11th European Conference on Severe Storms

Bucharest, Romania

8 – 12 May 2023

Programme

ECSS

European Conference on Severe Storms

Programme overview – ECSS2023

	Monday	Tuesday	Wednesday	Thursday	Friday
09:00 / 09:15	OPENING SESSION	11: Collection of storm data, historical events and damage assessments	5: Forecasting and nowcasting of severe weather	8: Radar studies of storms and their environment	9: Storm electrification, lightning, microphysics and hail
09:30 / 09:45 / 10:00 / 10:15 / 10:30	3: Impact of storms on society, impact mitigation and early warning systems				
10:45 / 11:00 / 11:15	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK
11:30 / 11:45 / 12:00 / 12:15 / 12:30 / 12:45	3: continued 4: Flash floods	1: Convective storm and tornado dynamics	5: continued	7: Satellite studies of storms and their environment	6: Severe weather forecast training 7: continued, including Nikolai Dotzek Award Lectures
13:00 / 13:15 / 13:30 / 13:45 / 14:00 / 14:15	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	LUNCH BREAK	CLOSING and CONFERENCE AWARDS SESSION until 13:30
14:30 / 14:45 / 15:00 / 15:15 / 15:30 / 15:45	10: Storm climatology, risk assessments and relation to climate change	TUESDAY POSTER SESSION	14:30 Conference Photo and SPONSORED SOCIAL EVENTS: Guided tours	THURSDAY POSTER SESSION In parallel: EUMETSAT CWG splinter meeting	
16:00 / 16:15 / 16:30	COFFEE BREAK	COFFEE BREAK		COFFEE BREAK	
16:45 / 17:00 / 17:15 / 17:30 / 17:45 / 18:00	10: continued	1: continued		2: Numerical modelling of storms, storm-scale data assimilation	
18:30 / 19:30	Icebreaker reception		Conference dinner and giving of Nikolai Dotzek Award		
21:30 / 23:30					

On site registration desk opening hours:
Sun 15:00 – 20:00
Mon 08:00 – 18:00
Tue – Fri starting at 08:30 until the end of the scientific programme

All printed programme information as of 24 April 2023. Please check the online programme on our webpage www.ecss.eu for updates. Updates will also be provided via local announcements or tweets.

ECSS Twitter updates by @essl_ecss.
Please use the hashtag **#ecss2023** for your tweets.

Sunday, 7 May 2023

Location: Conference Lobby and poster area

Relaxed Sunday on site registration

No cues, relaxed atmosphere.

You can already hang your poster for the Tuesday poster session.

Location: Sala Albastră

Sunday evening side events

18:00-19:00: Tutorial on "Media communication of meteorological content" **by Alois M. Holzer (ESSL) – event fully booked.**

19:00-20:00: Introductory lecture "From showers to a derecho. A demonstration of severe storm forecasting in contrasting environments" **by Tomáš Púčik (ESSL) – event fully booked.**

Monday, 8 May 2023

Location: Main Conference Room
09:00–09:30

Opening session

09:30–12:30

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

09:30–10:00: ECSS2023-176
Severe Storms Research and Forecasting in Subtropical South (solicited)
Ribeiro, Bruno Z.

10:00–10:15: ECSS2023-2
Comparing probabilistic and dichotomous forecasts of hazardous events on a consistent basis: Toy statistical models applied to tornado forecasting
Brooks, Harold

10:15–10:30: ECSS2023-88
Toward the definition of "Medicane"
Miglietta, Mario Marcello and the COST Action on Mediterranean cyclones - initiative on the definition of Medicanes

10:30–10:45: ECSS2023-83
Severe Weather Impact Database and Impact-based Forecasts by Utilizing Machine-Learning Technology
Punkka, Ari-Juhani; Kämäräinen, Matti

11:30–11:45: ECSS2023-146
Lightning Fatalities in Europe (2001-2020)
Kühne, Thilo; Antonescu, Bogdan; Groenemeijer, Pieter; Púcik, Tomáš

11:45–12:00: ECSS2023-12
The risk of lightning strikes in stadiums: the example of football
Schmitt, Stéphane

12:00–12:15: ECSS2023-95
Guidelines for Satellite-based Nowcasting in Africa
De Coning, Estelle; **Nietosvaara, Vesa**

