
**16TH Multidimensional
Chromatography
Workshop**

February 3 – February 5, 2025

Preliminary Program

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Full Program – MONDAY February 3, 2025

8:00 - 8:30 AM	Registration
8:30 - 9:00 AM	KL01 Karine Faure - Introducing Supercritical Fluid Chromatography in the Community of Multidimensional Chromatography
9:00 - 9:30 AM	KL02 Thomas Dutriez - GC×GC-MS - Fragrance Allergens - The Olympic Gold Standard
9:30 - 9:50 AM	OL01 Clément De Saint Jores - Development of a multiple heart-cut SFC-SFC setup
9:50 - 10:10 AM	OL02 Sebastiaan Eeltink - Toward unrivaled chromatographic resolving power in proteomics: Design and development of comprehensive spatial three-dimensional liquid-phase separation technology
10:10 - 10:40 AM	Coffee Break and poster session
10:40 - 11:00 AM	OL03 Frederic Iynen - Enhanced chiral screening of complex samples via aqueous achiral × chiral comprehensive liquid chromatography
11:00 - 11:20 AM	OL04 Michael Laemmerhofer - Application of 2D-LC to the analysis of chiral and other isomeric molecules in biosciences
11:20 - 11:40 AM	OL05 Donatella Ferrara - One-step-microwave-assisted extraction and derivatization followed by comprehensive two-dimensional chromatography coupled with flame ionization detector to analyze fatty acid methyl esters (FAMES) in complex food matrices.
11:40 - 12:00 AM	OL06 Nikoline J. Nielsen - Profiling phenolic compounds in shea by comprehensive two-dimensional liquid chromatography hyphenated to ion mobility spectrometry and high-resolution mass spectrometry
12:00 - 12:20 PM	OL07 Laura McGregor - Investigating the impact of packaging on oat volatiles using GC×GC-TOF MS
12:20 - 12:40 PM	OL08 Christopher Freye - Non-targeted analysis of PFAS using two dimensional gas chromatography
12:40 - 1:30 PM	Lunch

1:30 - 1:50 PM	Ivo Novotný – LabRulez FL01 Damien Eggermont - Coupling of VAC-HS-SPME and GC×GC-QMS for simultaneous 5-HMF quantification and volatile profiling in honey
1:50 - 2:10 PM	FL02 Aleksandra Gorska - MOSH&MOAH in food ingredients and additives, and the advantages of using LC/GC×GC(-FID/TOFMS) for their analysis FL03 Tijmen S. Bos - Automation and challenges in one- and-dimensional liquid chromatography method development: what is optimal?
2:10 - 2:30 PM	FL04 Stepan Urban - Forensic olfactronics and human scent signatures created from GC×GC-MS data FL05 Oleksii Kaminskyi - Development and testing of a non-contact scent collection device on real human scent
2:30 - 2:50 PM	FL06 Elsa Boudard - Towards a better understanding of the body volatolome: focus on endogenous parameters influencing body volatolome composition FL07 Emma Macturk - Method optimization of fingerprint residue using comprehensive two-dimensional gas chromatography
2:50 - 3:10 PM	FL08 Radim Spetlík - Sex and person identity recognition from GC×GC analysis of scent samples FL09 Marion Risse - The impact of the menstrual cycle on skin volatile profiles
3:10 - 4:30 PM	Coffee Break and Poster session
4:30 - 5:30 PM	Guided Discussion
7:00 PM	Conference dinner at the Liège University Aquarium

