

**10<sup>th</sup> European Conference on Severe Storms**

**Kraków, Poland**

**4 – 8 November 2019**

# **Programme**



## Programme overview - ECSS2019

	Monday	Tuesday	Wednesday	Thursday	Friday
09:00	<b>OPENING SESSION</b>	<b>Session 1: Convective storm and tornado dynamics</b>	<b>Session 7: Satellite studies of storms and their environment</b>	<b>Session 5, continued</b>	<b>Session 10: Storm climatology, risk assessments and relation to climate change</b>
09:15					
09:30	<b>Session 4: Field observations and case studies</b>	<b>Session 1, continued</b>	<b>Session 5: Forecasting and nowcasting of storms</b>	<b>Session 5, continued</b>	<b>Session 10, continued</b>
09:45					
10:00					
10:15					
10:30	COFFEE BREAK	Conference Photo	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK
10:45		COFFEE BREAK			
11:30	<b>Session 8: Radar studies of storms and their environment</b>	<b>Session 1, continued</b>	<b>Session 5: Forecasting and nowcasting of storms</b>	<b>Session 5, continued</b>	<b>Session 10, continued</b>
11:45					
12:00					
12:15					
12:30	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	<b>CLOSING and AWARDS SESSION until 13:30</b>
12:45					
13:00					
14:30	<b>Session 9: Storm microphysics, electrification, lightning and hail</b>	<b>POSTER SESSION</b>	14:30 Bus transfer to Salt Mine.	<b>POSTER SESSION</b>	15:00 CWG splinter meeting (room Attic)
14:45					
15:00	COFFEE BREAK	COFFEE BREAK	Wieliczka Salt Mine guided tour. No drinks or meals included.	<b>Session 2: Numerical modelling of storms, storm-scale data assimilation</b>	
15:15					
15:30	<b>Session 9, continued</b>	<b>Session 11: Collection of storm data, historical events and damage assessments</b>			
15:45					
16:00	<b>Session 3: Impacts, mitigation, and early warning systems</b>				
16:45					
17:00	18:30 INFORMAL ICEBREAKER RECEPTION		19:30 Buses return	18:30 CM1 model introduction by George Bryan (room Attic), until 19:30	
17:15					
17:30			20:00 CONFERENCE DINNER at Avangarda Restaurant. Handing out of the Dotzek Award.		
17:45					
18:00					
18:30					

### On site registration desk opening hours:

Sun 15:00 – 20:00

Mon 08:00 – 18:00

Tue – Fri starting at 08:30

All printed programme information is as of 24 October 2019.

Please check local announcements or see ECSS message board or tweets for latest updates.

ECSS Twitter updates by @essl\_ecss.

Please use the hashtag #ecss2019 for your tweets.

ESSL General Assembly: Sun, 3 Nov 2019, 19:30, room Attic

## Sunday, 3 November 2019

Location: Conference Lobby

15:00–20:00

### On site registration.

Location: Room Attic

19:30–21:00

### ESSL General Assembly

For members of the European Severe Storms Laboratory.

## Monday, 4 November 2019

Location: Lecture room

09:00–09:30

### A Opening session

09:30–10:45

### Session 4 Field Observations and Case Studies

09:30–09:45: ECSS2019-183

Targeted Observation by Radars and UAS of Supercells (TORUS): Summary of the 2019 field campaign  
**Houston, Adam**; Argrow, Brian; Coniglio, Michael; Frew, Eric; Rasmussen, Erik; Weiss, Christopher; Ziegler, Conrad

09:45–10:00: ECSS2019-47

Implementation and use of the Model for the Prediction Across Scales (MPAS) for extended, convection-permitting forecast guidance during RELAMPAGO  
**Trapp, Robert**

10:00–10:15: ECSS2019-84

Overview of convection initiation events during the RELAMPAGO-CACTI project  
**Marquis, James**; Wilson, Jim; Varble, Adam

10:15–10:30: ECSS2019-163

Investigating an extraordinary mesocyclonic tornado in the coastline of Mediterranean, Turkey  
**Ozturk, Kurtulus**; Tastan, Melik Ahmet

10:30–10:45: ECSS2019-106

Wind gusts associated with mesovortices in the inner core of Typhoon GONI (2015)  
**Mashiko, Wataru**

END OF ORAL PROGRAMME SESSION 4

10:45 Coffee break, sponsored by EUMETSAT

11:30–12:45

### Session 8 Radar studies of storms and their environment

11:30–11:45: ECSS2019-50

Challenges of Radar Quantitative Precipitation Estimation in Stormy Conditions  
**Besic, Nikola**; Yu, Nan; Le Bastard, Tony; Augros, Clotilde; Gaussiat, Nicolas

11:45–12:00: ECSS2019-100

Operational benefits to correcting S-Band differential reflectivity for hail detection  
**Kingfield, Darrel**; French, Michael

12:00–12:15: ECSS2019-146

A Polarimetric Radar Climatology of Supercell Thunderstorms in the United States  
**French, Michael**; Kingfield, Darrel; Tuftedal, Kristofer; Segall, Jacob; Snyder, Jeffrey

12:15–12:30: ECSS2019-92

Towards a better understanding of the role of topography in the motion of severe storms in Catalonia: First results with C-band dual-Doppler analysis  
**del Moral, Anna**; Weckwerth, Tammy M.; Rigo, Tomeu; Bell, Michael M.; Llasat, Maria Carme

12:30–12:45: ECSS2019-88

Environments conducive for severe convective winds in Europe  
**Pacey, George**

END OF ORAL PROGRAMME SESSION 8

13:00 Lunch break

14:30–17:30

## Session 9

### Storm microphysics, electrification, lightning and hail

14:30–15:00: ECSS2019-156

Influences on Hail Size as Inferred from Hailstone Growth Trajectory Model Calculations (solicited)  
**Kumjian, Matthew**; Lombardo, Kelly

15:00–15:15: ECSS2019-135

Detection and monitoring of mid latitude convective rainfall using H-SAF blended SEVIRI and LEO MW convection precipitation product

**Lapeta, Bozena**; Melfi, Davide; Iwański, Rafał; Struzik, Piotr

15:15–15:30: ECSS2019-89

The role of melting and shedding in supercells and squall lines

**Lebo, Zachary**; Kacan, Kevin

15:30–15:45: ECSS2019-141

The particle-based ice microphysics McSnow in ICON  
 Siewert, Christoph; **Seifert, Axel**

15:45–16:00: ECSS2019-110

Application of machine learning to large hail prediction - the importance of radar reflectivity, lightning occurrence and convective parameters derived from ERA5

**Czernecki, Bartosz**; Taszarek, Mateusz; Marosz, Michał; Kolendowicz, Leszek; Pórolniczak, Marek; Wyszogrodzki, Andrzej; Szturc, Jan

15:45 Coffee break, sponsored by EUMETSAT

16:45–17:00: ECSS2019-160

Are lightning initiation locations and inferred charge regions influenced by local updraft variations?

