



5th International Meeting on Meteorology and Climatology of the Mediterranean

Organized by *Associació Catalana de Meteorologia (ACAM)* and *Network of Meteorology of the Mediterranean* with support from *Tethys, Journal of Mediterranean Meteorology & Climatology* and *Istanbul Technical University (ITU)*

Programme

Istanbul, March 2nd-4th 2015

Monday, 2nd

8:30 : Conference Registration, light Ice break

Session 0: Welcome

9:20-9:25 Dr. **Jose Luis Palau**, Chair of Conference, on behalf of the Organising Committee: *Welcome and opening the 5th MetMed Conference*

9:25-9:45 Prof. **Selahattin Incecik**, Department of Meteorological Engineering, ITU: *Climate Change in Mediterranean: Current, Future and Challenges*

9:45-9:50 Prof. **Ahmet Duran Sahin**, Head of the Department of Meteorological Engineering, ITU: *Welcome Talk*

9:50-10:10 Mr. **Ismail Belen**, Vice General Manager, Republic of Turkey Ministry of Forestry and Water Affairs, General Directorate of Combating Desertification and Erosion: *Natural Resource Management, International Cooperation Mechanisms and Opportunities related to Forestry and Combat Desertification in Mediterranean Region, and UNCCD COP12*

10:10-10:30 Prof. **Mehmet Karaca**, Rector of ITU: *Welcome Talk*

Session 5: Wind energy

Chairmen: *Dr. Zardi, Dr. Codina and Dr. Tan*

10:30-10:45 **K. Horvath**, A. Bajić, S. Ivatek-Šahdan, A. Stanešić, I. Odak, M. Hrastinski, M. Tudor, E. Ivanković, M. Vašak, M. Đalto, J. Matuško, M. Baotić, N. Perić: *Weather Intelligence for Wind Energy - WILL4WIND*

10:45-11:00 **I. Odak**, L. Delle Monache, K. Horvath, M. Hrastinski, A. Bajić: *Wind Speed Ensemble Predictions With an Analog-Based Method in Complex Terrain*

11:00-11:15 **M. Davis**, F. Doblas-Reyes, V. Torralba Fernandez, N. Gonzalez-Reviriego, A. Pintó Biescas: *Resilience: A Semi-Operational Prototype to Forecast*

Wind Power from Weeks to Months Ahead

11:15-11:30 **G. Kirkil**, Y. Ezber, T. Kaytanci: *WRF's wind power ensembles for a wind farm located in a coastal area of Turkey*

11:30-11:45 **D. Koračin**, R. Belu, C. Smith, J. Mejia, K. Horvath, R. Vellore: *Microscale Variability of Wind Power Density Assessment in Complex Terrain and Wind Regime Trends in Future Climate Projections*

11:45-12:00 **E. Tan**: *Offshore Wind Energy Potential of Turkey*

12:00 : Lunch

Session 4: Numerical modelling

Chairmen: *Dr. Horvath, Dr. Teller and Dr. Palau*

13:15-13:30 **A. Montornès**, B. Codina, J. Zack: *Solar parameterizations: impact on real WRF-ARW simulations*

13:30-13:45 **R. Romero**, C. Ramis, V. Homar: *Observational and Numerical Study of the Severe Convective Storm of 29th October 2013 in the Balearic Islands*

13:45-14:00 **M. Telišman-Prtenjak**, I. Horvat, I. Tomazić, M. Kvakić, M. Viher, B. Grisogono: *Impact of Mesoscale Meteorological Processes on Anomalous Propagation Conditions Over the Northern Adriatic Area*

14:00-14:15 **D. C. Carrió**, V. Homar, U. Corsmeier: *Impact of Kitcube Data on the Prediction of Maritime Convective Severe Weather. Test for HyMeX IOP13 Event*

14:15-14:30 **U. Turuncoglu**: *Development and Validation of a Regional Earth System Model (RegESM) for the Mediterranean Region*

14:30 : Coffee Break - Poster attendance Block 5 & 4

15:40-15:55 **M. Hrastinski**, K. Horvath, I. Odak, S. Ivatek-Šahdan, A. Bajić: *Does increasing the resolution*

of Mesoscale Numerical Weather Prediction models enhance reproduction of wind regimes in the complex terrain?