Full Program – TUESDAY February 4, 2025

8:00 - 8:30 AM	Registration
8:30 - 9:00 AM	KL03 Pascal Cardinael - How to design microcolumns for comprehensive GC
9:00 - 9:30 AM	KL04 Patrik Petersson - Application of 2D-LC-MS for analysis of pharmaceutical peptides
9:30 - 9:50 AM	OL09 Jelle De Vos - Multi-dimensional LC-MS platforms for structure-function characterization of therapeutic antibodies
9:50 - 10:10 AM	OL10 Anaïs Rodrigues - The Century Mix as QC for untargeted metabolomics using two-dimensional gas chromatography
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10:10 - 10:40 AM	Coffee Break and poster session
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10:40 - 11:00 AM	OL11 Katelynn Perrault Uptmor - Observation of chromatographic differences by non-specialist viewers for one-dimensional gas chromatography and comprehensive two-dimensional gas chromatography output
11:00 - 11:20 AM	OL12 Rafal Gieleciak - Advanced data processing techniques in GC×GC-TOFMS for bio-oil analysis
11:20 - 11:40 AM	OL13 Masaaki Ubukata - Development of unknown compounds analysis method combining high-resolution mass spectrometry, soft ionization technique, and ai technology for comprehensive 2-dimensional gas chromatography
11:40 - 12:00 AM	OL14 John Moncur - Leveraging chromatographic and statistical approaches for enhanced GC×GC-MS data processing
12:00 - 12:20 PM	OL15 Nino Milani - Evaluation of the relationship between peak and signal characteristics and the performance of common peak-detection methods in comprehensive two-dimensional chromatography
12:20 - 12:40 PM	OL16 Christina Kelly - Applying statistical data processing tools for GC×GC differentiation of alternative aviation fuels
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12:40 - 1:30 PM	Lunch
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1:30 - 1:50 PM	FL10 Oskar Munk Kronik - Data processing workflows for non-target screening on LC×LC-HRMS data: ready to go? FL11 Michael Sorochan Armstrong - Comparative analysis of comprehensive two-dimensional gas chromatography-time-of-flight mass spectrometry data in time and frequency domains
1:50 - 2:10 PM	FL12 Ulrika Malá - Analysis of the human scent on the cartridge cases using GC×GC-MS/TOF FL13 Marie Pardon - Comprehensive two-dimensional liquid chromatography coupled to high-resolution mass spectrometry for the characterization of pharmaceutical residues in hospital wastewater
2:10 - 2:30 PM	FL14 Megane Aebischer - Development of an online SEC-UV-RP-MS method for multi-attribute characterization of adeno-associated viruses FL15 Ryland T. Giebelhaus - GC×GC-TOFMS metabolomics and exposomics for studying the impact of fetal and neonatal cannabis exposures
2:30 - 2:50 PM	FL16 Colleen Ray - In-situ accelerated aging and analysis of high explosives via GC×GC-TOFMS FL17 Andrea Caratti - Dual parallel detection raw data fusion: challenges and opportunities for accurate fingerprinting over large time frames
2:50 - 3:00 PM	FL18 Sebastiano Panto - Boosting non-targeted analysis with comprehensive two-dimensional gas chromatography and high-resolution mass spectrometry
3:00- 4:30 PM	<i>Coffee Break and Poster session</i>
4:30 - 5:30 PM	Guided Discussion
6:00 PM	<i>LECO Beer Tasting event</i>

Full Program – WEDNESDAY February 5, 2025

8:00 - 8:30 AM	Registration
8:30 - 9:00 AM	OL17 Patricia Forbes - Multidimensional gas chromatography-mass spectrometry for the elucidation of indoor air quality improvements arising from planned interventions
9:00 - 9:30 AM	OL18 Andriy Rebryk - What's in the dust? GC×GC-MS based non-target screening of house dust OL19 Catherine Brasseur - TD-GC-MS/O and TD-GC×GC-HRTOFMS for the characterization of odorous compounds in recycled materials
9:30 - 9:50 AM	OL20 Dwight Stoll - An aliquot push-pull interface for coupling the first and second dimension separations in two-dimensional liquid chromatography
9:50 - 10:10 AM	OL21 Oliver Schmitz - Development of a MULTI-2D LC×LC-ESI/TPI-DUAL SOURCE-QTOF-MS for the analysis of complex samples
10:10 - 10:40 AM	Coffee Break
10:40 - 11:00 AM	OL22 James Harynuk - Characterization of chemical exposures from cannabis and vape devices using GC×GC-MS
11:00 - 11:20 AM	OL23 Pedro Victor Bomfim Bahia - Quantification of heterocyclic aromatic compounds (nso-het) in unfractionated and fractionated fuel samples by comprehensive two-dimensional gas chromatography with time-of-flight mass spectrometry
11:20 - 11:40 AM	OL24 Melissa Dunkle - Polyaromatic hydrocarbon quantification in plastic pyrolysis oils
11:40 - 12:00 AM	OL25 Miloš Auersvald - Determination of oxygen and chlorine-containing compounds in waste plastic pyrolysis oils using GC×GC-AED
12:00 - 12:20 PM	OL26 Roderquita Moore - Characterization of untargeted GC×GC TOFMS pyrolyzed vegetation utilizing a pyro probe
12:20 - 12:40 PM	OL27 Giulia Giacoppo - Sample preparation approaches coupled with GC×GC-MS for the characterization of new energy materials wastes
12:40 - 1:30 PM	Lunch

1:30 - 1:50 PM	FL19 Robert Cody - Pyrolysis and GC×GC-MS. a hot topic!
	FL20 Bruno da Costa Magalhaes - Speciation of chlorine-containing molecules in plastic pyrolysis oils
1:50 - 2:10 PM	FL21 Michelle Corbally - Application of pearson correlation coefficient to two-dimensional gas chromatography high-resolution time-of-flight mass spectrometry as a comparison and discovery-based technique
	FL22 Nadine Gawlitta - Ambient ultrafine particles: classification, chemical characterization, and quantification of ubiquitous pahs via DTD-GC×GC-TOFMS
<hr/> 2:10 - 2:30 PM	<hr/> <i>SCSC Poster Awards</i> <hr/>
<hr/> 2:30 - 2:50 PM	<hr/> <i>Closing Remarks</i> <hr/>

