AEROBIOLOGY
SCHWEIZERSICHE GESELLSCHAFT
SOCIÉTÉ SUISSE
SOCIETA SVIZZERA

AEROBIOLOGY SYMPOSIUM 2024

Aerobiology: Bridging environmental monitoring and health research

5 - 6th December 2024, Day 1: 13.15-17:20, – Day 2: 9.00-17:25

EPFL (École Polytechnique Fédérale de Lausanne), CH-1015 Lausanne
Building GC room C2 413 (locate on the map or download the campus app)

Target audience and general information

The symposium is aimed at allergists, paediatricians, pneumologists, other medical specialists and scientists interested to learn about aligning bioaerosol research and allergy medicine.

The symposium provides a platform for exploring the latest advances in environmental monitoring and clinical research on aeroallergens, aimed at bridging the gap between medical and environmental perspectives and defining synergies.

CME accreditation from SGAI/SSAI: **10** credits for both days, 4 credits for Thursday 5th, 6 credits for Friday 6th of December

Registration

For the registration, please use the form on **aerobiologie.ch/Aerobiology-Symposium-20241**
Registration will be handled on a first come, first serve basis - deadline **29.11.2024**

Price
Member: 60.- CHF │ Non-member: 120.- CHF

Administration

Aerobiology
Schweizerische Gesellschaft
Société suisse
Societa svizzera

Scheibenstrasse 20 │ CH-3014 Bern
office@aerobiologie.ch

AEROBIOLOGY
SCHWEIZERSICHE GESELLSCHAFT
SOCIÉTÉ SUISSE
SOCIETA SVIZZERA

Program

Thursday, 5th December

12:15 – 13.15	Arrival of participants. Registration and welcome coffee, tea
13:15 – 13.30	**Welcome address:** Prof. Dr. Marloes Eeftens, president SSA/SGA

Session 1: **INSIGHTS INTO POLLEN'S IMPACT ON HEALTH**
Chairs: Prof. Dr. Marloes Eeftens and Prof. Dr. med Yannick Muller

13.30 – 14.10	**How pollen affects respiratory health in the UK** Dr. Elaine Fuertes (Imperial college London)
14.10 – 14.50	**The PollDi app: An innovative early warning system to improve the quality of life of allergy sufferers in urban and rural areas - Evaluation of effectiveness in different settings** PD Dr. Stefanie Gilles (Uni Augsburg)
14.50 – 15.30	**Thunderstorm-related respiratory symptoms: an old story with a new ending** Prof. Dr. Athanasios Damialis (AUTH)
15.30 – 16.00	Coffee Break

Session 2: **MODERN ALLERGY MEDICINE**
Chairs: PD. Dr. Stefanie Gilles and Dr. Elaine Fuertes

16.00 –16.40	**The gut microbiome, its metabolites and childhood allergies** PD Dr. med. Caroline Roduit (Inselspital)
16.40 – 17.20	**Profil d'atopie en Suisse et ailleurs : résultats des multiplex IgE et des profils d'allergie pollinique en Suisse** Prof. Dr. med. Yannick Muller (Uni Lausanne)
19.00 – 22.00	**Conference dinner – networking** Gina's ristorante (location)

AEROBIOLOGY
SCHWEIZERSICHE GESELLSCHAFT
SOCIÉTÉ SUISSE
SOCIETA SVIZZERA

Friday, 6th December

08:30	Arrival of participants. Registration and welcome coffee, tea and croissant
09.00 – 09.10	**Introduction to the day** Dr. Maria Lbadaoui-Darvas

Session 3: EUROPEAN MONITORING NETWORKS

Chairs: Dr. Julia Palamarchuk and Prof. Dr. Athanasios Damialis

09.10 – 10.50	**AutoPollen, the European network for pollen monitoring** Dr. Marie-Pierre Meurville (MeteoSwiss)
09.50 – 10.30	**SYLVA: A SYstem for reaL-time obserVation of Aeroallergens** Dr. Fiona Tummon (MeteoSwiss)
10.30 – 11.00	Coffee Break

Session 4: **REAL TIME MEASUREMENTS**
Chairs: Dr. Bernard Clot and Dr. Fiona Tummon