**Chmielewski, Vanna**; MacGorman, Donald; Biggerstaff, Michael; Betten, Daniel; DiGangi, Elizabeth

17:00–17:15: ECSS2019-211

High speed video campaigns and meteorological conditions related to Gigantic Jets in Colombia

**van der Velde, Oscar**; Montanyà, Joan; López, Jesús; Fabró, Ferran; Cummer, Steven

17:15–17:30: ECSS2019-4

Mesoscale lightning discharges seen from space

**Goodman, Steven**; Virts, Katrina

END OF ORAL PROGRAMME SESSION 9

17:30–18:15

## Session 3

### Impact of storms on society, impact mitigation and early warning systems

17:30–17:45: ECSS2019-63

Impact-Based Severe Early Weather Warning System in South Africa: Getting the message to the ground level  
**Webster, Elizabeth**

17:45–18:00: ECSS2019-30

Learning lessons from deaths and injuries due to lightning in Western Europe

**Schmitt, Stéphane**; Kreitz, Michaël

18:00–18:15: ECSS2019-155

General public's preparedness and precautionary measures ahead of a severe thunderstorm outbreak in Southern Finland on 12 August 2017

**Punkka, Ari-Juhani**; Laurikainen, Heikki; Kekki, Tuula; Ruuhela, Reija; Pilli-Sihvola, Karoliina; Harjanne, Atte

END OF ORAL PROGRAMME SESSION 3

18:30–20:30

## B Icebreaker

Informal welcome cocktail and hors d'oeuvres.

## Tuesday, 5 November 2019

Location: Lecture room

09:00–13:00

## Session 1

### Convective storm and tornado dynamics

09:00–09:30: ECSS2019-219

Insights into Tornadogenesis from integrals of the vorticity equation and from angular-momentum advection (solicited)

**Davies-Jones, Robert**

09:30–09:45: ECSS2019-42

The Impact of Coastal Topography on Mesoscale Convective System Dynamics

**Lombardo, Kelly**; Wu, Fan

09:45–10:00: ECSS2019-175

The Effects of Idealized Topography Shape and Location on the Generation of Intense Near-Surface Vertical Vorticity in Supercells

**Katona, Branden**; Markowski, Paul

**10:00–10:15: ECSS2019-168**

Outflow Surges in Simulated Supercell-Like Storms and their Influence on Tornado Development  
**Fischer, Jannick**; Dahl, Johannes

**10:15–10:30: ECSS2019-178**

Ensemble Experiments on a Maritime Meso- $\beta$ -scale Vortex that Spawned Tornado-like Vortices causing shipwrecks  
**Tochimoto, Eigo**; Yokota, Sho; Niino, Hiroshi; Yanase, Wataru

**10:30–10:45: ECSS2019-94**

Dynamics of nocturnal convective systems  
**Parker, Matthew**

**10:45 Conference Photo & Coffee break****11:30–11:45: ECSS2019-203**

Tornadogenesis within a Supercell Storm near a Meiyu Frontal System in Eastern China: Dynamical Analyses based on a Tornado-Resolving Real-Data Simulation  
**Xue, Ming**; Wang, Shiqi; Min, Jinzhong

**11:45–12:00: ECSS2019-159**

Observations of the Streamwise Vorticity Current from Project TORUS  
**Weiss, Christopher**; Schueth, Alex; Houston, Adam

**12:00–12:15: ECSS2019-28**

Mechanisms leading to the genesis of a tornado-scale vortex in an Argentinian supercell observed during the RELAMPAGO field campaign  
**Wurman, Josh**; Kosiba, Karen; Trapp, Jeff; Kumjian, Matt

**12:15–12:30: ECSS2019-27**

Low-Level Winds in Tornadoes  
**Kosiba, Karen**; Wurman, Josh

**12:30–12:45: ECSS2019-182**

Spring 2019 above-ground thermodynamic observations in convective storms from balloon-borne probes acting as pseudo-Lagrangian drifters  
 Bartos, Elissa; Markowski, Paul; **Richardson, Yvette**

**12:45–13:00: ECSS2019-154**

Tornado Outbreaks from Quasi-Linear Convective Systems in the United Kingdom: Synoptic-Scale Environments and Along-Line Variability  
**Buckingham, Ty**; Schultz, David

**END OF ORAL PROGRAMME SESSION 1****13:00 Lunch break**

**Location:** Room Attic

**14:30–16:00**

## C ECSS press briefing

**Location:** Lecture room

**16:45–18:15**

## Session 11 Collection of storm data, historical events and damage assessments

**16:45–17:00: ECSS2019-137**

Climatology of mesoscale convective systems in Russia obtained with convolutional neural networks: first results  
**Chernokulsky, Alexander**; Krinitsky, Michael; Sprygin, Alexander; Eroshkina, Nadezhda; Kurgansky, Michael; Shikhov, Andrey

**17:00–17:15: ECSS2019-200**

Theories on tornado and waterspout formation in ancient Greece and Rome  
**Antonescu, Bogdan**; Schultz, David M.; Ricketts, Hugo M. A. M.; Ene, Dragoş

**17:15–17:30: ECSS2019-158**

The catastrophic case of heavy rainfall and flash flooding of 14-15 October 2018 in south-western France: a multi-scale observational and modelling analysis  
**Caumont, Olivier**; Bouttier, François; Lebeaupin-Brossier, Cindy; Lovat, Alexane; Mandement, Marc; Nuissier, Olivier; Laurantin, Olivier; Eeckman, Judith

**17:30–17:45: ECSS2019-179**

Crowdsourced severe weather reports in a high-impact situation: a showcase and its implications to maximize their value and usability  
**Pistotnik, Georg**

**17:45–18:00: ECSS2019-185**

Assessment of Tornado-Induced Building Damage Using a Hybrid Meteorological Model/Engineering LES Method: In Case of Tsukuba Tornado in 2012  
**Kawaguchi, Masaharu**; Tamura, Tetsuro; Mashiko, Wataru; Kawai, Hidenori

**18:00–18:15: ECSS2019-198**

EWOB: A standard for international exchange of weather and weather impact observations from crowd-sourcing  
**Holzer, Alois M.**; Groenemeijer, Pieter; Krennert, Thomas; Kaltenberger, Rainer; Kühne, Thilo; Schreiner, Thomas; Strommer, Gabriel

**END OF ORAL PROGRAMME SESSION 11**

## Tuesday's posters

**Location:** Poster area

**Attendance time:** 14:30–16:00

### Session 1 Convective storm and tornado dynamics

**P1: ECSS2019-38**

A study of a tornado event in Basque Country: the 4th July 2018 case.