POSTER LIST

- P-1 Shanbo Zhang** Application of selective comprehensive two-dimensional liquid chromatography for the simultaneous analysis of constitutional isomers and enantiomers in oolong tea
- P-2 Rick van den Hurk** Overcoming the modulation challenges in two-dimensional liquid chromatography
- P-3 Andrea Caratti** Dual parallel detection raw data fusion: quantitative food volatilomics on large sample sets
- P-4 Fulvia Trapani** Comprehensive two-dimensional gas chromatography-time of flight mass spectrometry (GC×GC-TOF MS) and image pattern recognition: volatilomics unveil metabolic synergies in fecal microbiome
- P-5 Fulvia Trapani** Investigating quality traits in artisanal cheese by comprehensive two-dimensional gas chromatography and quantitative volatilomics
- P-6 Angelica Fina** Synergies among different metabolic fractions in germinated peanuts: flexibility and informative potential of comprehensive two-dimensional gas chromatography – time-of-flight mass spectrometry
- P-7 Sarah Foster** Aroma profiling of commercial poi products in fresh and aged states using comprehensive two-dimensional gas chromatography
- P-8 Tiziana Orlando** Molecular characterization of new renewable feedstocks by multi-scale analysis using gas chromatography, mass spectrometry and an oxygen selective detector
- P-9 Seo Lin Nam** High-resolution GC×GC-TOFMS analysis of crude oil after gamma ray radiolysis
- P-10 Laura McGregor** Group-type analysis of hydrocarbons in aviation fuel using dual-channel GC×GC-FID
- P-11 Thibaut Dejong** Multi-omics workflow to define oxidative stress at the molecular level using in vitro models
- P-12 Paula Albendea** Evaluation of mineral oil hydrocarbons in various types of unprocessed meat using LC-GC×GC-FID/MS
- P-13 Ewenet Mesfin** Accelerating wood metabolite extraction: optimizing Pressurized Liquid Extraction (ple) for enhanced wood metabolomic profiling
- P-14 Yunle Huang** Unraveling the distribution and enantiomer ratios of carotenoid-derived aroma compounds in oolong tea using multi-dimensional gas chromatography coupled with mass spectrometry
- P-15 Noemae Lim** Developing jet fuel property prediction models through composition analysis using comprehensive two-dimensional gas chromatography
- P-16 Taylor Hayward** Improved data integrity of complex volatile mixtures using GC×GC and QC pooling by thermal desorption tube recollection
- P-17 Robyn Barrett** Characterisation of biodegradable polymers by pyrolysis multidimensional gas chromatography-mass spectrometry (PY-GCXGC-MS)

- P-18 Michael Wilde** Immersive insights: transforming GCXGC data visualisation with virtual and augmented reality
- P-19 Djulia Bensaada** Identification of antifungal Volatile Organic Compounds (VOCS) from streptomyces scabiei using GCxGC-TOF-MS
- P-20 Miloš Auersvald** How to quantify olefins in plastic pyrolysis oils via GCxGC-FID without an MS detector
- P-21 Xiangdong Chen** GCXGC-TOFMS and GC/HRMS for the detailed characterization of volatile fractions from pyrolysis oils of wasted tires and hydrocarbon resins
- P-22 Kirk R. Jensen** Analysis of perfumes using two-dimensional gas chromatography on a quadrupole mass spectrometer
- P-23 Jana Čechová** Challenges in data processing and evaluation of scent samples analyzed by GCxGC-TOF
- P-24 Maria Llambrich** GcDUO: GCxGC-MS analysis with open-source software
- P-25 David Alonso** Comprehensive screening of complex samples for PFAS and other pollutants using enhanced chromatography with high-resolution time-of-flight mass spectrometry and spectral analysis tools
- P-26 Thibault Massenet** Breath sampling and patient considerations for clinical implementation: a comparative study
- P-27 Anika Lokker** Non-destructive identification possibilities of prehistoric hafting adhesives with DHS-GCxGC-TOFMS
- P-28 Matthew Herman** Application of alteration analysis coupled with two-dimensional correlations analysis to multidimensional gas chromatography high-resolution mass spectral data
- P-29 Veronika Skerikova** Sorbents for forensic olfactronic
- P-30 Tugce Sanliturk** Comparing GCxGC with GC-VUV in polyaromatic hydrocarbon quantification & qualification
- P-31 Natalia Manousi** Elucidation of the volatile profile of wild garlic by comprehensive two-dimensional gas chromatography-mass spectrometry and solid-phase microextraction
- P-32 Sena Caglar-Andac** Application of two dimensional online SPE-liquid chromatography to biotechnological drug analysis from biological fluids
- P-33 Pelin Koseoglu-Yilmaz** On-line SPE-LC for natural product analysis: a case study of *ulva rigida* phenolics
- P-34 Grant Ochoa** Investigation of sputum volatiles for classification of *M. Tuberculosis* infection by multidimensional gas chromatography - high resolution mass spectrometry
- P-35 Charlotte Mase** Using response factors to improve quantification of oxygen species in wood pyrolysis oils

The poster list will be updated with last minute posters.