15:55-16:10 L. Fita, P. Drobinski, F. Hourdin, L. Fairhead: *Regional results of the coupling of LMDZ physics in WRF*

16:10-16:25 L. Trapero, J. Bech, F. Duffourg, J. Lorente: *A Lagrangian Description of the Flow Feeding Precipitating Systems over a Mediterranean Mountainous Region (Eastern Pyrenees)*

16:25-16:40 R. Salgado, M. Potes, C. Policarpo, P. Le Moigne, ALEX 2014 Scientific Team: *Interactions lake-atmosphere under Mediterranean conditions: ALEX 2014 observations and simulations*

Tuesday, 3rd

Session 2: Processes and applications

Chairmen: *Dr. Cuxart and Dr. Palau*

8:30-8:50 Prof. Nuzhet Dalfes: *Opening talk*

8:50-9:05 G. Simó, J. Cuxart, T. Weidinger, A. Z. Gyongyosi, B. Wrenger, Z. Istenes, Z. Bottyan, Z. Bozoki, D. Tatrai, A. Jericevic, B. Matjacic, M. Kiss, J. Jozsa: *Field Study of the Atmospheric Boundary Layer in the Pannonian Plain*

9:05-9:20 B. Ahrens, A. Obermann: *Mistral and Tramontane Patterns in Regional Climate Models*

9:20-9:35 J. Cuxart, L. Conangla, M. Ponsetí, I. Fernández: *The imbalance of the measured surface energy budget and an estimation of the latent heat flux*

9:35-9:50 G. Duman, O. Yagci, E. Tan, E. Gorgun: *The Quantification of The Relationship Between Hydraulic Geometry of Rivers in Western Anatolia and The Formative Discharges*

9:50-10:05 J. L. Palau, F. Rovira: *Spatio-Temporal Variability of Atmospheric Precipitable Water Vapor Accumulation over the Mediterranean Sea*

10:05 : *Coffee Break - Poster attendance Block 2*

11:15-11:30 Th. Karacostas, I. Pytharoulis, I. Tegoulas, D. Bampzelis, S. Kartsios: *The 'DAPHNE' Conceptual Model for the Design of a Precipitation Enhancement Project in Thessaly, Greece*

11:30-11:45 J. L. Gómez-Amo, A. Di Sarra, C. Marcos, V. Estellés, R. Pedrós, M. P. Utrillas, J. A. Martínez-Lozano: *Impact of the mixing state on aerosol optical properties and radiative effect during a severe wildfire episode over Eastern Spain in summer 2012*

11:45-12:00 P. Jiménez-Guerrero, J. P. Montávez, N. Ratola: *Comprehensive Assessment of Atmospheric Benzo(A)Pyrene in the Mediterranean under Present and Climate Change Scenarios – A Field and Modelling Approach*

12:00-12:15 L. Fita, E. Flaounas: *FF: Water budget analysis on a set of severe cyclogenesis events in the Mediterranean basin*

12:15 : *Lunch*

Session 3: Remote and in-situ measurements

Chairmen: *Dr. Roujean, Dr. Caselles and Dr. Bech*

13:15-13:30 B. Boudad, H. Sahbi, I. Manssouri: *Using a Model Hybrid Based on ANN-MLP and the SPI Index for drought Prediction case of Inaouen Basin (Northern Morocco)*

13:30-13:45 S. Venafrá, M. G. Blasi, G. Liuzzi, G. Masiello, C. Serio, V. Telesca: *Surface Temperature And Emissivity Retrieval from Seviri Observations: Results and Comparisons with Remote and in-situ Measurements*

13:45-14:00 C. Birman, F. Karbou, J.-F. Mahfouf: *Daily rainfall detection and estimation over land using microwave surface emissivities*

14:00-14:15 J. M. Redondo, T. Vila, J. Tellez, J. M. Sanchez: *Diffusion in Convective Flows Laboratory Experiments and Atmospheric Flows*

14:15-14:30 J. L. Roujean, I. Trigo, A. Arboleda, C. Barroso, F. Camacho-de-Coca, D. Carrer, X. Ceamanos, C. C. DaCamara, J. García-Haro, F. Gellens-Meulenberghs, N. Ghilain, F. Goettsche, F. Olesen, M. Wooster: *Satellite Application Facilities on Land Surface Analysis (LSA SAF): an overview of existing MSG SEVIRI products*

14:30-14:45 P. Altube, J. Bech, O. Argemí, T. Rigo, N. Pineda: *Comparing three popular methods for monitoring weather radar antenna pointing accuracy*

14:45 : *Coffee break and poster attendance block 3*

15:45-16:00 D. Carrer, X. Ceamanos, J.-L. Roujean, B. Six, P. Nabat: *AERUS-GEO: An advanced initiative for tracking operationally aerosol events over any surface targets (including the Mediterranean Basin) based on satellite MSG/SEVIRI observations*