Session 4
Flash floods

12:15–12:30: ECSS2023-85
Real-time extremity assessment of rainfall observations and SINFONY forecasts for small hydrological catchments
Berndt, Christian; Bondy, Jan; Schultze, Markus; Blahak, Ulrich

14:30–18:15

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

14:30–14:45: ECSS2023-160
Comparing CMIP6 Future Projections for Severe Convective Environments in a Warmed Climate over Australia, Europe and North America
Allen, John; Gopalakrishnan, Deepak; Cuervo-Lopez, Carlos; Trapp, Robert; Robinson, Eric

14:45–15:00: ECSS2023-98
Trends of thunderstorm activity and relation to large-scale atmospheric conditions in western and central Europe
Augenstein, Markus; Mohr, Susanna; Kunz, Michael

15:00–15:15: ECSS2023-104
Large-scale flow patterns and their relation to summer lightning in Europe
Ghasemifard, Homa; Groenemeijer, Pieter; Pucik, Tomas; Battaglioli, Francesco

15:15–15:30: ECSS2023-25
Do severe storms across Australia, Europe and the United States share similarities? A comparison of atmospheric profiles and environmental predictors
Taszarek, Mateusz; Allen, John; Nixon, Cameron; Dowdy, Andrew; Battaglioli, Francesco

15:30–15:45: ECSS2023-107
A climatology of drylines and dryline related convection in sub-tropical southern Africa
van Schalkwyk, Lynette; Blamey, Ross C.; Reason, Chris J. C.; Dyson, Liesl L.; Gijben, Morne

15:45–16:00: ECSS2023-11
Using convection-permitting simulations to assess future changes in lightning and hail in Europe
Kahraman, Abdullah; Kendon, Elizabeth; Fowler, Hayley; Wilkinson, Jonathan

16:00 Coffee break

16:45–17:00: ECSS2023-101
Reconstructing Long-Term (1950-2021) Trends in Convective Hazards using Additive Logistic Regression Models
Battaglioli, Francesco; Groenemeijer, Pieter; Púcik, Tomáš; Taszarek, Mateusz; Ulbrich, Uwe; Rust, Henning

17:00–17:15: ECSS2023-55
ENSO Modulation of U.S. Cloud-to-ground Lightning Activity
Malloy, Kelsey; Tippett, Michael; Koshak, William

17:15–17:30: ECSS2023-154
Reconstruction of tornado environments in Romania (1981-2020) using the ERA5 reanalysis
Cheval, Sorin; **Antonescu, Bogdan**; Andrei, Meda Daniela; Andrei, Simona; Manta, Robert-Daniel

17:30–17:45: ECSS2023-117
Derechos in Finland
Rauhala, Jenni

17:45–18:00: ECSS2023-56
Hail time series from radar proxies for decadal variability of hail in Switzerland
Wilhelm, Lena; Martius, Olivia; Schröer, Katharina; Schwierz, Cornelia

18:00–18:15: ECSS2023-15
Risk Assessment for Hail Damages to Buildings and Cars in Switzerland: Current Risk and Future Projections
Schmid, Timo; Bresch, David N.

18:30–20:30

Icebreaker reception

at the conference venue

Tuesday, 9 May 2023

Location: Main Conference Room
09:00–10:45

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

09:00–09:30: ECSS2023-32
The Northern Tornadoes Project – Shifting the Post-Event Paradigm in Canada (solicited)
Sills, David; Kopp, Gregory

09:30–09:45: ECSS2023-29
Climatology of convective dust storms in Poland
Skop, Filip

09:45–10:00: ECSS2023-143
Damage survey, environment and storm-scale evolution of the giant hail and F4 tornado producing supercell on 24 June 2021
Púcik, Tomáš; Groenemeijer, Pieter; Singer, Miroslav; Ryva, David; Stanek, Miloslav; Pistotnik, Georg; Kaltenberger, Rainer; Holzer, Alois

10:00–10:15: ECSS2023-50
Citizen observations via smartphone in Belgium: data collection and applications
Reyniers, Maarten; Delobbe, Laurent; Watelet, Sylvain

10:15–10:30: ECSS2023-6
A machine learning approach to mitigate problems with estimated winds in severe thunderstorm wind damage reports
Gallus, William; Tirone, Elizabeth; Pal, Subrata; Dutta, Somak; Maitra, Ranjan; Newman, Jennifer; Weber, Eric

