of the FOODSIM'2020 conference. The best paper candidate receives a certificate signed by the General Conference and Program Chairs and also a free registration to any EUROSIS conference within 2 years of receipt of the prize.

1.11 Paper Legend:

Each paper is designated before each paper by its number. This number has to be entered on the form for the best paper award.

The room has an LCD projector and an overhead projector

SESSION CHAIRPERSONS

ALL SESSION CHAIRPERSONS IN THIS PROGRAM ARE PROVISIONAL.

Session Chairs are chosen on a voluntary basis by proposals by either authors or local committee members or are appointed by the Track Chairs, General Program Chair or General Conference Chair. They are responsible for their assigned session. They make sure their speakers are available, take care of the timing within the session, chair the discussion after each presentation and introduce each speaker based on the CV's given to them by the authors. **If a session chair is not available then the first author takes on the responsibility to chair**

Sessions with extended papers: If you are a session chair in a session with extended papers make sure the session participants have a copy of the best paper award form and ask them to return them to you at the end of the session. After the session hand over the collected forms to Philippe Geril.

THE NUMBERS NEXT TO THE PRESENTATIONS DENOTE THE PAGE-NUMBERS IN THE PROCEEDINGS. IF NO NUMBERS ARE MENTIONED THEN THIS PAPER IS NOT PUBLISHED IN THE PROCEEDINGS

THE AUTHORS WHO ARE UNDERLINED ARE NORMALLY THE PRESENTERS

ONLY PAPERS IN GREY BOXES ARE THE EXTENDED PAPERS ELIGIBLE FOR THE BEST PAPER AWARD

PAPER NUMBERS IN THE FINAL PROGRAMME FOLLOWED BY "ONL" MEAN THESE PAPERS WILL BE PRESENTED ONLINE

SUNDAY, 6th APRIL 2020		
16.00-17.30	REGISTRATION IN FRONT OF ROOM L-226, BUILDING L, 2 ND FLOOR	
16.30-17.30	COST VIRTUAL COMMITTEE MEETING L-226 SECOND FLOOR BUILDING L	
16.00-18.00	WELCOME DRINK IN MEETING SPACE IN FRONT OF ROOM L-226, 2ND FLOOR BUILDING L	
MONDAY, 7th APRIL 2020		
08.00-17.00	REGISTRATION IN FRONT OF ROOM L226, BUILDING L, 2 ND FLOOR	
09.00-09.30	MAIN MEETING ROOM BUILDING L ROOM L-226 – 2ND FLOOR	
	INTRODUCTION TO FOODSIM 2020	
09.30-10.30	KEYNOTE SESSION BUILDING L ROOM L-226	
	ROOM A L-226	
	KEYNOTE SPEAKER FERRUH ORDOGDU (ONLINE PRESENTATION)	
10.30-11.00	COFFEE BREAK	
11.00-12.30	PARALLEL SESSIONS BUILDING L/M -2 ND FLOOR	
	ROOM A L-226	ROOM B M-228
	FOOD PROCESS SYSTEMS ENGINEERING I	COST FOOD_MC I
12.30-13.30	LUNCH BREAK MEETING AREA IN FRONT OF ROOM L-226	
13.30-15.30	PARALLEL SESSIONS BUILDING L/M-2 ND FLOOR	
	ROOM A L-226	ROOM B M-228
	FOOD PROCESS SYSTEMS ENGINEERING II	COST FOOD_MC II
15.30-16.00	COFFEE BREAK	
16.00-18.00	SESSION BUILDING L/M-2 ND FLOOR	
	ROOM A L-226	ROOM B M-228
	MULTI-SCALE MODELLING APPROACHES	COST FOOD_MC III
18.30-20.30	SOCIAL EVENT MORE INFO AT THE CONFERENCE	

TUESDAY, 8th APRIL 2020		
08.30-17.00	REGISTRATION IN FRONT OF ROOM L-226, BUILDING L, 2ND FLOOR	
09.00-10.00	KEYNOTE SESSION BUILDING L ROOM L-226	
	ROOM A L-226	
	KEYNOTE SPEAKER GAVIN GIBSON (ONLINE PRESENTATION)	
10.00-10.30	COFFEE BREAK	
10.30-12.30	PARALLEL SESSIONS BUILDINGS L/M -2ND FLOOR	
	ROOM A L-226	ROOM B M-228
	INNOVATIVE FOOD PRODUCTION AND PROCESSING TECHNOLOGIES I	FOOD SAFETY I
12.30-13.30	LUNCH BREAK MEETING AREA IN FRONT OF ROOM L-226	
13.30-14.30	KEYNOTE SESSION BUILDING L ROOM L-226	
	ROOM A L-226	
	KEYNOTE SPEAKER ASHIM DATA (ONLINE PRESENTATION)	
14.30-15.00	COFFEE BREAK	
15.00-17.30	PARALLEL SESSIONS BUILDINGS L/M -2ND FLOOR	
	ROOM A L-226	ROOM B M-228
	INNOVATIVE FOOD PRODUCTION AND PROCESSING TECHNOLOGIES II	FOOD SAFETY II
17.30 –18.30	PARALLEL SESSIONS BUILDINGS L/M -2ND FLOOR	
	ROOM A L-226	ROOM B M-228
	INNOVATIVE FOOD PRODUCTION AND PROCESSING TECHNOLOGIES III	FOOD SAFETY III
19.30-23.00	Conference dinner	