16:00-16:15 K. Lagouvardos, V. Kotroni, E. Galanaki, Th. Giannaros, A. Karagiannidis, S. Kazadzis, E. Proestakis: *Lightning studies in the frame of TALOS Project: Climatology, forecasting and now-casting*

16:15-16:30 V. García-Santos, Ll. Pérez, V. Caselles: *Comparing Different Manners to Characterize the Atmosphere for Meteorological Applications*

Wednesday, 4th

Session 1: Climatology

Chairmen: *Dr. Guijarro, Dr. Fita and Dr. Calbó*

8:30-8:50 Prof. Yurdanur S. Unal: *Opening talk*

8:50-9:05 D. Demirhan Bari: *Long Term Analysis of Rainfall Characteristics Related to Erosion Risk in Turkey*

9:05-9:20 P. Mahmoudi: *Synoptic Anomalies Result-*

ing in Pervasive Frosts in Iran

9:20-9:35 M. Tous, G. Zappa, R. Romero, L. Shaffrey: *Medicanes in HadGEM3 N512 climate simulations*

9:35-9:50 J. A. Guijarro: *Homogenization and Trends of Spanish Mean Wind Speed Monthly Series*

9:50-10:05 A. Jansà, V. Homar, R. Romero, S. Alonso, J. A. Guijarro, C. Ramis: *Extension of Mediterranean Summer towards Spring*

10:05-10:20 M. Alarcón, B. Jordina, T. Majeed Husam, C. Periago, R. Izquierdo: *Impact of Atmospheric Circulation Patterns on the Airborne Pollen Dynamics in Catalonia (NE Iberian Peninsula)*

10:20 : Coffee break and poster attendance block 1

11:25-11:40 Y. Yilmaz, U. Turuncoglu, O. L. Sen: *Performance Evaluation of CMIP5 Simulations for Turkey and Neighboring Region*

11:40-11:55 J. P. Montavez, P. Jimenez-Guerrero, A. Olmedo, S. Jerez, N. Ratola: *Present and Future Variation of drought Patterns over Mediterranean under Several Climate Change Scenarios*

11:55-12:10 L. Giovannini, L. Laiti, S. Serafin, D. Zardi: *A climatological analysis of diurnal winds in the Adige Valley in the Alps*

12:10 : Lunch

Session 6: Water cycle and climate change

Chairmen: *Dr. Scavone and Dr. Tan*

13:00-13:20 Prof. Izzet Ozturk: *Probable Impacts of Climate Change on Water Potential of Turkey*

13:20-13:35 N. Kutaladze, L. Megrelidze, M. Shvan-giradze: *Changes in water cycle at resent past 60 year in Georgia*

13:35-13:50 D. Demirhan Bari, A. Gabriel, C. Ozen: *Long Term Changes in Three Dimensional Middle Atmospheric Residual Circulation*

13:35-13:50 B. ÖnoI: *Analysis of Simulated Snow Variability During The 2013-2014 Drought over Turkey*

14:05-14:20 Ali, R. M. Khan: *A comparative analysis of climate change and impact on agriculture and food security and also practices for adaptation and mitigating climate change, The Cases and Asian Countries*

14:20-14:35 J. L. Palau, M. J. Sales, M. M. Millan: *Meso-scale Processes in the Western Mediterranean and their implications on the Water Cycle in the Basin*

14:35 : Coffee break and poster attendance block 6

15:35-15:50 A. R. Salah Eddine, C. Brahim, B. Abdelkader: *Development of new formula to estimate groundwater recharge and evapotranspiration in semi-arid area*

15:50-16:05 A. Erturk, R. Albay Akcaalan, Z. Dorak, O. Gaygusuz, C. Gurevin, L. Koker, M. Albay: *Impacts*

of Climate Change on Water Resources in Turkey - A Focus on Assimilation Capacity for Freshwater Ecosystems

16:05-16:20 A. Bouanani, K. Baba-Hamed, R. Bouanani: *Impact of Climate Variability on Contributions to Dam Watershed of Tafna (NW of Algeria)*

16:20-16:35 O. L. Sen, O. M. Gokturk, D. Bozkurt: *Climate Change and its Impacts on Water Resources in Turkey*

End of conference

List of posters

Session 5: Wind energy

P5.1 A. M. Palomares, M. Espino, J. Navarro, M. Grifoll, P. A. Jiménez, E. Pallares: *Application of a Wind-Wave-Current Coupled Model in the NW Zone of the Mediterranean Sea, next to the Catalan Coast*

P5.2 E. Yilmaz, N. Goktepe, S. S. Mentés, E. Tan, Y. S. Unal, F. M. Sayinta, E. Unal, B. Onol, B. Barutcu, S. Incecik: *Performance analysis of the WRF Model coupled to WindSim and WAsP Models for the Short Term Wind Energy Prediction System of Keltepe Wind Farm of Turkey*

