



# 7th International Conference 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, March 4<sup>th</sup> - 6<sup>th</sup> 2019

### Monday, 4<sup>th</sup>

---

**8:30** Conference Registration

---

#### Welcome

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

**9:35-9:45** Dr. **Jaume Carot**, Vice-rector of University of Balearic Islands: Welcome words

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

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

---

**10:00-10:30** Coffee break

---

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

Chairs: Joan Bech and Vicent Caselles

**10:30-11:00 Solicited Talk** J. L. Sánchez et al.: *Safe flight project: Detection and identification of aircraft icing conditions using multiplatform observations*

**11:00-11:15** G. Masiello et al.: *An application to Mediterranean Sea of the SEVIRI Level 2 Processor for Surface Parameters*

**11:15-11:30** M. A. Jiménez et al.: *Estimation of the chilling hours in Mallorca through satellite-derived surface temperatures*

**11:30-11:45** M. Portabella et al.: *Are satellite-derived mesoscale sea surface winds useful in the Mediterranean?*

**11:45-12:00** O. Rodríguez et al.: *A field work methodology for wind damage from strong-convective winds events*

**12:00-12:15** J. Bech et al.: *Observational analysis of the 18 October 2017 Valls severe weather thunderstorm*

---

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

---

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

---

## Session 1: Climatology

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

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

**15:00-15:15** A. Jansà et al.: *Time and spatial differences on climate tendencies in the Balearics*

**15:15-15:30** A. Maimó et al.: *Attribution of an anomalous summerization of the springtime detected over the Western Mediterranean*

**15:30-15:45** L. Sangelantoni et al.: *On the use of original and bias-corrected climate simulations: impact on the hydrological signal of small Apennines catchments*

**15:45-16:00** M. Cardell et al.: *Future effects of climate change on the suitability of agricultural crop production over Europe*

**16:00-16:15** S. Mathbout et al.: *Spatiotemporal analysis of drought characteristics in the Mediterranean based on Standardized Precipitation Index (SPI)*

---

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

---

**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 et al.: *Characterization of the sea-breeze in the Palma basin from in-situ and remote observations*

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

**18:00-18:15** J. A. Guijarro et al.: *Benchmarking and homogenization of daily Essential Climatic Variables within the INDECIS project*

---

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

---

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

---

## Tuesday, 5<sup>th</sup>

### Session 2: Processes and applications

Chairs: Maria Antonia Jiménez and Maja Telišman

**9:00-9:30 Solicited Talk** A. Paci: *Fine scale dynamics over complex terrain*

**9:30-9:45** J. Cuxart et al.: *Surface thermal inversion evolution in the bottom of a Pyrenean valley studied by single-column modelling forced with observed surface fluxes*

**9:45-10:00** G. Bugday et al.: *Investigation of sea breezes on the middle Aegean coast of Turkey*

**10:00-10:15** R. Romero et al.: *A computationally cheap atmosphere-ocean modelling system aimed at anticipating meteotsunami occurrence in Ciutadella harbor*

---

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

---

**11:15-11:30** C. Periago et al.: *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 et al.: *Can dust outbreaks conditionate 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 Solicited Talk** S. Khodayar: *Towards advances in modelling of extreme precipitation by the synergetic use of convection-permitting simulations and state-of-the-art observations*

**12:30-12:45** A. Nagy et al.: *Nowcasting precipitation techniques applied to the heavy rainfall event that flooded Sant Llorenç des Cardassar*

---

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

---

**14:45-15:00** R. Ferretti et al.: *A hydrological early warning system over small Appennine's catchments trough an operational NWP-ensemble*

**15:00-15:15** Y. Zhang et al.: *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: *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*

---

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

---

**17:00-17:15** D. S. Carrió et al.: *Improving the Predictability of the 7 November 2014 Medcane Event: Impact of Remote Sensing RS-AMVs Using an EnKF Data Assimilation System*

**17:15-17:30** M. Licer et al.: *Operational Numerical Ensemble Modelling of Storm Surges on the Northern Adriatic Shelf*

---

**18: 30** Palma City Tour

---

**21:00** Social Dinner

---

### Wednesday, 6<sup>th</sup>

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

Chairs: Joan Cuxart, Jose Luis Palau and Dani Martínez

**9:00-9:30 Solicited Talk** A. Boone et al.: *Land surface Interactions with the Atmosphere over the Iberian Semi-arid Environment (LIAISE) Project*

**9:30-9:45** J. Brooke et al.: *LIAISE: Land surface Interactions with the Atmosphere over the Iberian Semi-arid Environment*

**9:45-10:00** J. M. Villar-Mir et al.: *Significant disparity in ETo estimates (Penman-Monteith) according to the network of weather stations in Spain*

**10:00-10:15** D. Martínez et al.: *ET evolution along the drying transition season over a mesoscale Mediterranean island*

---

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

---

**10:45-11:00** P. Benetó-Vallés and J. L. Palau: *Soil-Vegetation-Atmosphere Exchange Analysis during a Convective Summer Storm over the Túria 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 et al.: *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 Solicited Talk** A. Jansà et al.: *About tropical-like cyclones in the Mediterranean: the Ionian Sea case of 28-29 September 2018*

