



# 7th International Meeting on Meteorology and Climatology of the Mediterranean

Co-organized by *Tethys, Journal of Mediterranean Meteorology & Climatology*, Center of Environmental Studies of the Mediterranean (CEAM) and University of Balearic Islands (UIB) with the support of Catalan Meteorological Association (ACAM)

## Programme

Palma de Mallorca, March 4-6th 2019

### Monday, 4th

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**8:30** : Conference Registration, light Ice break

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#### Welcome

**9:30-9:35** Dr. Jose Luis Palau, Chair of Conference, on behalf of the Organizing Committee: *Welcome and opening the 7th MetMed Conference*

**9:35-9:45** Dr. Antoni Aguiló, Vice-rector de Campus, Cooperació i Universitat Saludable de la UIB: *Welcome words*

**9:45-9:50** Dr. Josep Calbó, Editor of Tethys:

**9:50-10:00** Dr. Maria Antònia Jiménez, on behalf of the Local Committee: *General information*

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10:00-10:30 Coffee break

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#### Session 3: Remote measurements and in-situ

Chairs: Joan Bech and Vicent Caselles

**10:30-11:00** J. L. Sánchez, P. Melcón, E. Garcia-Ortega, A. Merino, J. Díaz-Fernández, M. L. Martín, F. Valero, S. Fernández-González, P. Bolgiani, L. Sánchez-Muñoz, L. López and J. L. Marcos: *SAFE FLIGHT PROJECT: Detection and Identification of Aircraft Icing conditions using multiplatform observations.*

**11:00-11:15** G. Masiello, C. Serio, S. Venafrà, G. Lizzi and I. De Feis: *An application to Mediterranean Sea of the SEVIRI Level 2 Processor for Surface Parameters*

**11:15-11:30** M. A. Jiménez, A. Grau and J. Cuxart: *Estimation of the chilling hours in Mallorca through satellite-derived surface temperatures*

**11:30-11:45** M. Portabella, W. Lin, F. Polverari, A. Trindade and G. P. King: *Are satellite-derived mesoscale sea surface winds useful in the Mediterranean?*

**11:45-12:00** O. Rodríguez, J. Bech, J. Soriano, D. Gutiérrez and S. Castán: *A field work methodology for wind damage from strong-convective winds events*

**12:00-12:15** J. Bech, O. Rodríguez, P. Altube, T. Rigo

and N. Pineda: *Observational analysis of the 18 October 2017 Valls severe weather thunderstorm*

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**12:15-13:15** : Poster session 3

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**13:15-14:30** : Lunch

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#### Session 1: Climatology

Chairs: Vito Telesca, Josep Calbó and Jose A. Guijarro

**14:30-15:00** J. Price: *The Long Term Effect of a Growing Woodland on Measurements of Normalised Shear Stress*

**15:00-15:15** A. Jansà, J. Guijarro and A. Maimo: *Time and spatial differences on climate tendencies in the Balearics*

**15:15-15:30** D. S. Carrió, A. Maimó, V. Homar, S. Alonso, A. Jansà, R. Romero and C. Ramis: *Attribution of an anomalous summerization of the springtime detected over the Western Mediterranean*

**15:30-15:45** L. Sangelantoni, A. Lombardi, B. Tomasetti, V. Colaiuda, M. Verdecchia, G. Redaelli and R. Ferretti: *On the use of original and bias-corrected climate simulations: impact on the hydrological signal of small Apennines catchments*

**15:45-16:00** M. F. Cardell Martínez, A. Amengual Pou and R. Romero March: *Future effects of climate change on the suitability of agricultural crop production over Europe*

**16:00-16:15** S. Mathbout, J. Lopez-Bustins, D. Royé, J. Martín Vide and M. Skaf: *Spatiotemporal analysis of drought characteristics in the Mediterranean based on Standardized Precipitation Index (SPI)*

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**16:15-17:15** : Coffee break & Poster Session 1

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**17:15-17:30** A. Halifa-Marín and M. A. Torres-Vázquez: *Wetter trend within the Semi-Arid Iberian Southeast due to WeMO negative phases increasing*