WEDNESDAY, 9th APRIL 2020	
08.30-16.00	REGISTRATION IN FRONT OF ROOM L-226, BUILDING L, 2 ND FLOOR
08.30-10.00	KEYNOTE SESSION BUILDING L ROOM L-226
	ROOM A L-226
	KEYNOTE SPEAKER MASAMI T TAKEUCHI (ONLINE PRESENTATION)
10.00-10.30	COFFEE BREAK
10.30-12.30	SESSIONS BUILDINGS L/M
	ROOM A L-226
	ROOM B M-228
	CLIMATE CHANGE I
12.30-13.30	LUNCH BREAK
13.30-15.30	SESSIONS BUILDINGS L/M
	ROOM A L-226
	ROOM B M-228
	CLIMATE CHANGE II
15.30-16.00	COFFEE BREAK
16.00-18.00	SESSIONS BUILDINGS L/M
	ROOM A L-226
	ROOM B M-228
	SUSTAINABLE FOOD SYSTEMS
18.00-18.15	CLOSING SESSION FOODSIM'2020 AND BEST PAPER AWARD ROOM A L-226
THURSDAY, 10th APRIL 2020	
09.00-15.00	MEETING ROOM M 210 ITN_PROTECT FINAL MEETING

Sunday, 6th April 2020

16.00 - 17.30

**HALLWAY BUILDING L – 2ND Floor
Registration in front of Room L-226**

16.30- 17.30

COST VIRTUAL COMMITTEE MEETING L-226 SECOND FLOOR

16.00 - 18.00

**WELCOME DRINK IN MEETING SPACE IN FRONT OF ROOM L-226,
2ND FLOOR BUILDING L**



Monday, 7th April 2020

REGISTRATION

08.00 - 17.00

IN FRONT OF ROOM L226, BUILDING L, 2ND FLOOR

09.00 – 09.30

**MAIN ROOM L 226 BUILDING L – 09.00-09.30
WELCOME ADDRESS**

WELCOME

Introduction to FOODSIM'2020 and SCIFI-IT'2020

Jan F.M. Van Impe, Katholieke Universiteit Leuven, Campus Ghent, Belgium
FOODSIM'2020, General Conference Chair

09.30 – 10.30

**ROOM A – L 226 – 09.30-10.30
KEYNOTE ADDRESS**

KEYNOTE



KEY_03_ONL

[Conventional and Innovative Processing Techniques towards better Process Design](#)

Ferruh Erdogdu, Ankara University, Department of Food Engineering, Golbasi-Ankara, Turkey

10.30 - 11.00

COFFEE BREAK

Welcome - Monday

Monday, 7th April 2020

11.00 - 12.30

ROOM A – L-226 - 11.00-12.30

PSE

FOOD PROCESS SYSTEMS ENGINEERING I - METHODOLOGY

FOOD_PROC_SYS_07

Cultivation and Monitoring of a Gut Microbiota Model System

Theodora Akritidou, Cindy Smet, Simen Akkermans and Jan FM Van Impe,
Department of Chemical Engineering, KU Leuven BioTeC - Chemical and
Biochemical Process Technology and Control CPMF2, Flemish Cluster Predictive
Microbiology in Foods, Ghent, Belgium

FOOD_PROC_SYS_10

**Introducing Sexual Selection in Genetic Multi-Objective Optimisation
Algorithms**

Viviane De Buck, Ihab Hashem, Mihaela Luliana Sbarciog and Jan F.M. Van Impe,
BioTeC+, KU Leuven, Ghent, Belgium

FOOD_PROC_SYS_11

**Studying the Growth and Substrate Consumption of Pichia Pastoris for the
Bioproduction of Recombinant Proteins**

Jewel Ann Joseph, Simen Akkermans and Jan F.M. Van Impe, CPMF2, Flemish Cluster
Predictive Microbiology in Foods BioTeC+ & OPTEC, Department of Chemical
Engineering, KU Leuven, Ghent, Belgium

ROOM B – M-228 - 11.00-12.30

COST

FOODMC I – ENVIRONMENTAL MODELLING AND PEST CONTROL

COST-FOODMC_03_ONL

Environmental Modeling in the Food Supply Chain - Future Perspectives

Ilija Djekic, Faculty of Agriculture, University of Belgrade, Belgrade - Zemun, Serbia,
and Jan Van Impe KU Leuven, Department of Chemical Engineering - BioTeC+, Gent,
Belgium and Alberto Tonda, INRAE, Thiverval-Grignon, France

Monday, 7th April 2020

COST_FOODMC_02_ONL

"Population Dynamics of the European Corn Borer, *Ostrinia Nubilalis*, Adults in Slovenian Hop Gardens in 1999-2018"

Magda Rak Cizej, Plant Protection Department, Slovenian Institute of Hop Research and Brewing, Zalec, Slovenia and Pasquale Trematerra, Department of Agricultural, Environmental and Food Sciences, University of Molise, Campobasso, Italy

COST_FOODMC_05

Forecasting the Distribution of Phosphine and Insect Mortality in Cylindrical Grain Silos with Computational Fluid Dynamics for Precision Fumigation: Model Validation with Field Trials

Paraskevi Agrafioti and Christos G. Athanassiou, Laboratory of Entomology and Agricultural Zoology, Department of Agriculture, Crop Production and Rural Environment, University of Thessaly, Volos, Magnesia, Greece, and Efsthathios Kaloudis and Sotiris Bantas, Centaur Analytics, Inc., Ventura, CA, USA and Vasilis Sotiroudas, Agrospecom, Thessaloniki, Greece

COST_FOODMC_04_ONL

Durable Pasta Packaging with Bio-Based Barrier to prevent Insect Infestation

Urška Vrabc Brodnjak and Jon Jordana, University of Ljubljana, Faculty of Natural Sciences and Engineering, Department of Textiles, Graphic Arts and Design, Ljubljana, Slovenia and Pasquale Trematerra, University of Molise, Department of Agricultural, Environmental and Food Sciences, Campobasso, Italy

12.30 - 13.30

LUNCH BREAK MEETING AREA IN FRONT OF ROOM L-226

13.30 - 15.30

ROOM A – L 226 - 13.30-15.30

PSE

FOOD PROCESS SYSTEMS ENGINEERING II – SOLIDS AND LIQUIDS

FOOD_PROC_SYS_01

Modelling Drying of Food Products under Large Deformation: A Simple Realistic Approach

Bianca Cristine Marques and Carmen Cecilia Tadini, University of São Paulo, Escola politécnica, Chemical Engineering Department, and FoRC/NAPAN Food Research Center, São Paulo, SP, Brazil and Artemio Plana-Fattori and Denis Flick, Université Paris-Saclay, INRAE, AgroParisTech, UMR SayFood, Massy, France