**Gaztelumendi, Santiago;** Egaña, Joseba; Aranda, Jose Antonio

**P2: ECSS2019-71**

Tornadoes regions in Poland - meteorological conditions and spatial and temporal distribution

**Walczakiewicz, Szymon**

**P3: ECSS2019-91**

A Demonstration of the Effect of Vertical Wind Shear and the Perturbation Pressure Fields on Simulated Thunderstorms

**Kretschmer, Morten;** Dahl, Johannes

**P4: ECSS2019-129**

A Numerical Study on a Tornado that Formed in a Quasi Linear Convective System over Kanto plain in Japan

**Tochimoto, Eigo;** Niino, Hiroshi

**P5: ECSS2019-181**

3-D structure of non-supercell tornado at initial stage

**Sassa, Koji;** Nagano, Haruna

**P6: ECSS2019-204**

Idealized testing of the sensitivity of mesovortices to low-level CAPE variations

**Gatzen, Christoph;** Schielicke, Lisa

**P7: ECSS2019-208**

Vortex identification in simulated supercells: a comparison of methods

**Schielicke, Lisa;** Dahl, Johannes

**END OF POSTER PROGRAMME SESSION 1**

### Session 3 Impact of storms on society, impact mitigation and early warning systems

**P8: ECSS2019-8**

The call of the clouds. High weather involvement in Austria.

**Keul, Alexander;** Krennert, Thomas; Kaltenberger, Rainer

**P9: ECSS2019-12**

The regional risk perception of extreme weather events in Germany

**Mohr, Susanna;** Döring, Martin; Feser, Frauke; Kunz, Michael; Kunz-Plapp, Tina; Ratter, Beate; Schwarze, Reimund

**P10: ECSS2019-123**

Improving the prediction of flash floods - New and user-oriented approaches under development at DWD

**Keller, Julia;** Blahak, Ulrich; Hagedorn, Renate; Akansu, Elisa; Rempel, Martin

**P11: ECSS2019-125**

Multihazard Weather Risk Perception and Preparedness: Results from the India Severe Weather Survey

**Sharma, Sanjay;** Keul, Alexander; Brunner, Bernhard; Longkumer, Imolemba; Biswasharma, Rupraj; Roy, Partha; Samanta, Debajyoti

**END OF POSTER PROGRAMME SESSION 3**

### Session 7 Convective storms within extratropical, Mediterranean and tropical cyclones & Floods and flash floods

**P12: ECSS2019-33**

Satellite-based study and numerical simulation of mesoscale convective systems with tornadoes in Russia for 2017-2018

**Shikhov, Andrey;** Chernokulsky, Alexander; Sprygin, Alexander; Bykov, Alexey; Azhigov, Igor

**P13: ECSS2019-36**

Analysis of convective clouds characteristics by FY-4A data

**Liu, Jian;** Jiang, Jianyin; Liu, Hui

**P14: ECSS2019-53**

Storm Environment Studies with IASI L2 Data

**Kocsis, Zsófia;** Simon, André; **Csirmaz, Kálmán;** Putsay, Mária; August, Thomas

**P15: ECSS2019-81**

Tobac - a Lagrangian framework for object-based analysis of clouds

**Senf, Fabian;** Heikenfeld, Max; Watson-Parris, Duncan; Christensen, Matthew; Stier, Philip

**P16: ECSS2019-112**

Temporal characteristics of cloud tops during storm evolution

**Štáštka, Jindřich**

**P17: ECSS2019-124**

Current Status of Convective Clouds Discrimination from GK-2A

**Park, Ki-Hong;** Ryu, Geun-Hyeok; Lee, Ho-Yeon; Jang, Jae-Dong

**P18: ECSS2019-132**

The search of the cross correlation between the PERUN lightning detection system and satellite registrations of the thunderstorms effects above Poland with use of DEMETER and Swarm data  
 Błęcki, Jan; Słomiński, Jan; Wronowski, Roman; Słomińska, Ewa; **Iwański, Rafał**; Martyński, Karol; Haagmans, Roger; Parrot, Michel

**P19: ECSS2019-191**

Dependence of satellite derived cloud parameters on storm severity based on lightning activity over Ukraine  
**Kryvobok, Oleksii**

**P20: ECSS2019-199**

On the influence of spatial and temporal resolution of satellite observations for characterizing convective initiation  
**Deneke, Hartwig**; Lenk, Stephan; Senf, Fabian

**P21: ECSS2019-209**

Use of the H-SAF precipitation products for the characterization and monitoring of heavy precipitation events in the Mediterranean area  
**Marra, Anna Cinzia**; Panegrossi, Giulia; Casella, Daniele; D'Adderio, Leo Pio; Dietrich, Stefano; Sanò, Paolo; Melfi, Davide

**END OF POSTER PROGRAMME SESSION 7****Session 8****Radar studies of storms and their environment****P22: ECSS2019-5**

Severe Storms in the Lake Victoria Basin  
**Goodman, Steven**; Virts, Katrina; Roberts, Rita; Wilson, Jim; Petersen, Ralph; Crounce, Lee; Hartley, Andrew; Chang'a, Ladislaus

**P23: ECSS2019-17**

ZDR-Column Detection in Switzerland  
**von Matt, Christoph**; Barras, Hélène; Boscacci, Marco; Figueras i Ventura, Jordi; Hering, Alessandro; Gabella, Marco; Martius, Olivia; Germann, Urs

**P24: ECSS2019-22**

Developing Method to monitor Strong Wind Associated with Downburst and Gust-front Using Doppler Radar for Railways Operation  
**Takami, Kazuya**; Fukuhara, Takaaki; Araki, Keiji

**P25: ECSS2019-35**

Characteristics of QLCS Downdrafts and Environments Observed during the VORTEX-Southeast Project  
**Marquis, James**; Kosiba, Karen; Wurman, Josh

**P26: ECSS2019-51**

Mesocyclone detection at Météo-France  
**Besic, Nikola**; Augros, Clotilde; Gaussiat, Nicolas; Imbert, Jean; Kreitz, Michaël; Le Bastard, Tony

**P27: ECSS2019-60**

Real-time recognition of surface precipitation type (SPT) for high resolution precipitation data  
**Jurczyk, Anna**; Szturc, Jan; Ośródko, Katarzyna; Wyszogrodzki, Andrzej; Kolendowicz, Leszek

**P28: ECSS2019-67**

Mountain related supercell events analysis using radar observations and the COSMO model pre-convective environments in the Western Carpathians  
**Kvak, Róbert**; Zacharov, Petr; Kašpar, Marek