10:30–10:45: ECSS2023-151
The International Fujita Scale and its implementation
Groenemeijer, Pieter; Holzer, Alois M.; Kühne, Thilo; Púcik, Tomáš

10:45 Coffee break

11:30–13:00

Session 1
Convective storm and tornado dynamics

11:30–11:45: ECSS2023-13
How Mountains Alter Quasi-linear Convective System Dynamics and Tornado Potential
Lombardo, Kelly; Wu, Fan; Fenrich, Adisen

11:45–12:00: ECSS2023-17
A conceptual model for the development of tornado in the Po Valley
De Martin, Francesco; Davolio, Silvio; Miglietta, Mario Marcello; Levizzani, Vincenzo

12:00–12:15: ECSS2023-14
Supercell low-level mesocyclones: Origins of inflow and vorticity
Coffer, Brice; Parker, Matthew; Peters, John; Wade, Andrew

12:15–12:30: ECSS2023-100
Two Archetypes of Tornadic Quasilinear Convective Systems in the United Kingdom: Vortex Genesis and Maintenance
J. Buckingham, Ty; M. Schultz, David; M. Markowski, Paul; J. Trapp, Robert

12:30–12:45: ECSS2023-108
Idealized study of the interaction between squall lines and convective cells
Schielicke, Lisa; Pacey, George; Gatzen, Christoph; Pfahl, Stephan

12:45–13:00: ECSS2023-122
Towards a deeper understanding of the scale interactions between cold fronts and convection during the European warm-season
Pacey, George; Pfahl, Stephan; Schielicke, Lisa

13:00 Lunch break

Location: Sala Albastră
14:30–15:30

ECSS press briefing

Location: Main Conference Room

Session 1
Convective storm and tornado dynamics

16:45–17:00: ECSS2023-111
Tornado Thermodynamics Observations and the Boundary-layer Evolution and Structure of Tornadoes (BEST) Study
Kosiba, Karen; Wurman, Josh

17:00–17:15: ECSS2023-51
Supercell thunderstorms in complex topography - how lakes in mountain valleys can increase occurrence frequency
Feldmann, Monika; Rotunno, Richard; Germann, Urs; Berne, Alexis

17:15–17:30: ECSS2023-94
Does big CAPE equate to big tornado potential in supercell thunderstorms?
Peters, John M

17:30–17:45: ECSS2023-65
Can GNSS help satellite measurements for thunderstorm nowcasting?
Holl, Gerrit

17:45–18:00: ECSS2023-69
Severe hail in France: reconstruction of Storm Ela's and June 2022 hailstorms
Panosetti, Davide; Allen, Christopher; Obaidullah, Yaqubi; Thollon, Orane

18:00–18:15: ECSS2023-40
Severe convection event in southeast of Bulgaria on 17th September 2022
Kostashki, Bilyana; Penchev, Rosen; Guerova, Guergana

END OF TUESDAY ORAL PROGRAMME

Tuesday posters

Location: Poster area

Attendance time: 14:30–16:00

Session 6
Severe weather forecaster training

P1: ECSS2023-96
EUMETSAT activities in training forecasters for using satellite data and applications
Strelec Mahović, Nataša; Nietosvaara, Vesa; Smiljanic, Ivan

P2: ECSS2023-127
Tornadic, hail and wind storms in Central Europe – when to expect what: a case study of the severe weather outbreak on 20 May 2022
Beyer, Marcus; **Wapler, Kathrin**

Session 7
Satellite studies of storms and their environment

P3: ECSS2023-42
Estimates of the relationship among characteristics of severe convective storms, their cloud-top properties, and environmental parameters in Northern Eurasia
Chernokulsky, Alexander V.; Shikhov, Andrey; Yarinich, Yulia; Sprygin, Alexander

P4: ECSS2023-75
Enhance object-based thunderstorm nowcasting with the use of next-generation satellite data at DWD
Strube, Cornelia; Müller, Richard; Werner, Manuel

P5: ECSS2023-168
Global instability indices derived from EUMETSATs current and future hyperspectral Infrared sounding missions
Goukenleuque, Cedric; Stapelberg, Stefan; Crapeau, Marc; Hultberg, Tim