Sessions - Monday

Monday, 7th April 2020**FOOD_PROC_SYS_04****Mathematical Modelling of the Rehydration Process of Dried Broccoli (*Brassica oleracea* L. var. *Italica*) Stems**

Irem Erdem, Department of Food Engineering, Afyon Kocatepe University, Afyonkarahisar, Turkey and Cristina L.M.Silva, Universidade Católica Portuguesa, CBQF, Escola Superior de Biotecnologia, Porto, Portugal

FOOD_PROC_SYS_05**3D Simulation of Oxidation Reactions in Real Deep Fryer: Interactions with Anisothermal Oil Flow and Design**

Maxime Touffet, Paul Smith and Joël Wallecan, Cargill R&D Centre Europe, Vilvoorde, Belgium and Mohammed Hatem Allouche, UMR 6303 CNRS-Université de Bourgogne Franche-Comté, Dijon, and Olivier Vitrac, UMR 1145 Food Processing and Engineering, INRAE, AgroParisTech, Université Paris-Saclay, Massy, France

FOOD_PROC_SYS_08**Observer-Based Predictive Control of a Continuous Co-Fermentation Process for Ethanol Production**

Mihaela Iuliana Sbarciog, Satyajeet Bhonsale and Jan F.M. Van Impe, BioTeC+, Department of Chemical Engineering, KU Leuven, Ghent, Belgium

FOOD_PROC_SYS_09**Multiobjective Optimal Control of Beer Fermentation Process using Pomodoro**

Satyajeet Bhonsale, Mihaela Iuliana Sbarciog and Jan F.M. Van Impe, BioTeC+ & OPTEC, Department of Chemical Engineering, KU Leuven CPMF2, Flemish Cluster Predictive Microbiology in Foods, Ghent, Belgium

ROOM B – M 228 - 13.30-15.30**COST****FOODMC II – FOOD PRODUCTION AND BUSINESS****COST_FOODMC_06_ONL****Modelling Food Business in the Context of Agriculture 4.0**

Eugen Pop, IPA S.A, R&D Institute for Automation, Bucharest and Alexandina Sirbu, "Constantin Brancoveanu" University, Ramnicu Valcea, and Mihnea Alexandru Moiescu and Simona Iuliana Caramihai, Automatics and Industrial Informatics Department and Ioan Stefan Sacala and Ioan Dumitrache, Automatic Control and Systems Engineering Department, Bucharest, Romania

COST_FOODMC_11_ONL**Visualizing FoodMC Network, Graph Database and a Visualization Web Tool**

Kamal Kansoua, INRAE, BIA, Nantes and Christophe Fernandez, INRAE, I2M, Université de Bordeaux, CNRS, Bordeaux INP, Arts et Métiers Paris tech, Talence, France

Monday, 7th April 2020

COST_FOODMC_14

Monitoring Honey Bees using a Sensor Network

Andrzej Sobecki, Julian Szymanski and Tymoteusz Cejrowski, Faculty of Electronics, Telecommunications and Informatics, Department of Computer Architecture, Gdansk University of Technology, Gdansk, Poland

COST_FOODMC_10_ONL

Assessment of Quality Management System in Beverage Industry based on Fuzzy Modelling

Mirza Uzunovic, Aleksandra Nikolic, Dusanka Boskovic

FOOD_MC_15_ONL

A Study on Reverse Logistics within Agri-Food Supply Chains

Maria Varadinov and João Miranda, Instituto Politécnico de Portalegre, and C3i - Coordenação Interdisciplinar para a Investigação e a Inovação and CERENA - Centro de Recursos Naturais e Ambiente, Instituto Superior Técnico, Universidade de Lisboa, IST, Lisboa, Portugal

FOOD_MC_15_ONL

Computational Complexity Studies on the Robust Design and Scheduling of Chemical Batch Processes

João Miranda, Instituto Politécnico de Portalegre, Portalegre, Portugal, CERENA - Centro de Recursos Naturais e Ambiente, Instituto Superior Técnico, Universidade de Lisboa, IST, Lisboa, Portugal

FOOD_MC_17_ONL

Modeling of Consumer and Functional Properties of Pastry based on Natural Ingredients

Kateryna Iorgachova, Olga Makarova, Kateryna Khvostenko, Department of Bread, Confectionary, Pasta and Food Concentrates Technologies, Odessa National Academy of Food Technologies, Odessa, Ukraine

15.30 - 16.00

COFFEE BREAK

16.00 - 18.00

ROOM A – L 226 - 16.00-18.00

MULTI-SCALE MODELLING METHODS

MULTI-SCALE

Sessions - Monday

Monday, 7th April 2020**FOOD_MULTI_MOD_01_ONL****Computational Simulation of Steak Pan Cooking**

Jara Ma Moya, Jose Angel Bernad and Silvia Lorente-Bailo, Universidad de Zaragoza, Zaragoza. Spain

FOOD_MULTI_MOD_02_ONL**Transient DEM Simulation of Starch Granule Suspension undergoing Thermal Treatment**

Arnesh Palanisamy, Artemio Plana-Fattori, Paul Menut, Marco Ramaioli and Denis Flick, Université Paris Saclay, INRAE, AgroParisTech, UMR SayFood, Massy, France

FOOD_MULTI_MOD_06**Agent-Based Modeling of Crop Irrigation**

Jorge Lopez-Jimenez, Laurent Dewasme and A. Vande Wouwer, Automatic Control Laboratory, University of Mons, Mons, Belgium, and Nicanor Quijano, Ingeniera Electrica y Electronica Department, Universidad de los Andes, Colombia

FOOD_MULTI_MOD_04**Regulation of Aggression in Bacterial Warfare**

Ihab Hashem, Viviane De Buck, Mihaela Iuliana Sbarciog and Jan F.M. Van Impe, BioTeC+ & OPTEC, Department of Chemical Engineering, KU Leuven CPMF2, Flemish Cluster Predictive Microbiology in Foods, Ghent, Belgium