**P29: ECSS2019-77**

Derecho evolving from a mesocyclone - a study of 11 August 2017 severe weather outbreak in Poland: event analysis and high-resolution simulation  
**Taszarek, Mateusz**; Pilgaj, Natalia; Orlikowski, Juliusz; Surowiecki, Artur; Walczakiewicz, Szymon; Pilorz, Wojciech; Piasecki, Krzysztof; Pajurek, Łukasz; Pórolniczak, Marek

**P31: ECSS2019-142**

Radar Observation of Violent Wind around Typhoon 'Jebi'  
**Sassa, Koji**; Nishii, Akira; Shimada, Udai

**P32: ECSS2019-150**

Updraft width in severe thunderstorms - observations of significant-hail producing thunderstorms  
**Rauhala, Jenni**

**P33: ECSS2019-151**

EchoTop height estimations across the Swiss Radar Domain - possibilities and limitations  
**Trefalt, Simona**; Boscacci, Marco; Figueras i Ventura, Jordi; Germann, Urs; Hering, Alessandro; Schröer, Katharina; Schwierz, Cornelia

**END OF POSTER PROGRAMME SESSION 8****Session 9****Storm microphysics, electrification, lightning and hail****P34: ECSS2019-10**

Lightning Potential Index in the Czech Republic during convective events of summer 2018 using COSMO NWP model  
**Sokol, Zbyněk**; Minářová, Jana; Uhlířová, Iva

**P35: ECSS2019-11**

Hydrometeor distribution within convective events producing lightning using cloud profiler data of summer 2018  
**Minářová, Jana**; Sokol, Zbyněk

**P36: ECSS2019-61**

Capabilities of Eulerian based lightning jump algorithm  
**Jelić, Damjan**; Telišman Prtenjak, Maja; Skok, Gregor

**P37: ECSS2019-68**

Radar detection of hail in Czechia using single- and/or dual-polarization data  
**Skripniková, Kateřina**; Řezáčová, Daniela

**P38: ECSS2019-116**

Determination of movement vectors field for scale-dependent precipitation layers: case study.  
 Giszterowicz, Mateusz; **Kurcz, Agnieszka**

**P39: ECSS2019-144**

A multi sensor study of electrical, lightning and microphysical properties of thunderstorms over the north-eastern and eastern part of India  
**Sharma, Sanjay**; Biswasharma, Rupraj; Longkumer, Imolemba; Roy, Partha; Samanta, Debajyoti; Pramanik, Gour Pramanik

**P40: ECSS2019-188**

Quantifying Hail Size Distributions from the Sky: Application of Drone Aerial Photogrammetry to an Argentinian Hail Storm  
**Soderholm, Joshua**; Kumjian, Matthew; McCarthy, Nicholas; Maldonado, Paula

**END OF POSTER PROGRAMME SESSION 9**

## Session 11

### Collection of storm data, historical events and damage assessments

**P41: ECSS2019-18**

A GIS dataset of windthrow events in the European Russia and Ural regions for 1986-2017  
**Shikhov, Andrey**; Chernokulsky, Alexander; Azhigov, Igor

**P42: ECSS2019-24**

Exceptional bura case at the end of February 2019  
**Renko, Tanja**; Strelec Mahovic, Nataša; Mikus Jurkovic, Petra

**P43: ECSS2019-37**

A study of severe storms in Basque Country: the 3rd June 2018 case. Egaña, Joseba; **Gaztelumendi, Santiago**

**P44: ECSS2019-46**

Tornadoes in Portugal overview. **Leitao, Paula**

**P45: ECSS2019-56**

Using >60'000 crowd-sourced hail reports for the verification of radar based hail products  
**Barras, Hélène**; Hering, Alessandro; Martynov, Andrey; Noti, Pascal-Andreas; Germann, Urs; Martius, Olivia

**P46: ECSS2019-64**

Cooperation between National meteorological service and amateur meteorological associations in the Czech republic.  
**Tomšů, Radek**; Prouza, Tomáš; Duspara, Robin

**P47: ECSS2019-66**

Verification of reconstructed historical extreme precipitation events in an hourly resolution  
**Bližňák, Vojtěch**; Kašpar, Marek; Müller, Miloslav; Zacharov, Petr

**P48: ECSS2019-72**

A comparison of predictability of historical heavy precipitation events. **Zacharov, Petr**; Kaspar, Marek

**P49: ECSS2019-83**

Identification of tornado tracks in Russian forests based on combining of Meteosat-8 and Sentinel-2 satellite images  
**Shikhov, Andrey**; **Azhigov, Igor**

**P50: ECSS2019-107**

Case Study of Multiple Low Topped Supercell Tornadoes in SW Iberia. March 4, 2018  
**Soriano Romero, Juan de Dios**; Gutiérrez Rubio, Delia

**P51: ECSS2019-127**

Determination of storm precipitation zones based on radar data on the example of the city of Kraków  
**Pyrc, Robert**

**P52: ECSS2019-134**

Forensic meteorology. A field survey methodology proposal for wind assessment  
**Gutiérrez Rubio, Delia**; Soriano, Juan de Dios; Bech, Joan; Rodríguez, Oriol; Castán, Salvador

**P53: ECSS2019-138**

Weather-related fatalities in Poland  
**Pilorz, Wojciech**; Surowiecki, Artur

**P54: ECSS2019-143**

The 1984 Ivanovo tornado outbreak: diagnosis and modelling  
 Chernokulsky, Alexander; **Vazaeva, Natalia**; Shikhov, Andrey

**P55: ECSS2019-195**

Information on severe storms in newspapers from the 19th century  
**Cheval, Sorin**; Haliuc, Aritina; Antonescu, Bogdan; Tişcovschi, Adrian; Dobre, Mihaela; Tătui, Florin; Dumitrescu, Alexandru; Manea, Ancuța; Tudorache, George; Irimescu, Anișoara; Birsan, Marius-Victor

**P57: ECSS2019-212**

The International Fujita Scale: A Globally Applicable Scale for Tornado and Wind Damage Classification  
**Groenemeijer, Pieter**; Holzer, Alois M.; Hubrig, Martin; Kühne, Thilo; Kaltenberger, Rainer; Soriano, Juan de Dios; Bock, Lothar; Gutiérrez Rubio, Délia; van de Ploeg, Bas; Strommer, Gabriel; Schreiner, Thomas

**END OF POSTER PROGRAMME SESSION 11**

## Session 12

### Additional posters (Tuesday)

**P58: ECSS2019-221**

Radar-based mesocyclone detection and tracking in alpine regions  
**Feldmann, Monika**

**P59: ECSS2019-222**

Deep Learning for forecasting Thunderstorms on NE Italy  
**Manzato, Agostino**; Horton, Pascal; Dovie, Agostino; Serra, Giuseppe; Foschiani, Luca; Soldà, Davide

**P60: ECSS2019-223**

KraK - a dedicated group at MET Norway on deep convection  
**M.-Gulbrandsen, Sevim**; Pedersen, Nina H.; Sarchosidis, Charalampos