P5.3 I. Priedite: *Economic assessment of CO₂ emission reduction in Latvia when part of CHP generated electricity is replaced by small scale wind turbines generated electricity*

Session 4: Numerical modelling

P4.1 N. Ata Tutkun, G. Ozel: *A Probabilistic Risk Assessment of Time to Rainfall of Turkey: a Censoring Approach*

P4.2 D. C. Carrió, V. Homar: *Potential of Ensemble Data Assimilation Methods to Forecast Severe Convective Phenomena Over the Sea*

P4.3 T. Vila, J. M. Redondo, J. Diez, M. A. Sanchez: *SAR Observations of Convective Flows in the Coastal Region of the NW Mediterranean*

P4.4 N. Goktepe, E. Yilmaz, F. M. Sayinta, E. Tan: *Verification of the WRF Model Wind Speed Forecasts for the Western Coastline of Turkey*

P4.5 K. Horvath, D. Koračin, C. Smith, R. Vellore, R. Belu: *Sub-Kilometer Dynamical Downscaling of Near-Surface Wind Profiles in Complex Terrain*

P4.6 I. Tegoulías, Th. Karacostas, I. Pytharoulis, S. Kotsopoulos, S. Kartsios, D. Bampzelis: *Using object based methods to verify weather predictions*

P4.7 J. A. Garcia-Valero, J. P. Montáñez, J. J. Gomez-Navarro, P. Jimenez-Guerrero: *Extreme Hot Days Trends and its Relation With Changes in the Atmospheric Circulation*

P4.8 T. M. Giannaros, D. Melas, I. Ziomas: *Evaluation of the Performance of a Mesoscale Modeling System for Wind Resource Assessment*

P4.9 E. Tan, D. D. Bari, A. Shaghayegh, D. Sari, S. Incecik: *Investigating the Local Circulations by WRF Model: A Case Study of İzmir*

P4.10 B. Rahima, B.-H. Kamila, B. Abderrazak: *Calibration and validation of a model rainfall-runoff: Application to Watershed Haute Tafna Beni Bahdel (Tafna, NW Algeria)*

P4.11 Z. Aslan, M. Altunç, G. Erdemir, A. Tokgozlu: *Evaluation of Wavelet and ANN Analyses for Wind Energy Potential*

Session 2: Processes and applications

P2.1 A. Sanchez-Romero, J. Calbó, J.-A. González, A. Sanchez-Lorenzo: *Retrieval of aerosol optical properties from a multifilter rotating shadowband radiometer over Girona, NE Spain*

P2.2 F. Pastor, J. A. Valiente: *Heat waves prediction system in a Mediterranean area (Valencia Region)*

P2.3 G. A. Giorgio, M. Ragosta, G. Scavone, V. Telesca: *Meteo-Climatic Analysis at Local Scale by Means of a Multivariate Statistical Procedure*

P2.4 M. A. Jiménez, R. Beltran, A. Traveset, N. Marbà: *Effect of Environmental Conditions on the Deposits of Seagrass Litter in two Contrasting Beaches of Mallorca Island*

P2.5 M. A. Jiménez, G. Simó, B. Wrenger, J. Martínez, J. A. Guijarro, M. Telišman-Prtenjak, J. Cuxart: *Phases of the Sea-Breeze in the Island of Mallorca*

P2.6 L. Marotta, E. Tan, V. Telesca: *A stochastic generation of daily precipitation in Turkey*

P2.7 B. Matjacic, J. Cuxart: *Mesoscale cold pool flow organization in the Pannonian basin*

P2.8 D. Serrano, M. J. Marín, M. P. Utrillas, M. Nuñez, J. L. Gómez-Amo, J. A. Martínez-Lozano: *In-ferring cloud optical depth of broken clouds*

P2.9 B. Martí, D. Martínez-Villagrasa, J. Cuxart: *An Experimental Evolution of the Fine Structure of the Temperature Profile 2m above the Surface*

P2.10 L. Laiti, L. Giovannini, D. Zardi: *Solar resource assessment in complex orography: a comparison of available datasets for the Trentino region*

P2.11 E. Mantilla, F. Pastor, J. A. Valiente, J. L. Palau, J. J. Diéguez: *Experimental Characterization of the Spatial Distribution of NO₂ Urban Pollution*

Session 3: Remote and in-situ measurements

P3.1 J. M. Sánchez, R. López-Urrea, C. Doña, D. Caselles, V. Caselles, A. Montoro, L. Martínez: *Comparison Between Micrometeorological Techniques and Lysimetry Measurements in a Mediterranean Vineyard*