ROOM B – M 228 - 16.00-18.00**COST****FOODMC III – FOOD PRODUCTION OPTIMIZATION****COST_FOOD_MC_07_ONL****Modeling of Supercritical CO₂ Extraction Processes for the Selection of Productive Strategies**

J. Bon, L. Torró, N. Sanjuan and J. Benedito, Food Technology Department, Universitat Politècnica de València, and M.García, AINIA Research Center, Valencia, Spain

COST_FOODMC_08_ONL**Optimization of the Pasteurization Process of Andalusian Gazpacho: Simulation of the Food Temperature Evolution inside the Plate Heat Exchanger**

J. Bon, D. Fita, M.P. Villalba, N. Sanjuan and J. Benedito, Food Technology Department, Universitat Politècnica de València, and M.García, AINIA Research Center, Valencia, Spain

Monday, 7th April 2020

COST_FOODMC_18_ONL

Investigation of Rheological Properties of Different Gluten Free Cake Batter Formulations by Using LAOS Method

Esra Özyigit, Ismail Eren, Seher Kumcuoglu, Sebnem Tavman, Turkey

COST_FOODMC_19_ONL

ANOVA and Multidimensional Statistical Methods in Assignment of Diet Supplementation on Quails Egg Quality

Malgorzata Korzeniowska, Department of Functional Food Products Development and Agnieszka Kita Department of Food Storage and Technology, Wroclaw University of Environmental and Life Sciences, Wroclaw, Poland

18.30 - 20.00

SOCIAL EVENT – MORE INFO AT THE CONFERENCE

Sessions - Monday

Tuesday, 8th April 2020

REGISTRATION

08.30 - 17.00

IN FRONT OF ROOM L226, BUILDING L, 2ND FLOOR

09.00 - 10.00

ROOM A – L 226 – 09.00-10.00
KEYNOTE ADDRESS

KEYNOTE



KEY_02_ONL

[The role of Stochastic Models in controlling Epidemics in Food-Production Systems](#)

Gavin Gibson, Heriot-Watt University, Edinburgh, Scotland, United Kingdom

10.00 - 10.30

COFFEE BREAK

10.30 - 12.30

ROOM A – L226 - 10.30-12.30

INNOVATIVE FOOD PRODUCTION AND PROCESSING
TECHNOLOGIES I - SOLIDS

INNOV

FOOD_INNOV_01

Stress Concentration in a Dough Gas Cell Wall

[Kossigan B. Dedey](#), [Tiphaine Lucas](#) and [David Grenier](#), Université Rennes 1, INRAe, UR OPAALE, and Université européenne de Bretagne, Rennes, France

Tuesday, 8th April 2020

FOOD_INNOV_04

Fast Growth of Eyes in Semi-Hard Cheese: Optimization of a Two-Steps Process using Numerical Simulations

Antoine Lejeune, Yves Diascorn, Tiphaine Lucas, David Grenier, IRSTEA, UR TERE, Rennes, France

FOOD_INNOV_12

Analysis of High-Frequency Atmospheric Plasma for Growth of Mung Bean in a Closed System at Extreme Conditions

Dmytro Kozak, Estefanía García Rodríguez, Renald Blundell, Vladimir S Tsepelev, Simen Akkermans, Jan F.M. Van Impe, Vasilis Valdramidis, Ruben Gatt, Chemical & Biochemical Process Technology & Control (BioTec+), Department of Chemical Engineering, KU Leuven, Belgium; and Metamaterials Unit, Faculty of Science, University of Malta, Msida, Malta; and Research Center for Metallic Liquids Physics, Ural Federal University (UrFU), Ekaterinburg, Russia; and Department of Food Sciences and Nutrition, Faculty of Health Sciences; and Department of Physiology and Biochemistry, Faculty of Medicine and Surgery, and Centre for Molecular Medicine and Biobanking, University of Malta, Msida, Malta

ROOM B – M228 - 10.30-12.30

FOOD SAFETY

FOOD SAFETY I – MICROBIAL DETECTION

FOOD_SAFE_07

Non-Culturable Salmonella Enterica Ser. Typhimurium in Foods in Simulated Gastric and Enteric Fluid by Flow Cytometry

Anthimia Batrinou, Efstathia Tsakali, Dimitra Houhoula and Dimitrios Timpis, Department of Food Science and Technology, University of West Attica, Egaleo and Spiridon Konteles, Regional Division of Attica, EFET Hellenic Food Authority, Athens, Greece

FOOD_SAFE_09

Detection of Brucella spp. in Milk and Blood Samples of Ruminants Animals by PCR

Ioannis Dimou, Ekaterini Samioti, Dionisis Antonopoulos, Anthimia Batrinou, Spiridon Konteles, Valentini Stefanou, Spiridon Papatheodorou, Efstathia Tsakali and Dimitra Houhoula, Department of Food Science and Technology, University of West Attica, Egaleo, and Dimitrios Vourvidis, and Anna Kyrma, Laboratory of Brucellosis and Bacterial Disease Serology, Department of Diagnostic Pathology, Anatomy, Histology and Microbiology, Directorate of Athens Veterinary Center, Ministry of Rural Development and Food, Agia Paraskevi, Athens, Greece

Sessions - Tuesday

Tuesday, 8th April 2020

**12.30 - 13.30
LUNCH BREAK**

13.30 - 14.30

**ROOM A – L 226 – 13.30-14.30
KEYNOTE ADDRESS**

KEYNOTE



KEY_01_ONL

[Food Process Simulation: Developing Community Resources for Manufacturing, Education and Research](#)

[Ashim Datta](#), Cornell University, College of Agriculture and Life Sciences, Ithaca, NY, USA

**14.30 - 15.00
COFFEE BREAK**

15.00 - 17.00

**ROOM A – L226 - 15.00-17.30
INNOVATIVE FOOD PRODUCTION AND PROCESSING
TECHNOLOGIES II - LIQUIDS**

INNOV

FOOD_INNOV_10

Temperature Evolution inside Liquid Foods of Different Viscosity during Reciprocal Agitated Processing in the Shaka Retort