**END OF POSTER PROGRAMME SESSION 12**



## Wednesday, 6 November 2019

**Location:** Lecture room

09:00–10:45

### Session 7 Satellite studies of storms and their environment

09:00–09:15: ECSS2019-186

A Unified Theory of Storm Top Dynamics and Its Verification

**Wang, Pao K.**

09:15–09:30: ECSS2019-31

A satellite perspective on interactions between convective storms and the upper atmosphere

**Setvak, Martin;** Calbet, Xavier; Miller, Steven

09:30–09:45: ECSS2019-109

The Meteosat Third Generation satellite mission and its future contribution to the monitoring of convective storms

Nietosvaara, Vesa; **Bojinski, Stephan;** Grandell, Jochen

09:45–10:00: ECSS2019-187

Satellite observations of deep convection during Mediterranean Hurricanes

**Dafis, Stavros;** Claud, Chantal; Kotroni, Vassiliki; Lagouvardos, Konstantinos; Rysman, Jean-François

10:00–10:15: ECSS2019-1

Detection of Storm-Scale Rotation from Geostationary Satellite

**Lindsey, Dan**

10:15–10:30: ECSS2019-82

"Convective cloud analysis with use of medium and high resolution radiometers - simulation of MTG/FCI and EPS-SG/MetImage RGBs"

**Struzik, Piotr;** Pajek, Monika

10:30–10:45: ECSS2019-197

Evaluating the use of temperature and humidity profiles from the IASI hyperspectral sounder for severe storm forecasting at the ESSL Testbed

**Groenemeijer, Pieter;** Púčik, Tomáš; August, Thomas

10:40 Coffee break

11:30–13:00

### Session 5 Forecasting and nowcasting of storms

11:30–11:45: ECSS2019-76

Combining ensembles of NWP and observation-based nowcasting at DWD to improve convective precipitation forecasts

**Rempel, Martin**

11:45–12:00: ECSS2019-43

Using Near-Ground Storm Relative Helicity in Tornado Forecasting

**Coffer, Brice;** Parker, Matthew; Thompson, Richard; Smith, Bryan

12:00–12:15: ECSS2019-161

Combination of object-based probabilistic Nowcasting and NWP-Ensemble

**Posada Navia-Osorio, Rafael;** Feger, Robert; Schultze, Markus; Wapler, Kathrin; Werner, Manuel

12:15–12:30: ECSS2019-184

Using machine learning to advance next-day probabilistic convective hazard prediction with convection-allowing models: Initial results and future plans

**Sobash, Ryan;** Schwartz, Craig; Gagne, David; Romine, Glen

12:30–12:45: ECSS2019-165

A novel multi-sensor nowcast algorithm of thunderstorm intensity using machine learning

**Hamann, Ulrich;** Zeder, Joel; Barras, Hélène; Clementi, Lorenzo; Foresti, Loris; Hering, Alessandro M.; Nath, Shruti; Nerini, Daniele; Nisi, Luca; Sassi, Marco; Germann, Urs

12:45–13:00: ECSS2019-54

Improving hail nowcasting by combining crowd-sourced hail reports with machine learning

**Barras, Hélène;** Hamann, Ulrich; Foresti, Loris; Hering, Alessandro; Nerini, Daniele; Zeder, Joel; Germann, Urs; Martius, Olivia

**ORAL PROGRAMME SESSION 5 CONTINUES ON THURSDAY**

13:00–14:30 Lunch break

14:30–23:00 Sponsored Social Programme

### D Excursion to the Wieliczka Salt Mine

14:30–19:00

Bus transfer to Wieliczka Salt Mine and guided tour.

### E Conference dinner

20:00–23:00

Location: **Restaurant Avangarda**

Address: Mikołaja Zyblikiewicza 1, 31-029 Kraków

(located east of city centre close to Westerplatte main road, about 10 to 15 minutes by foot from ECSS venue)

**Thursday, 7 November 2019**

Location: Lecture room

09:00–13:00

**Session 5  
Forecasting and nowcasting of storms****09:00–09:15: ECSS2019-170**What is the intrinsic predictability of supercell storms?  
**Markowski, Paul****09:15–09:30: ECSS2019-167**The 2019 NOAA/Hazardous Weather Testbed Spring Forecasting Experiment  
**Gallo, Burkely**; Clark, Adam; Jirak, Israel; Knopfmeier, Kent; Roberts, Brett and the Spring Forecasting Experiment Team**09:30–09:45: ECSS2019-114**Severe weather patterns of a tornadic event associated to a squall line in the western Mediterranean region  
**Pineda, Nicolau**; Altube, Patricia; Rigo, Tomeu; Farnell, Carme; Montanyà, Joan; van der Velde, Oscar; Salvador, Albert; Bech, Joan; Rodriguez, Oriol**09:45–10:00: ECSS2019-15**Forecasting lightning with ECMWF's IFS  
**Tsonevsky, Ivan**; Lopez, Philippe**10:00–10:15: ECSS2019-2**Predicting tornado count distributions by damage rating  
**Elsner, James**; Schroder, Zoe**10:15–10:30: ECSS2019-119**Classification, environments and impact of the most severe thunderstorms over Poland in last decade  
**Poręba, Szymon**; Barczyk, Mateusz**10:30–10:45: ECSS2019-215**A prototype real-time sting jet precursor tool for forecasters  
**Martinez-Alvarado, Oscar**; Gray, Suzanne L.; Suri, Dan; Ackerly, Duncan**10:45 Coffee break****11:30–11:45: ECSS2019-118**TAF verification - improvements of the thunderstorm forecasts at Croatian airports  
**Jurković, Jadran**; Šoljan, Vinko; Pasarić, Zoran; Kos, Igor**11:45–12:00: ECSS2019-176**SEEMET - South-Eastern Europe Training Initiative  
**Strelec Mahović, Nataša**; Mikuš Jurković, Petra; Blašković, Marko; Renko, Tanja**12:00–12:15: ECSS2019-115**Verification of heavy rain warning in Catalonia  
Gallego, Sergio; Alvarez, Manuel; Batalla, Esther; Brucet, Clara; Farnell, Carme; Flores, Abel; Segala, Santi; **Aran, Montse****12:15–12:30: ECSS2019-122**Upper air forcing of convection: the case of Gdask flood on 9 July 2001  
**Ziemiański, Michał****12:30–12:45: ECSS2019-192**Study of strong tornados in Germany: Various aspects of Forecasting and Nowcasting  
**Beyer, Marcus**; Wapler, Kathrin**12:45–13:00: ECSS2019-41**From Short Fuse Warnings to Long Range Forecasts: The Role of the Meteorologist in Global Weather Industry  
**Roys, Tyler****END OF ORAL PROGRAMME SESSION 5****13:00 Lunch break**