**17:30-17:45 A. Grau Ferrer**, M. A. Jiménez Cortés and J. Cuxart Rodamilans: *Characterization of the sea-breeze in the Palma basin from in-situ and remote observations*

**17:45-18:00 T. Rigo Ribas** and C. Farnell Barque: *Climatological analysis of lightning jump tool in Catalonia (2006-2018)*

**18:00-18:15 J. A. Guijarro**, E. Aguilar, T. Caloiero, G. N. Caroletti and E. Al.: *Benchmarking and homogenization of daily Essential Climatic Variables within the INDECIS project*

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**18:15-19:15** : *Light Ice Breaker*

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**19:15-20:15** : *Tethys Editorial Board Meeting*

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## Tuesday, 5th

### Session 2: Processes and applications

Chairs: *Maria Antonia Jiménez and Maja Telišman*

**09:00-09:30 A. Paci**: *Fine scale dynamics over complex terrain*

**09:30-09:45 J. Cuxart**, L. Conangla, D. Martínez-Villagrasa and M. Jimenez: *Surface thermal inversion evolution in the bottom of a Pyrenean valley studied by single-column modelling forced with observed surface fluxes*

**09:45-10:00 G. Buğday**, S. S. Menteş, H. S. Topçu, Y. Ünal and T. Kaytanci: *Investigation of Sea Breezes on the middle Aegean coasts of Turkey*

**10:00-10:15 R. Romero**, M. Vich and C. Ramis: *A computationally cheap atmosphere-ocean modelling system aimed at anticipating meteotsunami occurrence in Ciutadella harbour*

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**10:15-11:15** : *Coffee break & Poster Session 2*

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**11:15-11:30 C. Periago**, M. Alarcón, H. T. Majeed, C. De Linares and J. Belmonte: *Aerobiology of Artemisia pollen in Catalonia (NE Iberian Peninsula)*

**11:30-11:45 J. A. García Orza** and P. J. Gómez Cascales: *A lagrangian approach to the study of the arrival of African air masses to the Mediterranean Spanish coast*

**11:45-12:00 L. Palacios-Peña** and P. Jiménez-Guerrero: *Can dust outbreaks condionate precipitation over the Mediterranean? an evaluation of aerosol-radiation-clouds-precipitation interactions*

### Session 4: Numerical modeling

Chairs: *Kristian Horvath, Lluís Fita and Víctor Homar*

**12:00-12:30 S. Khodayar**: *Towards advances in mod-*

*elling of extreme precipitation by the synergetic use of convection-permitting simulations and state-of-the-art observations*

**12:30-12:45 A. Nagy**, A. Buil, J. Cantero, C. Alonso, E. De La Rubiera, J. De Juan, O. Cabrera, T. Salom, V. Homar and R. Romero: *Nowcasting precipitation techniques applied to the heavy rainfall event that flooded Sant Llorenç des Cardassar*

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**13:00-14:45** : *Lunch*

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**14:45-15:00 R. Ferretti**, A. Lombardi, L. Sangelantoni, B. Tomassetti, I. Maiello, V. Colaiuda and M. Verdecchia: *A hydrological early warning system over small Appennine's catchments trough an operational NWP-ensemble*

**15:00-15:15 Y. Zhang**, D. Rostkier-Edelstein, G. Roux, P. Kunin and R. Sheu: *Dust storms in the Middle East and North Africa: An observational and modeling study of two events using in-situ and remotely sensed measurements and WRF-Chem-RTFDDA*

**15:15-15:30 B. Jahani** and J. Calbó: *Radiative Transfer Simulation of Clouds and Aerosols in the Transition Zone: Weather Research and Forecasting Model (WRF)*

**15:30-15:45 A. Montornes Torrecillas**: *Model for Prediction Across the Scales - Atmosphere (MPAS-A): A first view in the Mediterranean basin*

**15:45-16:00 A. Hermoso** and V. Homar: *Solution of the Liouville equation for realistic atmospheric systems: limits and characteristics*