[Davy Verheyen](#) and Jan F. Van Impe, KU Leuven, Dept. of Chemical Engineering, BioTeC+ & OPTEC & CPMF2, Ghent, Belgium and Ozan Altin and Ferruh Erdogdu, Dept. of Food Engineering, Ankara University, Golbasi-Ankara, Turkey and Fabrizio Sarghini, University of Naples Federico II, Dept of Agricultural Sciences, Naples, Italy Dagbjørn Skipnes and Torstein Skára, Nofima, Stavanger, Norway

FOOD_INNOV_02_ONL

Microwave Pasteurization of Beer: A Computational Study with Experimental Validation

[Ozan Karatas](#), Huseyin Topcam and Ferruh Erdogdu, Department of Food Engineering, Ankara University, Ankara, Turkey

Tuesday, 8th April 2020

FOOD_INNOV_07_ONL

In Vitro Fermentation Kinetics of an Antarctic Yeast and Suitability for Beer Production

Juan Manuel Cevallos-Cevallos, Christian Guarco and Andrea Morales, ESPOL, CIBE, Campus Gustavo Galindo, Guayaquil, Ecuador

FOOD_INNOV_14_ONL

Cold Plasma Treatment as a Processing Technology to modify Peanut Oil

Ximena V Yepez and Haci Baykara, Facultad de Facultad de Ingenieria, Mecanica y Ciencias de la Produccion, ESPOL, Guayaquil, Ecuador and Sarah Cady, Chemical Instrumentation Facility, Iowa State University, Ames, IA, USA and Kevin M. Keener, College of Engin. & Physical Sci., Univ. of Guelph, Guelph, Canada

ROOM B – M228 - 15.00-17.30

FOOD SAFETY

FOOD SAFETY II – ENVIRONMENTAL RISK ASSESSMENT I

FOOD_RISK_01_ONL

A Quantitative Risk Assessment of E. coli O157:H7 on Ready to Eat Foods following the Application of Biomaterials on Land

Rajat Nag and Enda Cummins, UCD School of Biosystems and Food Engineering and Annetta Zintl, Bryan K Markey and Paul Whyte, UCD School of Veterinary Medicine, Belfield, Dublin, and Vincent O'Flaherty, National University of Ireland Galway, School of Natural Sciences, Galway, and Declan Bolton, Teagasc, Ashtown Food Research Centre, Ashtown, Dublin, and Owen Fenton and Karl G. Richards Teagasc, Environment Research Centre, Johnstown Castle, County, Wexford, Ireland

FOOD_SAFE_01

Microbial Deterioration of Lamb Meat of Portuguese Origin as affected by Its Intrinsic Properties

Vasco A. P. Cadavez, Ursula Gonzales-Barron, Diogo Félix-Oliveira, Sara Coelho-Fernandes and Gisela Santos-Rodrigues, Centro de Investigação de Montanha (CIMO), Instituto Politécnico de Bragança, Bragança, Portugal and José M. Lorenzo and Roberto Bermúdez Piedra, Fundación Centro Tecnológico da Carne, Parque Tecnológico de Galicia, San Cibrao das Vióas, Spain

FOOD_SAFE_02

Meta-Regression Models describing The Effects of Added Lactic Acid Bacteria on Pathogen Inactivation in Milk and Cheese

Beatriz Nunes Silva and José António Teixeira, Centre of Biological Engineering (CEB), Univ. of Minho, Braga and Ursula Gonzales-Barron and Vasco Cadavez, Centro de Investigação da Montanha (CIMO), IPB, Bragança, Portugal

Sessions - Tuesday

Tuesday, 8th April 2020

17.30 - 18.30

ROOM A – L226 – 17.30-18.30

INNOV

**INNOVATIVE FOOD PRODUCTION AND PROCESSING
TECHNOLOGIES III – DRYING TECHNIQUES**

FOOD_INNOV_03

Temperature Uniformity during Microwave Thawing: A Computational Study for Geometry and Rotation Effects

Ozan Altin, Huseyin Topcam, Ozan Karatas and Ferruh Erdogdu, Department of Food Engineering, Ankara University, Golbasi-Ankara, Turkey and Francesco Marra, Dipartimento di Ingegneria Industriale, Universita degli studi di Salerno, Salerno, Italy

FOOD_INNOV_05

Data Acquisition for Modeling Convective Drying of Yacón (*Smallanthus sonchifolius*) Slices

Bianca Cristine Marques and Carmen Cecilia Tadini, University of São Paulo, Escola Politécnica, and FoRC/NAPAN Food Research Center, SP, Brazil and Artemio Plana-Fattori, Université Paris-Saclay, INRAE, AgroParisTech, UMR SayFood, Massy, France

ROOM B – M228 - 17.30-18.30

FOOD SAFETY

FOOD SAFETY III - ENVIRONMENTAL RISK ASSESSMENT II

FOOD_SAFE_04

Computational Heat Transfer during Horizontal Rotation Process of Particulate Canned Foods

Ferruh Erdogdu, Department of Food Engineering, Ankara University, Golbasi-Ankara, Turkey and Angela De Vivo and Fabrizio Sarghini, University of Naples Federico II, Department of Agricultural Sciences, Naples, Italy

FOOD_SAFE_06

Impact of LED Light on *Pseudomonas Fluorescens* and *Staphylococcus Epidermidis* Biofilms

Valeria Angarano, Cindy Smet, Simen Akkermans, Charlotte Watt and Jan F.M. Van Impe, BioTeC+, Chemical and Biochemical Process Technology and Control Department of Chemical Engineering, KU Leuven, Ghent, Belgium and Andre Chieffi, Procter&Gamble Newcastle, United Kingdom