Location: Room Attic

14:30–15:45

**F CWG splinter meeting**By invitation.  
Meeting of the EUMETSAT Convection Working Group.

Lecture Room: Lecture room

16:45–18:15

**Session 2  
Numerical modelling of storms,  
storm-scale data assimilation****16:45–17:00: ECSS2019-45**Novel analysis techniques for identifying systematic differences between convection-allowing model forecasts  
**Potvin, Corey**; Skinner, Patrick; Clark, Adam; Wicker, Louis; Carley, Jacob; Reinhart, Anthony; Jones, Thomas; Yussouf, Nusrat; Knopfmeier, Kent**17:00–17:15: ECSS2019-173**The role of cloud microphysics and model grid resolution in the development of severe convective events.  
**Wyszogrodzki, Andrzej A.****17:15–17:30: ECSS2019-104**Assimilation of 3D radar data and derived objects on the convective scale with an ensemble-based data assimilation system  
**Welzbacher, Christian**; Bauernschubert, Elisabeth; Blahak, Ulrich; Feger, Robert; Khosravian, Kobra; de Lozar, Alberto; Potthast, Roland; Schraff, Christoph; Stephan, Klaus; Werner, Manuel**17:30–17:45: ECSS2019-96**Entrainment in Supercells  
**Jo, Enoch**; Lasher-Trapp, Sonia

**17:45–18:00: ECSS2019-131**

Exploring the potential of assimilating three-dimensional lightning discharge observations with an ensemble Kalman filter

**Honda, Takumi**; Sato, Yousuke; Miyoshi, Takemasa

**18:00–18:15: ECSS2019-55**

Comparison of Simulated Polarimetric Signatures Using ICE3 and LIMA Microphysics Schemes in Meso-NH

**Parisotto Sinhori, Natalia**; Augros, Clotilde; Caumont, Olivier

**END OF ORAL PROGRAMME SESSION 2**

**18:30–19:30**      **Location:** Room Attic

**G****CM1 model introduction**

by Dr. George H. Bryan from NCAR, Boulder, USA

**Thursday's posters**

**Location:** Poster area

**Attendance time:** 14:30–16:00

**Session 2****Numerical modelling of storms, storm-scale data assimilation****P1: ECSS2019-34**

Study and forecast of convection phenomena over the territory of the south of Russia using lightning location data network

**Gubenko, Inna**

**P2: ECSS2019-62**

Convective dust storms during Saharan dust outbreak on Northern Adriatic

**Mifka, Boris**; Telišman Prtenjak, Maja

**P3: ECSS2019-65**

Analysis of the WRF-HAILCAST model applied to the Croatian area

**Malečić, Barbara**; Ćorko, Karol; Jelić, Damjan; Horvath, Kristian; Strelec Mahović, Nataša; Mikuš Jurković, Petra; Telišman Prtenjak, Maja

**P4: ECSS2019-78**

High-resolution simulation of an isolated tornadic supercell in Poland on 20 June 2016

**Pilgaj, Natalia**; Taszarek, Mateusz; Pajurek, Łukasz; Kryza, Maciej

**P5: ECSS2019-85**

Updated analysis of nocturnal convection initiation using convective-scale data assimilation of observations collected during PECAN

**Marquis, James**; Wurman, Josh; Romine, Glen

**P6: ECSS2019-103**

A step towards dynamic forecast and monitoring of severe storms and cloudbursts in Higher Himalayas

**Dhar, Tanmay**

**P7: ECSS2019-113**

Numerical Modeling of a Masurian Lake District Severe Convective System from 21 August 2007

**Wójcik, Damian K.**; Ziemiański, Michał Z.; Grabowski, Wojciech W.

**P8: ECSS2019-130**

Understanding of Convection Genesis by Urban Meteorological Model Based on Large Eddy Simulation (withdrawn)

**Yamaguchi, Kosei**; Tsuchihashi, Tomohiro; Konishi, Dai; Nakakita, Eiichi

**P9: ECSS2019-147**

Massive parameter-sweep warm bubble experiment on convective cloud environment

**Sueki, Kenta**

**P10: ECSS2019-149**

Evaluation of heavily-precipitating storm-scale simulations with different microphysical schemes using observations from radar and SEVIRI visible channels

**de Lozar, Alberto**; Blahak, Ulrich; Seifert, Axel

**P12: ECSS2019-193**

Impact of terrain on supercells according to idealized simulations with actual terrain

**Bryan, George**

**P13: ECSS2019-213**

On the importance of the atmospheric-ocean feedback mechanisms in the Mediterranean storms

**Stathopoulos, Christos**; Patlakas, Platon; Tsalis, Christos; Kallos, George

**END OF POSTER PROGRAMME SESSION 2****Session 5****Forecasting and nowcasting of storms****P14: ECSS2019-3**

Numerical forecast of lightning probability over Bulgaria

**Markova, Boryana**; Tsenova, Boryana; Bogatchev, Andrey

**P15: ECSS2019-6**

The derecho episode in the Bory Tucholskie district 11 August 2017 - the present state of the predicting severe storms by awiacja\_imgw\_pl

**Barański, Piotr**

**P16: ECSS2019-9**

Predicting tornado frequency using environmental factors on big convective days in the United States

**Schroder, Zoe**; Elsner, James

**P17: ECSS2019-14**

Development of a probabilistic precipitation-nowcasting approach at DWD

**Schultze, Markus**; Rempel, Martin; Werner, Manuel; Blahak, Ulrich

**P18: ECSS2019-16**

Severe Storm Predictors - Capabilities of Remote Sensing in Central Europe  
**Valachova, Michaela**; Benacek, Patrik; Kyznarova, Hana

**P19: ECSS2019-19**

Analysis and nowcasting of the thunderstorm life-cycle based on multiple high resolution data sources  
**Zöbisch, Isabella**; Forster, Caroline; Zinner, Tobias; Wapler, Kathrin

**P20: ECSS2019-20**

Life cycle analysis of convective cells for Nowcasting purposes in consideration of atmospheric environment conditions  
**Wilhelm, Jannik**; Blahak, Ulrich; Wapler, Kathrin; Potthast, Roland; Kunz, Michael

**P21: ECSS2019-29**

Numerical modelling and observational analysis of the characteristics of an intense thunderstorm over Northern Greece  
**Tegoulas, Ioannis**

**P22: ECSS2019-39**

Evaluation of the potential use of lightning features as a storm severity indicator in Basque Country.  
**Gaztelumendi, Santiago**; Egaña, Joseba

**P23: ECSS2019-69**

Object-based verification of radar reflectivities on the convective scale  
**Hoff, Michael**; De Lozar, Alberto; Feger, Robert; Posada, Rafael; Junk, Markus