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**16:00-17:00** : *Coffee break & Poster Session 4*

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**17:00-17:15 D. S. Carrió**, V. C. Homar and L. Wicker: *Improving the Predictability of the 7 November 2014 Medicanne Event: Impact of Remote Sensing RS-AMVs Using an EnKF Data Assimilation System.*

**17:15-17:30 M. Licer**, A. Fettich and B. Strajnar: *Operational Numerical Ensemble Modelling of Storm Surges on the Northern Adriatic Shelf*

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**18:30** : *Palma City Tour*

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**21:00** : *Social Dinner*

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## Wednesday, 6th

### Session 5: Atmosphere-surface interactions in semi-arid conditions

Chairs: *Joan Cuxart, Jose Luis Palau and Dani Martínez*

**09:00-09:30 A. A. Boone**, M. Best, J. Cuxart, J. Polcher and P. Quintana Seguí: *Land surface Interac-*

tions with the Atmosphere over the Iberian Semi-arid Environment (LIAISE) Project

**09:30-09:45 J. K. Brooke**, M. Best, J. Price, A. Boone and J. Cuxart: *LIAISE: Land surface Interactions with the Atmosphere over the Iberian Semi-arid Environment*

**09:45-10:00 J. M. Villar Mir**, J. Clarisó, R. Ochoa, A. Puntos and M. Pascual: *Significant disparity in ETo estimates (Penman-Monteith) according to the network of weather stations in Spain*

**10:00-10:15 D. Martínez-Villagrasa**, B. Martí and J. Cuxart: *ET evolution along the drying transition season over a mesoscale Mediterranean island*

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**10:15-10:45** : Coffee break

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**10:45-11:00 P. Benetó-Vallés** and J. Palau: *Soil-Vegetation-Atmosphere Exchange Analysis during a Convective Summer Storm over the Túrria River Basin (Eastern Spain) using the WRF Model*

**11:00-11:15 S. Khodayar** : *Soil-atmosphere interactions in the Western Mediterranean: implications for local-to-regional extreme events and central European heat and drought.*

**11:15-11:30 F. Castellví**: *An advanced method based on surface renewal theory to estimate the friction velocity and the surface heat flux*

**11:30-11:45 P. Le Moigne**, A. Boone and S. Donier: *Modeling the impact of irrigation in the Ebro basin using the Meso-NH mesoscale model (preliminary study)*

## Session 6: Extreme Events, from improved weather forecasts to better projections in a context of accelerated climate change

Chairs: *Romualdo Romero, Jordi Mazón and Elçin Tan*

**11:45-12:15 A. Jansà**, J. Campins, D. Carrio, V. Homar and M. A. Picornell: *About tropical-like cyclones in the Mediterranean: the Ionian Sea case of 28-29 September 2018*

**12:15-12:30 C. Ramis**, V. Homar, R. Romero, A. Jansà and J. Campins: *The October 9th 2018 flash flood in Mallorca. A preliminary study*

**12:30-12:45 R. Lorente-Plazas**, J. P. Montavez, A. M. Ramos, A. Halifa-Marín and R. M. Trigo: *Extreme precipitation affecting eastern Iberia induced by unusual atmospheric-river-like structure coming from Africa*

**12:45-13:00 J. L. Sanchez**, J. Marcos, P. Melcon, A. Merino and E. Garcia-Ortega: *An approach to forecast large hailstone*

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**13:00-14:30** : Lunch

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**14:30-14:45 E. Tan**: *Hindcast Study of Medicane Zorba by using the Hurricane WRF (HWRF) Model*

**14:45-15:00 C. Farnell Barque** and T. Rigo Ribas: *"The lightning JUMP, an operational tool to forecast severe weather in catalonia, and the campaign "pick up the stone"."*

**15:00-15:15 A. Hermoso** and V. Homar: *Bred Vectors based tailored perturbations: application to mesoscale ensemble prediction system over the Western Mediterranean*

**15:15-15:30 M. Zoldoš** and J. Jurković: *Experiences in using conditional probability in short-range fog forecasting at Zagreb Airport*

