

## Program *(Times are given in CEST)*

### Tuesday 17 September 2024

Tue, 11:00-13:00	<b>Registration</b>
Tue, 13:00	<b>Welcome</b> Tobias Fuchs, Head of Climate and Environment, DWD Astrid Eichhorn-Müller, Organizer of PMC24, DWD
Tue, 13:20-14:00	<b>PMC24 Key Note</b> Siegfried Raasch, LUH

<b>SESSION 1:</b>		<b>URBAN CASE STUDIES</b> <i>Chair: Astrid Eichhorn-Müller, Jannis Brassat</i>
Tue, 14:00	Pierre Monteyne <i>Leibniz University Hannover</i>	Addressing the Overheating in limited-domain urban simulations with PALM
Tue, 14:20	Daiane Brondani <i>CNR - ISAC</i>	Simulating Heatwave in Urban Environments: A Case Study of Villa Ada, Rome, during October 2023
Tue, 14:40	Patricia Glocke <i>KIT</i>	Modelling Impacts of Subsurface Thermal Anomalies on Potential Air Temperatures in Berlin
Tue, 15:00-15:30	<i>coffee break</i>	
Tue, 15:30	Maja Zuvella-Aloise <i>GeoSphere Austria</i>	Evaluation of city-scale PALM model simulations for Vienna, Austria using operational and crowdsourced data
Tue, 15:50	Nooshin Nowzamani <i>Ruhr-University Bochum</i>	Supporting location determination for a meteorological monitoring network in the city of Linz (Austria)
Tue, 16:10	Julian Anders <i>Leibniz University Hannover</i>	Microscale Simulation of Local Climate Zones -- A QGIS-Based Set-up Wizard for Customized Cities and Adaptation Studies with PALM
Tue, 16:30	Martin Schneider <i>AIT Austrian Institute of Technology GmbH</i>	Supporting location determination for a meteorological monitoring network in the city of Linz (Austria)
Tue, 16:50-17:30	discussion	

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### Wednesday 18 September 2024

SESSION 2:		DISTURBANCES and DISPERSION
<i>Chair: Tobias Gronemeier</i>		
Wed, 9:00	Dan Li <i>Boston University</i>	Characterizing Urban Flow Disturbances for Safe Operations of Urban Air Mobility
Wed, 9:20	Giovanna Motisi <i>Leibniz University Hannover</i>	Large-eddy simulation of vehicle-induced turbulence and pollutant dispersion in urban street canyons - Effects of thermodynamics and wind conditions
Wed, 9:40	<del>Robert Wegener</del>	<del>Urban Ozone Production Simulated with PALM-4U at High Spatial Resolution</del> → postponed to Friday
Wed, 09:40	Tereza Pikousová <i>Czech Hydromet. Institut</i>	Retrieval of Annual Air Quality Statistics from a Limited Number of LES Model Simulations
Wed, 10:00	<del>Olanrewaju O. Soneye-Arogundande</del> <i>Houston University</i>	<del>Modeling the Dispersion of Natural Gas Leaks from Damaged Transmission Pipelines Using PALM</del>
Wed, 10:00-10:45	<i>coffee break</i>	
Wed, 10:45	Katrin Gehrke <i>Pecanode GmbH</i>	Dispersion of ship exhaust plumes and current developments in the moving emissions module
Wed, 11:05	Victor Bourgin <i>Paris Saclay University, France</i>	Implementation of a particle resuspension model in PALM
Wed, 11:25	Sebastian Giersch <i>EBP Deutschland GmbH</i>	Unveiling Dust Devil Particle Transport: A Large-Eddy Simulation Study
Wed, 11:45-12:30	discussion	
Wed, 12:30-14:00	<i>group photo, lunch break</i>	

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SESSION 3: DYNAMICALLY DRIVEN <i>Chair: Julian Anders</i>		
Wed, 14:00	Tony Christian Landi <i>CNR - ISAC</i>	Intercomparison of PALM-4U simulations performed by using MOLOCH and WRF meteorological drivers
Wed 14:20	Jiachen Lu <i>University of New South Wales</i> → <b>cancelled</b>	UrbanTALES: A comprehensive dataset of Urban Turbulent Airflow using systematic Large Eddy Simulations
Wed, 14:20	Sonja Steinbrück <i>ForWind, IWES</i>	Improvement of the PALM-FAST coupling for heterogeneous wind fields