Tuesday, 8th April 2020

19.30 - 23.00


**19.30 - 23.00
CONFERENCE DINNER**



Brasserie de Foyer

Sint-Baafsplein 17

9000 Gent

 Tel: + 32.9 234 13 54

 Email: info@foyerntgent.be

Website: <http://foyerntgent.be>



Dinner - Tuesday

Wednesday, 9th April 2020

REGISTRATION

08.30 – 16.00

IN FRONT OF ROOM L226, BUILDING L, 2ND FLOOR

09.00 - 10.00

ROOM A – L 226 – 09.00-10.00
KEYNOTE ADDRESS

KEYNOTE



KEY_04_ONL

[Risk of underestimating the Power of Communication in the Area of Food Safety](#)

Masami T. Takeuchi, FAO, Rome, Italy

10.00 - 10.30

COFFEE BREAK

10.30 - 12.30

ROOM A – L 226 - 10.30-12.30

CLIMATE CHANGE

CLIMATE CHANGE I - THE INFLUENCE OF CLIMATE CHANGE

FOOD_CLIM_ENV_01_ONL

Can Food Consumption Studies help in Modelling Climate Change?

[Ilija Djekic](#) and Igor Tomasevic, Faculty of Agriculture, University of Belgrade, Belgrade - Zemun, Republic of Serbia

Wednesday, 9th April 2020

ITN_PROTECT_03_ONL

Framework for Decision Support System (DSS) on The Influence of Climate Change on Food Safety

Gopaiah Talari, Cronan McNamara, Enda Cummins, John O'Brien, Creme Global, University College Dublin, Dublin, Ireland

ITN_PROTECT_04

Towards a Climate Change Resilient Industry: Application to Dairy Manufacturing

Rodney J. Feliciano, Géraldine Boué, and Jeanne-Marie Membré, Secalim UMR1014, INRA, ONIRIS, Nantes, and Jean-Cristophe Augustin, Danone Food Safety Center, Palaiseau, France

ITN_PROTECT_05_ONL

Modeling Future Scenarios within the Life Cycle Assessment Framework under Climate Change Conditions: Dairy Sector as a Study Case

Paola Guzmán, Miguel Mauricio-Iglesias and Almudena Hospido, Universidade de Santiago de Compostela, Santiago de Compostela, Spain and Anna Flysjö, Arla Foods, Viby J, Denmark

ITN_PROTECT_06_ONL

Considerations in Modelling Energy Demand in the Dairy Supply Chain

Maria Ioanna Malliaroudaki, Becca Ferrari, Rachel Gommès, Serafim Bakalis, Department of Chemical and Environmental Engineering, University of Nottingham, Nottingham, United Kingdom

12.30 - 13.30

LUNCH BREAK

13.30 - 15.30

ROOM A – L 226 - 10.30-12.00

CLIMATE CHANGE

CLIMATE CHANGE II – CLIMATE CHANGE AND MICROBIAL DYNAMICS

ITN_PROTECT_08

ITN_PROTECT_ESR#3: Multi-scale Modelling Approaches for Microbial Dynamics in the Context of Climate Change: a Needs Analysis

Lydia Katsini, Simen Akkermans, Satyajeet Bhonsale, Styliani Roufou, Sholeem Griffin, Vasilis Valdramidis and Jan Van Impe, Katholieke Universiteit Leuven, Ghent, Belgium

Wednesday, 9th April 2020

ITN_PROTECT_07_ONL

Microbial Changes in Dairy Wastewater under Climatic Stress Conditions

Styliani Roufou and Juan Attard, Department of Food Sciences and Nutrition, University of Malta, and Jan Van Impe, Department of Chemical Engineering, BioTec- Chemical & Biochemical Process Technology & Control, Katholieke Universiteit Leuven, Ghent, Belgium and Sholeem Griffin Vasilis P. Valdramidis, Department of Food Sciences and Nutrition; University of Malta, Malta

ITN_PROTECT_01_ONL

Feed-to-Food Chain Framework Model for the Risk Assessment of Mycotoxins

Rhea Sanjiv Chhaya and Enda Cummins, Biosystems and Food Engineering, Agriculture and Food Science Centre, University College Dublin, Belfield, Dublin, Ireland

ITN_PROTECT_02_ONL

Development and validation of an Expanded Model of *Geobacillus stearothermophilus* Growth as a Function of Temperature, pH and Water Activity

Ourania Misiou and Konstantinos Koutsoumanis, Department of Food Science and Technology, Aristotle University of Thessaloniki, Thessaloniki, Greece

FOOD_CLIM_ENV_03

Moisture Sorption Isotherms of Coriander Leaves and Estimation of Shelf Life of Dried Coriander Leaves (*Coriandrum Sativum*)

Tchoukouang, R. D. N. Tchoukouang, A. M. B. Arocha and M.M.C.Vieira, Higher Institute of Engineering, University of Algarve, Campus da Penha, Faro, Portugal

FOOD_CLIM_ENV_04

Effect of Temperature and Delayed Packaging on The Shelf Life of late Crop Greek Peaches and Nectarines

Efstathia Tsakali, Melina Aroni, Mavra Marouda, Anastasia Kanellou, John Tsaknis, Dimitra Houhoula, Spiridon Konteles and Dimitrios Timpis, Department of Food Science and Technology, Univ. of West Attica, Egaleo, Athens, Greece

15.30 – 16.00

COFFEE BREAK

16.00 - 18.00

**ROOM A – L226 - 16.00-18.00
SUSTAINABLE FOOD SYSTEMS I**

SUSTAIN

Wednesday, 9th April 2020

FOOD_ECON_02

Regression Analysis of Ukraine's Grain Production Transformation in Context of Climate Change

Viktor Zhukovskyy, Larysa Bachyshyna and Nataliya Zhukovska, Department of Computer Science and Applied Mathematics and Yelyzaveta Mykhailova, Preparatory Department for International Students, National University of Water and Environmental Engineering, Ukraine

FOOD_CHAIN_01_ONL

A Generic Software to support Collective Decision in Food Chains and in Multi-Stakeholder Situations

Rallou Thomopoulos and Julien Cufi, INRAE (IATE lab) / INRIA (GraphIK lab), Montpellier and Maxime Le Breton, Montterlot, France