**P24: ECSS2019-49**

Hell (hail) alleys at the Danubian Plain in Bulgaria.  
**Zamfirov, Ivailo**; Manafov, Ilian; Penchev, Rosen; Geogiev, Georgi

**P25: ECSS2019-52**

Satellite observed properties of isolated convective storms during their growth phase  
**Lenk, Stephan**; Senf, Fabian; Deneke, Hartwig

**P26: ECSS2019-57**

Ensemble Forecasting of Extreme Convective Phenomena Using Universal Tornado Index  
**Mazur, Andrzej**; Duniec, Grzegorz; Interewicz, Witold; Wyszogrodzki, Andrzej

**P27: ECSS2019-70**

Verification of the QPF for severe local storms vs heavy stratiform rains  
Zacharov, Petr; **Rezacova, Daniela**

**P28: ECSS2019-90**

EnSOMble Forecasting: Leveraging Self-Organizing Maps for Tornado Threat Modeling  
**Gallo, Burkely**; Anderson-Frey, Alexandra; Flora, Monte

**P29: ECSS2019-93**

Recent and future training developments related to severe weather forecasting in EUMeTrain  
**Kocsis, Zsófia**

**P30: ECSS2019-97**

Characteristics of the linearly organized convective systems over Croatia  
**Strelec Mahović, Nataša**; Mikuš Jurković, Petra; Lovrić, Branimir; Šoljan, Vinko; Renko, Tanja

**P31: ECSS2019-99**

The Nature and Variability of Ensemble Sensitivity Fields that Diagnose Severe Convection  
**Ancell, Brian**; Coleman, Austin

**P32: ECSS2019-102**

Storm observation system with 4-D weather database  
**Lialushkin, Aleksandr**; Zamorin, Igor; Bazlova, Tatiana; Bocharnikov, Nikolai; Solonin, Aleksandr

**P33: ECSS2019-108**

Detection of tornadic vortex from Doppler velocity field using Convolutional Neural Networks  
**Ishitsu, Naoki**; Kusunoki, Kenichi; Adachi, Toru; Arai, Ken-ichiro; Inoue, Hanako; Fujiwara, Chusei; Suzuki, Hiroto

**P34: ECSS2019-117**

High-resolution numerical models for forecasting a severe wet microburst over central Italy  
**Pasi, Francesco**; Capecchi, Valerio; Messeri, Gianni; Melani, Samantha; Antonini, Andrea; Ortolani, Alberto; Gozzini, Bernardo

**P36: ECSS2019-120**

An advanced system for automatic strong gust detection and warning for railroads using deep learning - current progress and future plans  
**Kusunoki, Kenichi**; Ishitsu, Naoki; Adachi, Toru; Arai, Ken-ichiro; Inoue, Hanako; Fujiwara, Chusei; Suzuki, Hiroto

**P37: ECSS2019-128**

An early severe weather warning system in the Meteorological Service of Catalonia  
**Figuerola, Francesc**; Aran, Montse; Farnell, Carme; Mateo, Jordi; Rigo, Tomeu; Segala, Santi

**P38: ECSS2019-136**

Pedagogical input of idealized numerical simulations performed by Meso-NH model in order to illustrate and understand the complex processes associated with deep and moist convection  
**Kreitz, Michaël**; Pollack, David; Gueguen, Claudine; Mahenc, Jeanne; Sterle, Amélie; Clotilde, Laure; Chassagnou, Anne-Sophie; Guet, Quentin

**P39: ECSS2019-139**

Diagnoses of severe convection during the cold season in France  
**Kreitz, Michaël**; Boisserie, Marie; Forster, Arnaud; Paillard, Michaël; Tessiot, Octave

**P40: ECSS2019-157**

Storm-Scale Ensemble Forecasting during NOAA 2019 HWT using FV3 with Multiple Physics  
**Kong, Fanyou**; Xue, Ming; Supinie, Tim; Zhang, Chunxi; Brewster, Keith

**P41: ECSS2019-164**

Forecast Parameters for US Hail Occurrence and Size  
**Allen, John**; Kumjian, Matthew; Jewell, Ryan; Smith, Bryan; Thompson, Rich

**P42: ECSS2019-166**

Towards automated multi-sensor thunderstorm warning suggestions

**Nath, Shruti**; Barras, Hélène; Clementi, Lorenzo; Foresti, Loris; Hamann, Ulrich; Hering, Alessandro M.; Nerini, Daniele; Nisi, Luca; Sassi, Marco; Zeder, Joel; Germann, Urs

**P43: ECSS2019-171**

Generation of an Object-based Nowcasting Ensemble

**Feger, Robert**; Werner, Manuel; Posada, Rafael; Wapler, Kathrin; Blahak, Ulrich

**P44: ECSS2019-172**

Exploring potential predictor variables by means of genetic algorithms for thunderstorms forecasting with analog methods

**Horton, Pascal**; Manzato, Agostino; Soldà, Davide; Martius, Olivia

**P45: ECSS2019-194**

Assessment of WRF model convection schemes for the prediction of convective storms over the United Arab Emirates

**Tilev, Seyda**; Ajjaji, Radi

**P46: ECSS2019-206**

Modifications to severe convective storm ingredients in the Alpine forelands for cases of strong and weak synoptic-scale flow.

**Pucik, Tomas**; Zacharov, Petr; Groenemeijer, Pieter

**P47: ECSS2019-216**

Challenging forecast of a mesocyclonic tornado on 3rd October 2018 in Slovakia

**Šinger, Miroslav**

**P48: ECSS2019-217**

Use of convection-allowing model ensembles in forecasting severe convective hazards in Australia

**Richter, Harald**; Sgarbossa, Dean

**END OF POSTER PROGRAMME SESSION 5**

## Session 10 Storm climatology, risk assessments and relation to climate change

**P49: ECSS2019-7**

Probabilistic modeling of European severe convective storm risk - from research to insurance application

**Lai, Michèle**; Dobbin, Alison; Haines, Philip; Hill, Marc; Grieser, Juergen

**P50: ECSS2019-40**

A nine-year climatology of thunderstorm days and lightning characteristics in Basque Country.

**Gaztelumendi, Santiago**; Egaña, Joseba; Aranda, Jose Antonio

**P51: ECSS2019-44**

Bayesian modeling of central U.S. tornado reporting rates

**Potvin, Corey**; Broyles, Chris; Skinner, Patrick; Brooks, Harold; Rasmussen, Erik

**P52: ECSS2019-48**

Increase of the largest hailstone diameter with melting level rise

**Berthet, Claude**; Dessens, Jean; Sanchez, Jose Luis; Merino, Andres

**P53: ECSS2019-73**

Climatological and meteorological aspects of very large hail and tornados in Lithuania in the period 1962-2018

**Marcioniene, Izolda**

**P54: ECSS2019-74**

LNS as a new tool for severe weather detection in relation to climatic studies

**Kryvoshein, Oleksandr**

**P55: ECSS2019-79**

Mid-tropospheric patterns and historic tornado outbreaks.