Wed,  
14:40-  
15:10

coffee break


SESSION 4: MODEL DEVELOPMENT <i>Chair: Pierre Monteyne</i>		
Wed, 15:10	Sasu Karttunen <i>University of Helsinki</i>	PALM-SLUrb: a single-layer urban surface model for micro to mesoscale atmospheric boundary layer studies
Wed, 15:30	Mohamed Hefny Salim <i>TU Berlin</i>	3-D Radiative Transfer in Building-Resolving Large-Eddy Simulations: Integrating the TenStream Solver with PALM Model System
Wed, 15:50	Pavel Krč <i>Czech Academy of Sciences</i>	Slanted surfaces: implementation, input data processing and testing
Wed, 16:10	Johannes Schwenkel <i>Leibniz University Hannover</i>	Simulating clouds with PALM: Current status, recent developments and perspectives
Wed, 16:30- 17:00	discussion	

Wed, 17:00- 18:30	<b>PALM developer meeting</b> → Gartensaal, DWD	
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Wed, 19:00	<b>conference dinner</b> → Restaurant LEONARDO Offenbach, Frankfurter Str. 39	
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### Thursday 19 September 2024

SESSION 5: VEGETATION		Chair: Giovanna Motisi
Thu, 9:00	Luca Mortarini <i>Università degli Studi di Milano</i>	Simulating the Amazon Forest Atmospheric Flow during an El Niño episode
Thu, 9:20	Joshua Brook-Lawson <i>University of Bath</i>	Simulating the Cooling Potential of Tilia Trees in Berlin Using PALM-LES: The Impact of Tree Age and Density During a Heatwave
Thu, 9:40	Ronald Queck <i>TU Dresden</i>	PALM and trees in different resolutions and their effect on thermal comfort
Thu, 10:00-10:15	discussion	
Thu, 10:15-10:45	coffee break	
SESSION 6: TURBULENT FLOWS		Chair: Johannes Schwenkel
Thu, 10:45	Lukas Vollmer <i>Fraunhofer IWES</i>	Investigations into the flow in and around offshore wind farms
Thu, 11:05	Oliver Maas <i>ENERCON</i>	Stratified flow over complex terrain and its effects on extreme wind conditions at wind turbines
Thu, 11:25	<del>Renuka Shastri <i>Instit. of Geography, Switzerland</i></del>	<del>Numerical investigation of high impact foehn storm in February 1925 using PALM -&gt; canceled</del>
Thu, 11:25	Igor Esau <i>UiT - the Arctic University of Norway</i>	Study of the Monin-Obukhov Similarity Theory (MOST) with PALM
Thu, 11:45	Benjamin Körner <i>University of Hohenheim</i>	Parametrizing turbulent fluxes by extending Monin Obukhov Similarity Theory with an Artificial Neural Network
Thu, 12:05	Matthias Mauder <i>TU Dresden</i>	The contribution of dispersive fluxes to the energy-balance closure problem
Thu, 12:05-12:45	discussion	
Thu, 13:00-14:15	lunch break	
Thu, 14:30-18:00	<b>14:15 opening reception</b> <b>Symposium in Honor of Siegfried Raasch</b> 	

## Program (Times are given in CEST)

Friday 20 September 2024

<b>SESSION 7: PALM TOOLS</b>		<i>Chair: Tobias Gronemeier</i>
Fri, 9:00	Astrid Eichhorn-Müller <i>DWD</i>	promet: a new pre-processor to generate dynamic drivers
Fri, 9:15	Pavel Krč <i>Czech Academy of Sciences</i>	A complete toolchain for preparing inputs for real-case PALM simulations
Fri, 9:30	Sebastian Schubert <i>TU Berlin</i>	Tools to generate the static driver – A comparison
Fri, 9:50	Matthias Winkler <i>Fraunhofer-IBP</i>	Advancements in PALM-4U GUI: New Features and Practical Application
Fri, 10:10	Matthias Winkler <i>Fraunhofer-IBP</i>	SanDy-PALM: a new open-source repository to create static and dynamic drivers for the PALM model system
Fri, 10:30-11:00	<i>coffee break</i>	
Fri, 11:00	Alexander Radi <i>ENERCON</i>	Enercon's pre-processor for complex terrain
Fri, 11:20	Joshua Brook-Lawson <i>University of Bath</i>	Validating PALM's Canopy Generator Using LiDAR-Derived Leaf Area Density Profiles
Fri, 11:40	Robert Wegener <i>FZ Jülich GmbH</i>	Urban Ozone Production Simulated with PALM-4U at High Spatial Resolution
Fri, 12:00-13:00	<b>PMC24 Wrap Up, Closing</b>	
Fri, 13:00-14:00	<i>lunch break</i>	
Fri, 14:00-16:00	<b>Working Group Session on PALM Tools</b> ➔ Gartensaal, DWD	