FOOD_CHAIN_03

Data Driven Modelling of the Beer Aging. Formation and Release of Beer Staling Aldehydes

Carlos Andre Muñoz, Paula Bustillo Trueba, Barbara Jaskula-Goiris and Jan Van Impe, KU Leuven, Department of Chemical Engineering, BioTeC+ Chemical & Biochemical Process Technology & Control, Department of Microbial and Molecular Systems (M2S), Laboratory of Enzyme, Fermentation and Brewing Technology (EFBT), Ghent, Belgium

FOOD_SUSTAIN_01_ONL

Silage Production from the Residues of Plantain (Musa AAB Simmonds): A Nutritional Analysis through Process Simulation

James A. Gómez and Óscar J. Sánchez, Research Group on Food and Agro-industry, Department of Engineering, Universidad de Caldas, Manizales, Colombia and José A. Teixeira and Clarisse Nobre, Centre of Biological Engineering, University of Minho, Campus de Gualtar, Braga, Portugal

18.00 - 18.15

ROOM A – L226 - 18.00-18.15

CLOSING SESSION

Closing Session and Best Paper Award

Meeting - Thursday

Thursday, 10th April 2020

09.00 - 15.00

**ROOM M.210 - 09.00-15.00
MEETING MANAGEMENT COMMITTEE**

ITN_PROTECT

ITN_PROTECT meeting

FOODSIM'2022

FOODSIM'2022



Proposals for workshops, special tracks, exhibitions etc. can be sent in by **December 2020** to Philippe.Geril@eurosis.org & Jan.VanImpe@cit.kuleuven.be

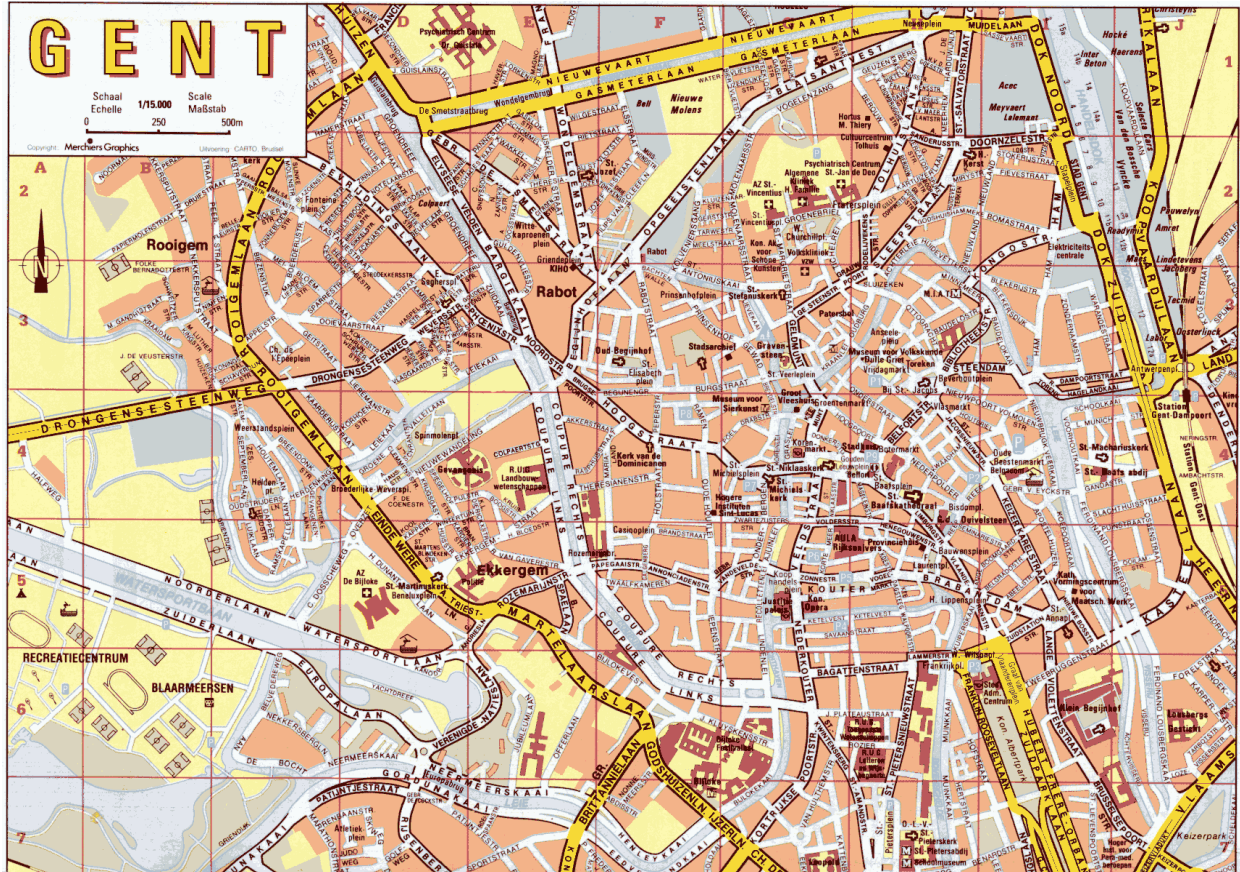
Conference Site Map

Conference Site Map



The conference takes place in rooms L 226 and M 228 in Buildings L&M. The coffee breaks and lunches are in Building L in the meeting space in front of room L226