**Cwik, Paulina**; McPherson, Renee; Brooks, Harold; Richman, Michael

**P56: ECSS2019-80**

Hazardous weather for aviation in Europe: climatological estimates based on ERA5 reanalysis

**Taszarek, Mateusz**; Kendzierski, Sebastian; Pilgaj, Natalia

**P57: ECSS2019-111**

A Hail Storm Climatology for Switzerland

**Schroeer, Katharina**; Trefalt, Simona; Schwierz, Cornelia; Hering, Alessandro; Germann, Urs; Nisi, Luca

**P58: ECSS2019-126**

Preliminary climatology of derechos in Czechia

**Rýva, David**

**P59: ECSS2019-133**

A 15 years climatology of storm tracks by analysis of Vertical Maximum Intensities over north-eastern Italy

**Pucillo, Arturo**

**P60: ECSS2019-140**

Observed redistribution of precipitation types toward more heavy showers in Northern Eurasia

**Chernokulsky, Alexander**; Kozlov, Fedor; Zolina, Olga; Semenov, Vladimir

**P61: ECSS2019-75**

A Climatology of Thunderstorms across Europe from a Synthesis of Multiple Data Sources

**Taszarek, Mateusz**; Allen, John; Púčik, Tomáš; Groenemeijer, Pieter; Czernecki, Bartosz; Kolendowicz, Leszek; Lagouvardos, Kostas; Kotroni, Vasiliki; Schulz, Wolfgang

**P62: ECSS2019-152**

A 10-year climatology of Mesoscale Convective Systems in Poland based on radar and lightning data

**Surowiecki, Artur**; Taszarek, Mateusz

**P63: ECSS2019-153**

Study of upper air conditions in tornadic and waterspout events in the Iberian Peninsula and Balearic Islands using ERA5 reanalysis data

**Rodriguez, Oriol**; Bech, Joan

**P64: ECSS2019-162**

Thunderstorm and hail occurrence in Kraków (1885-2018)

**Bielec-Bakowska, Zuzanna**

**P65: ECSS2019-169**

Thunderstorm favorable conditions over Poland  
(1951-2018)

**Ustrnul, Zbigniew**; Wypych, Agnieszka; Bochenek,  
Bogdan

**P66: ECSS2019-174**

Moisture Attribution and Sensitivity Analysis of a Winter  
Tornado Outbreak

**Molina, Maria**; Allen, John

**P67: ECSS2019-177**

Environmental controls on the climatological scaling of  
tornado frequency with intensity

**Tippett, Michael**; Lepore, Chiara

**P68: ECSS2019-180**

Understanding Climate Controls of Severe Local Storm  
Environments over North America

**Reed, Kevin**; Chavas, Daniel; Li, Funing

**P69: ECSS2019-196**

Estimating changes in high-end hail losses in Europe  
using a hail event set

**Castellano, Christopher**; Groenemeijer, Pieter; Rädler,  
Anja T.; Púčik, Tomáš; Faust, Eberhard

**P70: ECSS2019-201**

Season-long sensitivity studies on the role of soil moisture  
for convective precipitation

**Pistotnik, Georg**; Schneider, Stefan

**P71: ECSS2019-202**

Analysis of 10 severe convective storm cases over Kars  
and surroundings, Turkey

Kivrak, Berna; **Kahraman, Abdullah**

**P72: ECSS2019-207**

An updated climatology of severe convective wind events  
in Europe

**Gatzen, Christoph**; Taszarek, Mateusz; Surowiecki,  
Artur; Schielicke, Lisa

**P73: ECSS2019-214**

Significant tornado and strong waterspout climatology of  
Greece

**Sioutas, Michalis**; Doe, Robert K.

**P74: ECSS2019-218**

Assessing extreme wind speeds at return intervals of 20  
years and 50 years from the USAF data set

**Kettle, Anthony**

**END OF POSTER PROGRAMME SESSION 10**

## Friday, 8 November 2019

**Location:** Lecture room

09:00–13:00

### Session 10 Storm climatology, risk assessments and relation to climate change

**09:00–09:30: ECSS2019-25**

Investigating Possible Future Changes in Hailfall Occurrence and Intensity Using a Pseudo-Global Warming Approach (solicited)

**Lasher-Trapp, Sonia;** Trapp, Robert

**09:30–09:45: ECSS2019-87**

Probabilistic Hail Hazard Assessment

**Smit, Ansie;** Dyson, Liesl; Kijko, Andrzej

**09:45–10:00: ECSS2019-121**

Hail climatology and risk assessment combining satellite, radar and climate model data

**Punge, Heinz Jürgen;** Bedka, Kristopher M.; Kunz, Michael

**10:00–10:15: ECSS2019-190**

Large hail impacts and hail-related financial losses across Europe

**Pucik, Tomas;** Groenemeijer, Pieter; Castellano, Christopher; Rädler, Anja; Kühne, Thilo; Faust, Eberhard

**10:15–10:30: ECSS2019-101**

Seasonal and diurnal changes of thunderstorm activity in Poland

**Jaczewski, Adam**

**10:30–10:45: ECSS2019-105**

Floods in Turkey: 1980-1998

Kılıç, Özgenur; **Kahraman, Abdullah**

11:00 Coffee break

**11:30–11:45: ECSS2019-98**

The Global Distribution of Hail and Tornado Environments  
**Allen, John;** Lepore, Chiara

**11:45–12:00: ECSS2019-26**

High-Shear/Low-CAPE Environments in Reanalysis Data  
**Brooks, Harold;** Battaglioli, Francesco; Croad, Hannah; Cumming, Ryan; Martin, Elinor

**12:00–12:15: ECSS2019-95**

U.S. Tornado Fatalities: Environmental, Seasonal, and Geographical Perspectives

**Anderson-Frey, Alexandra;** Brooks, Harold

**12:15–12:30: ECSS2019-13**

Severe convective storms in Europe and their relation to large-scale mechanisms

**Mohr, Susanna;** Kunz, Michael; Piper, David; Wandel, Jan; Martius, Olivia

**12:30–12:45: ECSS2019-145**

Long-term changes in thunderstorm environments over Europe and United States as the response to a globally warming climate

**Taszarek, Mateusz;** Czernecki, Bartosz; Brooks, Harold; Allen, John; Pilgaj, Natalia

**12:45–13:00: ECSS2019-205**

Estimating the risk exposed areas and the return periods of Medicanes

**Patlakas, Platon;** Stathopoulos, Christos; Tsalis, Christos; Kallos, George

13:00–13:30

## H Closing and Awards Session

Organizing the ECSS is a statutory purpose of the



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