11.00 – 11.40	**Assimilation of near-real-time pollen data by atmospheric composition model simulations** Mariel Suarez (TUM-Med)
11.40 – 12.20	**Modern methods and challenges in aeroallergen monitoring** Dr. Julia Palamarchuk (FMI)
12.20 – 14.00	Lunch break

Session 5: **ALTERNATIVE MEASUREMENT TECHNIQUES**
Chairs: Dr. Maria Lbadaoui-Darvas and Dr. Benoît Crouzy

14.00 – 14.40	**Current trends in bioparticles monitoring using laser remote sensing (lidar) techniques** Prof. Alex Papayannis (EPFL, NTUA)
14.40 – 15.20	**Ambient bioaerosol measurements and their implications for cloud formation** Prof. Athanasios Nenes (EPFL, ICE-HT/FORTH)
15.20 – 16.00	**Environmental Lipidomics: A Novel Approach to Unravel the Dynamics of Airborne Biological Particles** Dr. Kalliopi Violaki (EPFL)
16.00 – 16.30	Coffee break

AEROBIOLOGY
SCHWEIZERSICHE GESELLSCHAFT
SOCIÉTÉ SUISSE
SOCIETA SVIZZERA

Session 6: **PANEL DISCUSSION**
Chairs: Prof. Dr. Marloes Eeftens

16.30 – 17.15	**Environmental monitoring and health research: aligning interests and future collaborations** Panelists: PD. Dr Stefanie Gilles, Dr. Fiona Tummon, Prof. Dr. med. Yannick Muller, Dr. Elaine Fuertes, Prof. Athanasios Damialis
17.15 – 17.25	Closing remarks (Prof. Dr. Marloes Eeftens)

AEROBIOLOGY
SCHWEIZERSICHE GESELLSCHAFT
SOCIÉTÉ SUISSE
SOCIETA SVIZZERA

Speakers

Dr. Elaine Fuertes (Imperial College)

Resume: Dr. Elaine Fuertes is a research fellow in environmental epidemiology at Imperial College London. Her research explores how environmental factors—such as pollution, green spaces, pollen, and climate—along with behavioral influences, impact the development of allergic diseases and respiratory health across the lifespan. Currently, she focuses on understanding the health effects of outdoor pollens and moulds, particularly how they interact with air pollutants and how they can have different levels of allergenicity.

PD Dr. Stefanie Gilles, (University of Augsburg)

Resume: PD Dr. Stephanie Gilles studied biology at the Ludwig Maximilians University of Munich, where she also obtained her PhD. Since 2017 she is holding a lecturer's degree (Privatdozentin), which she obtained at the Faculty of Medicine of the Technical University of Munich. Stefanie Gilles is a group leader in environmental immunology at the Institute of Environmental Medicine and Integrative Medicine (TUNE), University of Augsburg. Her research group is conducting in vitro experiments on primary human immune cells with the aim to decipher mechanisms of allergic sensitization. Another focus is on the interaction between nasal epithelial cells and pollen, fungal spores and respiratory viruses. Apart from wet-lab work, the group has been conducting clinical studies in the field of allergy. Since 2015, Dr. Gilles has been running an allergic rhinitis cohort in Augsburg to study the relationships between natural pollen exposure, nasal and systemic immune responses, and symptoms.

Prof. Athanasios Damialis, (Aristotle University of Thessaloniki)

Resume: Prof. Damialis has been working on Aerobiology since 1996. Among others, he focuses particularly on the interplay of human-environment-climate. He is currently the President of the European Aerobiology Society. Also, he is the Europe Councilor of the International Society of Biometeorology and an EAACI Board member of the WG Aerobiology and Pollution.

PD Dr. med. Caroline Roduit, (Inselspital, Bern)

Resume: Dr. (med) Caroline Roduit is a pediatrician and allergy specialist at Inselspital, Bern University Hospital. She also serves as the research group leader in Immunology and Allergology at the Hochgebirgsklinik, Davos. Her research focuses on the intricate relationships between nutrition, the microbiome, the immune system, and the development of allergies in children. Dr. Roduit leads the CARE study, a birth cohort aimed at developing innovative strategies for allergy prevention.