**12:15-12:30** C. Ramis et al.: *The October 9th 2018 flash flood in Mallorca. A preliminary study*

**12:30-12:45** R. Lorente-Plazas et al.: *Extreme precipitation affecting Eastern Iberia induced by unusual atmospheric-river-like structure coming from Africa*

**12:45-13:00** J. L. Sánchez et al.: *An approach to forecast large hailstone*

---

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

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

**14:45-15:00** C. Farnell and T. Rigo: *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*

---

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

**16:30-16:45** K. Horvath et al.: *Numerical analysis of an exceptional meteotsunami event in the Adriatic*

**16:45-17:00** V. Mazzarella et al.: *Study of a tornadic supercell in Southern Italy*

---

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

## **List of posters**

### **Session 1: Climatology**

**P1.1** J. Bartholy et al.: *Evaluation of large-scale atmospheric teleconnection in the CMIP5 general circulation models*

**P1.2** D. Martínez et al.: *The Cerdanya Cold Pool programme (CCP1x): an integrated study on cold-air pooling and drainage flows in the largest Pyrenean valley*

**P1.3** J. R. Miró et al.: *Synoptic features of Cold-Air Pool episodes in Cerdanya*

**P1.4** M. Lemus et al.: *An R package for computing a synoptic classification and spatial regionalization of precipitation data*

**P1.5** B. Öztürk et al.: *Evaluation of historical period CMIP5 simulations for wind patterns linked to North Atlantic Oscillation in Turkey*

**P1.6** F. Pastor et al.: *SST CEAMed: Mediterranean Sea surface temperature web portal*

## Session 2: Processes and applications

**P2.1** A. Paci et al.: *Exit jet in a narrow Pyrenean valley: the Aure valley 2018 field experiment*

**P2.2** L. Casaletto et al.: *Analysis of particulate matter levels and temperature extreme events in the summer time: a study case*

**P2.3** J. A. García Orza et al.: *Activity concentration of Be-7 and Pb-210 in aerosols at two heights (2500 and 650 m asl) in SE Spain*

**P2.4** M. A. Jiménez et al.: *Influence of a valley exit jet on the nocturnal atmospheric boundary-layer at the foothills of the Pyrenees*

**P2.5** M. Alarcón et al.: *Potential contribution of distant sources to the Betula pollen transport over Catalonia*

**P2.6** P. J. Gómez Cascales et al.: *African dust impact at two heights (2500 and 650 m asl) in SE Spain*

**P2.7** F. Pastor et al.: *Extreme temperature warning system in the Valencia region (Spain)*

## Session 3: Remote and in-situ measurements

**P3.1** M. Udina et al.: *Multi-observations of an elevated rotor associated to a mountain wave event (The Cerdanya-2017 field experiment)*

**P3.2** B. Martí et al.: *The ALEX17 field experiment: characterizing the flow over complex terrain for wind energy research*

**P3.3** D. Martínez et al.: *BOU: a low-cost tethered balloon sensing system for monitoring the lower atmospheric boundary-layer*

**P3.4** E. Casellas et al.: *First results of the Meteorological field Interpolation based on Clustered Analysis (MICA)*

**P3.5** A. Enríquez-Alonso et al.: *A method for the study of nocturnal clouds from images in the visible: implementation and validation in Girona*

**P3.6** O. Rodríguez and J. Bech: *Ortophotos: a source of information in tornado track and wind damage intensity studies*

## Session 4: Numerical modeling

**P4.1** A. Bosch and A. Montornes: *Analysis of the contribution of the dynamical downscaling in the mesoscale modeling chain for wind resource assessment applications for ERA5 reanalysis by ECMWF*

**P4.2** C. Düzgün et al.: *Air Quality Impact by Aircrafts in LTO-number-Record Breaking Year 2016 at Istanbul Atatürk Airport by using the WRF-Chem Model*

**P4.3** I. Gómez et al.: *Comparison of RAMS and WRF short-term forecasts over Eastern Spain using distinct observational and modelling datasets*

**P4.4** I. Gómez et al.: *Impact of land-atmosphere coupling on surface energy fluxes and meteorological variables simulated by the Regional Atmospheric Modeling System (RAMS)*

**P4.5** G. Deniz et al.: *Saharan Dust Transport Modeling for Turkey by using the WRF-Chem Model*

**P4.6** A. Maimó and V. Homar: *Forecast sensitivity analysis of the November 7th 2014 medicane*

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

**P5.1** G. Simó et al.: *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

**P6.1** F. J. Lana Pons et al.: *Classification of heavy rainfall profiles for Barcelona city*

**P6.2** R. Pongracz et al.: *Analysis of regional climate change scenarios with respects to extremes for the Med-CORDEX area*

**P6.3** I. Kurşun et al.: *Storm surge modelling of Goksu Delta by using SWAN Model*

**P6.4** J. Campins and M. A. Picornell: *Forecast of some intense Mediterranean cyclones occurred in 2018*

**P6.5** M. A. Picornell and J. Campins: *Medicane Qendresa forecast from EPS*

**P6.6** D. Pino et al.: *Analysis and simulation of two hot extreme events in the Iberian Peninsula*

**P6.7** J. Ferina et al.: *Extremely weather in Croatia during the 2017 fire season*

**P6.8** M. C. Llasat Botija et al.: *A holistic approach to the analysis of the catastrophic flash flood event of 12 October 2016 in the Central Coast of Catalonia*