P3.2 D. Haddouche, K. Mederbal, N. Bellahcene Zekri: *Characterization of the precipitation variation and its impact on landscapes changing in Algeria*

P3.3 J.-L. Roujean, D. Carrer, R. Lacaze, B. Smets: *Development of a surface albedo product from PROBA-V at the nominal resolution of 333M: method and pre-*

liminary validation around the Mediterranean basin

P3.4 N. Baghdadi, S. Cherchali, J.-F. Faure, M. Leroy, P. Maurel, J.-L. Roujean, M. Stoll: *The Theia Land Data Centre*

P3.5 D. Caselles, V. Caselles, R. Pérez, E. Valor, C. Doña, V. García-Santos, R. Niclòs, M. J. Barberá, J. M. Sánchez, C. Coll, J. A. Valiente: *Calibration of Landsat-8 Tirs Bands For Meteorological And Climatological Studies Of The Mediterranean Area*

P3.6 C. Corbari, M. Mancini, V. Telesca: *Satellite Land Surface Temperature and Ground Data for the Calibration of a Distributed Energy Water Balance Model*

P3.7 J. A. Valiente, R. Niclòs, M. J. Barberá, F. Pastor: *Angular Thermal-Infrared Measurements by an Autonomous Data Acquisition System to Validate Satellite Retrieved LST Products*

P3.8 J. Lorente, Y. Sola, J. Bech, A. Ossó: *Cloud and Aerosol Effects upon Surface Solar UV Irradiance in Barcelona*

Session 1: Climatology

P1.1 A. N. Yücekutlu: *Interaction with climate and ecosystem of Saharan dust dynamics*

P1.2 K. Zaninovic: *Implications of Climate Change to Croatian Tourism*

P1.3 S. Mathbout, J. A. Lopez-Bustins, J. Luterbacher, J. Martin-Vide: *Compression of multiple drought indices for meteorological drought monitoring in the Eastern Mediterranean*

P1.4 M. Achite, A. K. Toubal: *Detection of trends in precipitation during 1970-2010 in Wadi Wahrane basin, northwest Algeria*

P1.5 J. Calbó, J.-A. González, A. Sanchez-Lorenzo, A. Sanchez-Romero: *Building and Analyzing a Solar Radiation Series for Girona, NE of Iberian Peninsula (1986-2013)*

P1.6 A. Amengual, J. Cuxart, J. Vallespir: *Impact of climate change on several wine-growing regions of Spain*

P1.7 K. Baba-Hamed, A. Bouanani, F. Saouli, S. Belbachir: *Use of Statistical Methods for Spatialization of Climatic Parameters in Algeria*

P1.8 M. Alarcón, A. J. Mohammed: *Analysis of the Occurrence of Extreme Temperatures in the Iberian Peninsula in a Recent 20-Years Period*

P1.9 A. Al-Nassar, P. Sangrà, M. Alarcón, A. Jansà, C. Ramis: *The flood event that affected Iraq on November 2013: a synoptic approach*

P1.10 S. I. Bilgen, C. Yuruk, N. Goktepe, E. Tan, Y. S. Ünal, and S. S. Mentis: *Investigation on Heatwaves over Turkey and Leading Atmospheric Patterns*

P1.11 C. Yürük, S. Bilgen, Y. S. Ünal, S. Incecik: *Interannual Variations of Precipitation and Temperature Observations in Turkey*

P1.12 A. M. S. Delitala: *The Regional Climatological Network of Sardinia*

P1.13 N. Pineda, X. Soler: *The Influence of the Mediterranean Sea on the Annual Lightning Distribution in Catalonia*

Session 6: Water cycle and climate change

P6.1 M. Gajic-Capka, K. Cindric, I. Güttler, C. Brankovic: *Climate and Climate Change Analysis in the Lower Neretva River Basin, Croatia*

P6.2 L. Marotta, V. Telesca, F. Cioffi, U. Lall: *Assessment of climate change scenarios for Agro-Pontino plain through a Non-homogeneous Hidden Markov Model*

P6.3 M. Meskine, O. Ouardi, A. Kaarour: *A preliminary Study of the Infrared Spectrum of $^{34}\text{SF}_6$ (ν_4 and $\nu_2 + \nu_4$ combination band)*

P6.4 O. Karakus, E. Tan: *Climate Change Effect on Snow-Cover Duration in Turkey*

P6.5 E. Tan: *Variability in Moisture Flux Convergence Rates on Turkey*

P6.6 S. Khelifa, A. Rami: *Mediterranean sea level variability derived by multiresolution wavelet analysis*