AEROBIOLOGY
SCHWEIZERSICHE GESELLSCHAFT
SOCIÉTÉ SUISSE
SOCIETA SVIZZERA

Prof. Dr. med. Yannick Müller, (CHUV)

Resume:	Assistant Professor at the University of Lausanne and Associate Physician at CHUV (Centre Hospitalier Universitaire Vaudois), Yannick Muller specializes in clinical practice and research, focusing on cell therapy for autoimmune diseases and allergies.

Dr. Marie-Pierre Meurville, (MeteoSwiss)

Resume:	Marie-Pierre Meurville earned her Master's degree in Bioinformatics from the University of Lausanne, followed by a PhD from the University of Fribourg, where she researched ant evolution using machine learning and proteomics. She is now working at MeteoSwiss where she is the scientific coordinator of the EUMETNET AutoPollen program and contributes to the development of machine learning algorithms for bioaerosol identification.

Dr. Fiona Tummon, (MeteoSwiss)

Resume:	Fiona Tummon is scientific collaborator in the Biometerology Group at MeteoSwiss since 2018. She helped coordinate the EUMETNET AutoPollen Programme for over five years and currently helps manage the national pollen monitoring network SwissPollen. She is involved in a number of European research projects, including SYLVA and BioAirMet, and is helping to manage the CEN working group responsible for developing a new European standard for automatic pollen and fungal spore monitoring.

Mariel Suarez, (Technical University of Munich)

Resume:	Mariel Suarez is a PhD student at Technical University Munich in the Center of Allergy & Environment (ZAUM) and Helmholtzzentrum Munich. She conducts research focused on pollen forecast and pollen allergen potency.

Dr. Julia Palamarchuk, (Finnish Meteorological Institute)

Resume:	Dr. Julia Palamarchuk is a researcher at Finnish Meteorological Institute (Atmospheric Composition Unit). She has >10 years of experience in numerical weather prediction, forecast evaluation, atmospheric bioaerosols modelling and measurements. Her expertise in the field of pollen modelling and automatic detection resulted in a leading position as the FMI's representative in numerous European projects.

AEROBIOLOGY
SCHWEIZERSICHE GESELLSCHAFT
SOCIÉTÉ SUISSE
SOCIETA SVIZZERA

Prof. Alexandros Papayannis, (National Technical University of Athens/EPFL)

Resume:	Prof. Alexandros Papayannis (Dipl. Ing., DEA, Ph.D.) is the Director of the Laboratory of Optoelectronics, Lasers and Applications, Research Professor of Atmospheric Physics, Laser Technology and Laser Remote Sensing, at the National Technical University of Athens and Visiting Professor at the Laboratory of Atmospheric Processes and their Interactions (LAPI) at the Ecole Polytechnique Fédérale de Lausanne. He is a LiDAR expert in vertical profiling of atmospheric parameters, (bio)aerosols, clouds and gases (O3, H2O, Glyoxal) in the troposphere, in combination with sun photometry, satellite data, in situ aerosol measurements and meteorological modelling.

Prof. Athanasios Nenes, (EPFL / ICE-HT FORTH)

Resume:	Prof. Athanasios Nenes is the head of Laboratory of Atmospheric Processes and their Impacts (LAPI) at EPFL and an affiliated researcher at FORTH/ICE-HT is among the world's leading aerosol scientists with outstanding experience in aerosol experiments, instrumentation and modeling of aerosol. He has recently been leading several large-scale projects aimed at monitoring and characterizing bioaerosol and understanding their impacts on climate and human health.

Dr. Kalliopi Violaki, (EPFL)

Resume:	Dr. Kalliopi Violaki is a Research Associate in the Laboratory of Atmospheric Processes and their Impacts (LAPI) at EPFL. Her expertise lies in environmental analytical chemistry, with a focus on the chemical composition of atmospheric particles, the dynamics of sea-atmosphere chemical exchanges, and the biogeochemical cycles of nitrogen (N) and phosphorus (P). Currently, her research centers on bioaerosols and their impact on human health and ecosystems, applying advanced omics techniques.