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**15:30-16:30** : Coffee break and Poster Sessions 5 & 6

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**16:30-16:45 K. Horvath**, J. Šepić and M. Telišman Prtenjak: *Numerical analysis of an exceptional meteorological event in the Adriatic*

**16:45-17:00 M. V. cetemps - university of I' aquila**, V. Capozzi, I. Maiello, Y. Cotroneo, R. Ferretti, M. M. Miglietta and G. Budillon: *Study of a tornadic supercell in Southern Italy*

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**17:15-17:45** : Awards and Closing Session

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## End of conference

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## List of posters

### Session 1: Climatology

**1.P1 J. R. Miró**, J. C. Peña, N. Pepin, A. Sairouni and M. Aran: *Synoptic features of Cold-Air Pool episodes in Cerdanya*

**1.P2 J. Bartholy**, E. Kristof and R. Pongracz: *Evaluation of large-scale atmospheric teleconnection in the CMIP5 general circulation models*

**1.P3 D. Martínez-Villagrasa**, J. Cuxart, G. Simó, M. A. Jiménez, B. Martí, J. R. Miró, L. Conangla, B. Wrenger, A. Paci and R. Picos: *The Cerdanya Cold Pool programme (CCP1x): an integrated study on cold-air pooling and drainage flows in the largest Pyrenean valley*

**1.P4 F. Pastor**, J. Valiente and J. Palau: *SST CEAMed: Mediterranean sea surface temperature web portal*

**1.P5 M. Lemus Canovas**, J. Lopez Bustins and J. Martin Vide: *An R package for computing a synoptic classification and spatial regionalization of precipitation data*

**1.P6 B. Öztürk**, I. Kurşun and E. Tan: *Evaluation of historical period CMIP5 simulations for wind patterns linked to North Atlantic Oscillation in Turkey*

### Session 2: Processes and applications

**2.P1 P. J. Gómez Cascales**, L. Tositi, A. Milena Pérez, V. M. Expósito Suárez and F. Piñero García: *African dust impact at two heights (2500 and 650 m asl) in SE Spain*

**2.P2 F. Pastor**, J. Valiente, E. Mantilla and J. Palau: *Extreme temperature warning system in the Valencia region (Spain)*

**2.P3 A. Paci**, M. Jiménez, J. Cuxart, M. Lothon, D. Martinez-Villagrasa, C. Roman-Cascon, G. André, P. Aressy, J. Barrié, Y. Bezombes, G. Bouhours, A. Dabas, S. Derrien, C. Dione, J. M. Donier, T. Douffet, J. B. Estrampes, O. Garrouste, F. Lohou, W. Maurel, E. Moulin, A. Philibert, H. Raynal, T. Rieutord, A. Roy and V. Unger: *Exit jet in a narrow Pyrenean valley: the Aure valley 2018 field experiment*

**2.P4 M. Alarcón**, C. Periago, H. T. Majeed and J. Belmonte: *Potential contribution of distant sources to the Betula pollen transport over Catalonia*

**2.P5 L. Casaletto**, M. Ragosta, V. Telesca and G. A. Giorgio: *Analysis of particulate matter levels and temperature extreme events in the summer time: a study case*

**2.P6 M. A. Jiménez**, D. Martinez-Villagrasa, J. Cuxart, A. Paci and M. Lothon: *Influence of a valley exit jet on the nocturnal atmospheric boundary-layer at the foothills of the Pyrenees*

**2.P7 J. A. García Orza**, M. Ferro Garcia, A. Camacho, E. Brattich, M. Hernandez-Ceballos and C. Roman-Cascon: *Activity concentration of Be-7 and Pb-210 in aerosols at two heights (2500 and 650 m asl) in SE Spain*

### Session 3: Remote measurements and in-situ

**3.P1 M. Udina**, S. González, A. Paci, J. Bech and M. Soler : *Multi-observations of an elevated rotor associated to a mountain wave event (The Cerdanya-2017 field experiment)*

