

2ND ANNUAL ONLINE SCIENTIFIC WORKSHOP

CLIMATE AND ATMOSPHERE RESEARCH & INNOVATION IN THE EASTERN MEDITERRANEAN & MIDDLE EAST

Program

Tuesday, 1st November 2022

All times are in EET (Cyprus local time)

Opening Session		
09:00	Welcome & Introduction to the Workshop	
	Workshop introduction and opening	J. Sciare The Cyprus Institute
Air Pollution: From Observations to Models (Chair: M. Rami Alfarra)		
09:10	Invited Speakers	
	On the important of continuous comprehensive observations: From local clustering to regional air pollution	M. Kulmala UHEL, Finland
09:30	Oral Presentations	
	The FAIRMODE CT9 platform: Assessing sensitivity of model responses to emission changes towards effective emission reduction strategies	B. Bessagnet JRC, EU
	Long-range source apportionment of Black Carbon and Carbon Monoxide over Cyprus using FLEXPART and global emission inventories	S.O. Nabavi Cyl, Cyprus
	Ship plume modelling based on CALPUFF AND WRF: Towards a first estimate of individual ship NOx emissions from space	A. Georgoulis AUT, Greece
	Quantifying Nitrogen Oxides emissions in the EMME region using TROPOMI observations	A. Rey-Pommier LSCE, France
	Is residential wood burning an important issue in atmospheric chemistry, light absorption and radiative forcing over the Eastern Mediterranean?	D. Kaskaoutis NOA, Greece
	PM _{2.5} sources in the East Mediterranean – Middle East city Beirut: Chemical characterization and contribution to ambient concentrations	N. Fakhri USJ, Lebanon
10:40	Coffee Break (10 min)	

New Instrumentation and Research Infrastructure (Chair: Efstratios Bourtsoukidis)		
10:50	Oral Presentations	
	Studying the transboundary transport of atmospheric aerosols in the EMME region	F. Marengo Cyl, Cyprus
	Retrieval of aerosol optical depth using an all-sky imager and machine learning	C.P. Giannaklis Univ. Patras, Greece
	Performance evaluation of high-resolution and low-cost air quality monitoring network employing the VAISALA-AQT530 sensors for assessing urban road traffic variability	R. Papaconstantinou Cyl, Cyprus
Atmospheric Dust (Chair: Franco Marengo)		
11:30	Oral Presentations	
	Does mineral dust influence new particle formation events?	J. A. Casquero-Vera UHEL, Finland
	Mineral dust properties within different atmospheric layers during two dust events over Cyprus (Cyprus Fall Campaign 2021)	M. Kezoudi Cyl, Cyprus
	Dust aerosol spatiotemporal variability and drivers	N. Bounceur NCM, Saudi Arabia
	Auxiliary task learning for early warnings of dust events: Evidences from the Eastern Mediterranean	R. Sarafian WIS, Israel
	Four types of dust events in Israel from a systematic classification	D. Nissenbaum WIS, Israel
12:30	Lunch Break (40 min)	
International Networks, Regional initiatives, Education & Training opportunities (Chair: Charbel Afif)		
13:10	Oral Presentations	
	Improving weather and climate services in the Middle East and North Africa through the wiser MENA programme	L. Norris Met Office, UK
	EU-funded Trans-National Access opportunities of Atmospheric Research Infrastructure in the Eastern Mediterranean & the Middle East	E. Bourtsoukidis Cyl, Cyprus
	Eastern Mediterranean & Middle East summer school opportunities	T. Jokinen Cyl, Cyprus
Climate Modelling and Prediction (Chair: Georgiy L. Stenchikov)		
13:50	Oral Presentations	
	Climate and weather extremes in the Eastern Mediterranean and the Middle East	G. Zittis Cyl, Cyprus
	Future changes of compound drought and heat wave events over Cyprus under global warming	K. Philippopoulos NKUA, Greece
	A multidecadal analysis of Mata's climate trends and extreme events, 1952-2022	C. Galdies Univ. Malta, Malta
	Comparison of projections of extreme precipitation indices for Jordan from high-resolution EURO-CORDEX and MASHREQ domain RCM simulations	A. Jrrar RSS, Jordan
14:30	Coffee Break (10 min)	

Air Pollution & Climate Change Impacts (Chair: Diana Francis)