Conference Site Map

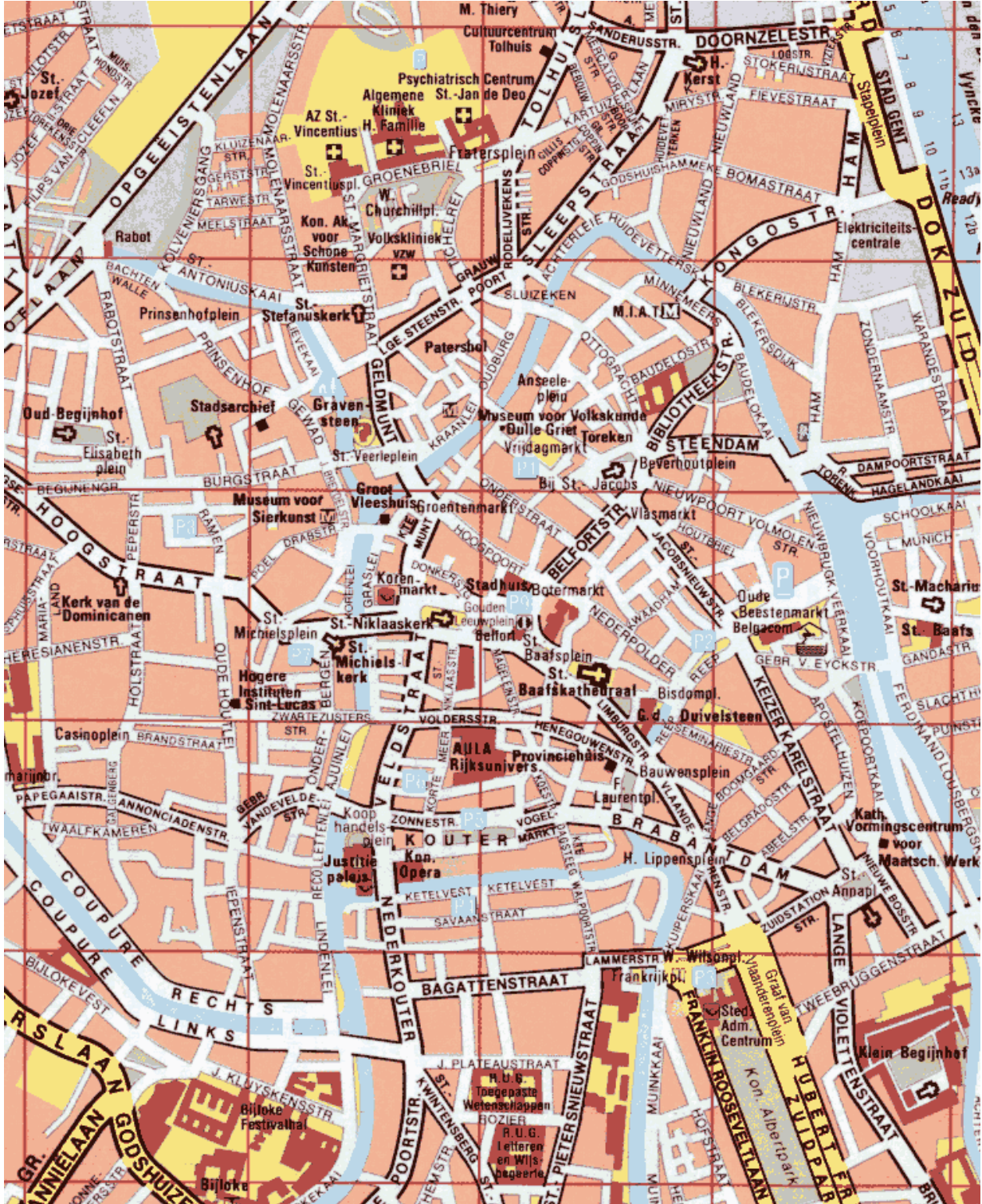


You will find the conference location on this map in quadrant E3
(KIHO/ODISEE)

Conference Site Map

Conference Site Map

Conference Dinner site location from left 2 down/3 across



NOTES

Conference Notes

FOODSIM'2020 At-Conference Registration Form

Please legibly print or type and fill out completely. (Check appropriate boxes where necessary)

FIRST NAME	LAST NAME	M.I.
COMPANY OR AFFILIATION		
Mailing address (tick one): <input type="checkbox"/> HOME <input type="checkbox"/> BUSINESS		
STREET		
CITY		
ZIPCODE	COUNTRY	
TELEPHONE	FAX	
E-MAIL		
DATE	SIGNATURE	
1. <input type="checkbox"/> EUROSIS member € 615 Member Number: _____		€ _____
2. <input type="checkbox"/> Members of Sponsor or Affiliate Society € 615		€ _____
3. <input type="checkbox"/> Non-Member Participant € 665		€ _____
4. <input type="checkbox"/> Student Participant € 515		€ _____
5. <input type="checkbox"/> Students, <u>who are not authors</u> but who wish to attend the conference, or ONE DAY PARTICIPANTS pay: € 445		€ _____
(Above registration fees include, one copy of the PROCEEDINGS, all midday meals, cocktail, refreshments, coffees and social program,) One Day Participants and Non-Author Students cannot participate in the conference dinner.		
6. <input type="checkbox"/> Tutorial registration ONLY - €30 (students) Or €80 (non students)/ per tutorial		€ _____
6. <input type="checkbox"/> Conference Dinner Ticket for Companion € 80 <input type="checkbox"/> Lunch Ticket for Companion € 25/day <input type="checkbox"/> Walking Dinner Ticket for Companion € 50		€ _____
7. <input type="checkbox"/> Extra Conference Proceedings € 50 Cash and Carry		€ _____
VAT Number if applicable: _____		
TOTAL AMOUNT DUE		€ _____
<u>ADD 21% VAT (Value Added Tax) OBLIGATORY</u>		€ _____
TOTAL AMOUNT REMITTED		€ _____

[12] Pay by **CREDIT CARD** and fill in the information below:

Charge my (tick one): Visa Euro/Mastercard American Express

CARD NO: _____ : _____ : _____ : _____ EXP.DATE: ____ / ____

Authorizing Signature:

Print Signature in CAPITALS



EUROSIS was borne out of discussions with the European Community to set up a new kind of Society, which would be project driven instead of driven by pure membership and conferences.

The aim of EUROSIS is to set up topic related Technical Committees which will link directly to European Projects in the field of computer simulation and related areas and to act as a knowledge pool for future European Networks of Excellence, like MOSAIC.

If you would like to receive more information about EUROSIS, please contact

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Please send me info on EUROSIS:

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