**3.P2 A. Enriquez-Alonso**, J. Calbó and J. González: *A method for the study of nocturnal clouds from images in the visible: implementation and validation in Girona*

**3.P3 D. Martínez-Villagrasa**, B. Martí, A. López-Grifol, G. Simó, B. Wrenger, J. Dünnermann, R. Picos and J. Cuxart: *BOU: a low-cost tethered balloon sensing system for monitoring the lower atmospheric boundary-layer*

**3.P4 E. Casellas**, R. Veciana, A. Sairouni, N. Pineda and J. Bech: *First results of the Meteorological field Interpolation based on Clustered Analysis (MICA)*

**3.P5 B. Martí**, D. Martínez-Villagrasa, J. Cuxart, E. Cantero, F. Borbón, J. Sanz Rodrigo, J. R. Miró, P. Santos, N. Vasiljevik, M. Courtney and J. Mann: *The ALEX17 field experiment: characterizing the flow over complex terrain for wind energy research*

**3.P6 O. Rodríguez** and J. Bech: *Ortophotos: a source of information in tornado track and wind damage intensity studies*

### Session 4: Numerical modeling

**4.P1 I. Gómez**, V. Caselles, M. Estrela and J. Miró: *Comparison of RAMS and WRF short-term forecasts over Eastern Spain using distinct observational and modelling datasets*

**4.P2 G. Deniz**, C. Düzgün and E. Tan: *Saharan Dust Transport Modeling for Turkey by using the WRF-Chem Model*

**4.P3 C. Düzgün**, B. Öztürk, E. Tan and O. Şen: *Air Quality Impact By Aircrafts in LTO-number-Record Breaking Year 2016 at Istanbul Atatürk Airport by using the WRF-Chem Model*

**4.P4 I. Gómez**, V. Caselles, M. Estrela, J. Sánchez and E. Rubio: *Impact of land-atmosphere coupling on surface energy fluxes and meteorological variables simulated by the Regional Atmospheric Modeling System (RAMS)*

**4.P5 A. Maimó** and V. Homar: *Forecast sensitivity analysis of the November 7th 2014 medicane*

**4.P6 A. Bosch I Mas** and A. Montornes Torrecillas: *Analysis of the contribution of the dynamical down-scaling in the mesoscale modeling chain for wind resource assessment applications for ERA5 reanalysis by ECMWF*

### Session 5: Atmosphere-surface interactions in semi-arid conditions

**5.P1 G. Simó**, J. Cuxart, M. Jiménez, D. Martínez-Villagrasa and R. Picos: *Observed atmospheric and surface variability on heterogeneous terrain at the hectometer scale and related advective transports*

### Session 6: Extreme Events, from improved weather forecasts to better projections in a context of accelerated climate change

**6.P1 J. Ferina**, V. Vučetić and P. Sviličić: *Extremely weather in Croatia during the 2017 fire season*

**6.P2 F. J. Lana Pons**, C. Serra De Larrocha, R. Rodríguez-Solà, D. Martínez Santafé and M. Casas-Castillo: *Classification of heavy rainfall profiles for Barcelona city*

**6.P3 M. A. Picornell** and J. Campins: *Medicane Qendresa forecast from EPS*

**6.P4 J. Campins** and M. A. Picornell: *Forecast of some intense mediterranean cyclones occurred in 2018*

**6.P5 M. Llasat Botija**, M. Cortès, A. Del Moral, M. Llasat-Botija and O. Rodríguez: *A holistic approach to the analysis of the catastrophic flash flood event of 12 October 2016 in the Central Coast of Catalonia*

**6.P6 R. Pongracz**, J. Bartholy, I. Pieczka and T. Kalmar: *Analysis of regional climate change scenarios with respects to extremes for the Med-CORDEX area*

**6.P7 I. Kurşun**, G. Deniz and E. Tan: *Storm surge modelling of Goksu Delta by using SWAN Model*

**6.P8 D. Pino**, A. J. Mohammed and M. Alarcón: *Analysis and simulation of two hot extreme events in the Iberian Peninsula*