14:40	Oral Presentations	
	Strong control of aerosol-cloud interactions by emissions from the boreal forests	T. Petäjä UHEL, Finland
	Water stress and sustainability challenges: Evidence from Saharan African countries (SSA)	D. Salman MSA Univ., Egypt
	Can Electric Vehicles Improve Urban Air-Quality and Save Lives?	C. Hadjistassou Univ. Nicosia, Cyprus
	Quantifying the effect of temperature on human mortality in Cyprus in response to Air Quality and other environmental factors	T. Economou Cyl, Cyprus
	Seasonal inhaled deposited dose of Particulate Matter in the respiratory system of urban individuals living in an Eastern Mediterranean city	T. Hussein INAR, Finland
	Large increases of in heat-related mortality burdens projected for the Middle East and North Africa under climate Change scenarios	Y. Proestos Cyl, Cyprus
	Mediterranean cyclones and severe weather warnings in Bulgaria	S. Tsalova Sofia Univ., Bulgaria
	Critical fire weather patterns of Greece: Forecasting extreme fire weather conditions in the medium-range	G. Papavasileiou NOA, Greece
	Developing a common approach to estimate future burnt area in the Mediterranean under various climate change scenarios	A. Karali NOA, Greece

16:30 Coffee Break (10 min)

16:40 vPICO presentations (Chair: Jean Sciare)

International Networks, Regional initiatives, Education & Training opportunities

	LIFE SIRIUS: A system for integrated environmental information in urban areas	J. Kushta Cyl, Cyprus
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New Instrumentation and Research Infrastructure

	A IDAR depolarization calibration approach using reference system	A. Papetta Cyl, Cyprus
	Cloud type identification using an all-sky imager system	A. Kazantzidis Univ. Patras, Greece
	Insights into the performance of low-cost optical particle sizers	C. Loizides Cyl, Cyprus

Air Pollution & Climate Modelling

	Real-time air quality forecast over the Eastern Mediterranean using the WRF-CHEM model	G. Georgiou Cyl, Cyprus
	Detection and attribution of greenhouse gases and anthropogenic aerosols to compound heat index over Africa in CANESM5 large ensemble	P. Adigun Univ. Tsukuba, Japan
	Evaluation of urban representation in high resolution WRF simulations over the Eastern Mediterranean and Middle East	K. Constantinidou Cyl, Cyprus
	Utilising generalised additive models (GAMS) to estimate near-surface temperature from satellite land surface information	A. Tzyrkalli Cyl, Cyprus
	Assessing the added value of increasing horizon resolution in simulated compound heat and humid conditions over the MENA-CORDEX domain	P. Hadjinicolaou Cyl, Cyprus



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	Projected heat stress under different levels of global warming with WRF Regional Climate high-resolution simulations for the MENA-CORDEX domain	A. Ntoumos Cyl, Cyprus
	A methodology for bridging the gap between regional and city-scale climate simulations for the urban thermal environment	K. Koutroumanou NKUA, Greece
	Acceleration of atmospheric chemical kinetics simulations through single-precision data structures and explicit vectorisation	K. Sophocleous Cyl, Cyprus
	Decomposing temperature variability in Global Mediterranean-type climate regions	D. Urdiales Flores Cyl, Cyprus
	An updated assessment of recent-past climate conditions in Cyprus	G. Lazoglou Cyl, Cyprus
	Intercomparison of the WRF-CHEM MODEL using Aeolus wind data with satellite-based products	P. Kyriakidis Cyl, Cyprus
Air Pollution Observations		
	Potential impact of working from home as an emission reduction measure in Cyprus	C. McClintock Cyl, Cyprus
	Cooking, Organic aerosols, and Air Quality at an Eastern Mediterranean urban environment	I. Stavroulas NOA, Greece
	Sources of size-resolved particle number concentrations at an urban location in Athens	P. Kalkavouras NOA, Greece
	PM2.5 in an urban industrial site in the East Mediterranean: Source apportionment and oxidative potential	M. Fadel ULCO, France
	Spatial variability of PM sources in Cyprus	E. Bimenyimana Cyl, Cyprus
	Possible influence of atmospheric micro nutrient deposition on the mucilage formation in the sea of Marmara: Preliminary results	M. Kocak METU, Turkey
	Massive dust loading during huge dust storm over Middle East during Spring and Summer 2022	H. Panahifar, AUT, Iran
17:45	End of Workshop	