P6: ECSS2023-77
Generation of AI-based proxy radar data from GK2A/AMI data in East Asia
Park, Ki-Hong; Lee, Heeyong; Sohn, Eunha

P7: ECSS2023-133
State-of-the-art Total Column Water Vapour Retrievals for Improved Characterization of Pre-convective Environments
El Kassar, Jan Riad; Carbajal Henken, Cintia; Preusker, Rene

Session 8
Radar studies of storms and their environment

P8: ECSS2023-26
Giant hail in Poland produced by a supercell merger in extreme instability
Matczak, Patryk; Piasecki, Krzysztof; Taszarek, Mateusz; Czernecki, Bartosz; Skop, Filip; Sobisiak, Adrian

P9: ECSS2023-35
Analysis of severe weather detection in the metropolitan area of Korea using X-Band weather radar
Park, Jin-woo; Mo, Sun-Jin; Gu, Ji-Young; Lee, Seungwoo

P10: ECSS2023-36
Convective objects detection using computer vision based on radar images
Mo, Sun-Jin; Park, Jin-woo; Gu, Ji-Young; Lee, seungwoo

P11: ECSS2023-110
Mobile S-band and Bistatic Networks for Severe Storms
Wurman, Joshua; Kosiba, Karen

P12: ECSS2023-112
Overview of the PERiLS (Propagation, Evolution and Rotation in Linear Storms) Project
Kosiba, Karen; Wurman, Josh; Trapp, Jeff; Nesbitt, Steve; Parker, Matt

P13: ECSS2023-113
Fine-Scale Hurricane Boundary Layer Structure
Kosiba, Karen; Wurman, Josh

P14: ECSS2023-114
The Flexible Array of Radars and Mesonets (FARM)
Wurman, Joshua; Kosiba, Karen; Trapp, Jeff; Nesbitt, Steve

P15: ECSS2023-116
Analysis of Tornadic Storm in Southern Moravia on 24th June 2021 Based on Polarimetric Doppler Weather Radar and Lightning Detection Data
Novak, Petr; Kyznarová, Hana

P16: ECSS2023-123
Analysis of splitting supercell storm based on the Doppler weather radar data
Barakova, Denitsa; Dimitrova, Tsvetelina; Georgiev, Stefan; Kadiyska, Nadezhda

P17: ECSS2023-149
A derecho in northern Europe
Rauhala, Jenni

P18: ECSS2023-161
The climatology of supercell thunderstorms across Poland based on multisource data
Piasecki, Krzysztof; Taszarek, Mateusz; Surowiecki, Artur; Pilguj, Natalia

Session 9
Storm microphysics, electrification, lightning and hail

P19: ECSS2023-4
The Belgian Lightning Location System (BELLS)
Poelman, Dieter

P20: ECSS2023-163
Will hail be severe? Elusive Environmental Predictors Generating Large Hail
Allen, John; Nixon, Cameron; Kumjian, Matthew; Taszarek, Mateusz

P21: ECSS2023-102
Operational hail forecasting in Greece
Papavasileiou, Georgios; Kotroni, Vasiliki; Lagouvardos, Konstantinos; Giannaros, Theodore M.

P22: ECSS2023-115
Selective simulated seeding on hailstorms – a summertime case study over Switzerland
Papaevangelou, Nikolaos; Lohmann, Ulrike; Ferrachat, Sylvaine

P23: ECSS2023-124
Pre-storm environments and storm-scale properties of the major hailstorms of 2021 and 2022 in Europe.
Pucik, Tomas; Groenemeijer, Pieter; Taszarek, Mateusz; Battaglioli, Francesco

P24: ECSS2023-130
Radar-based Hail Detection and Hail Size Estimation at DWD. **Schultze, Markus**; Wilke, Tabea; Berndt, Christian

P25: ECSS2023-162
ACCuReSy Project- targeting the aerosol-cloud interactions within convective environments in Romania
Andrei, Simona; Pîrloaga, Razvan; Adam, Mariana; Tudor, Alexandru; Piticar, Adrian; Antonescu, Bogdan

P26: ECSS2023-170
The Northern Hail Project: A renaissance in hail research in Canada
Brimelow, Julian C.; Kopp, Gregory A.; **Sills, David M.L.**

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

P27: ECSS2023-3
Trends of sounding-derived indices and observations in NE Italy in the last 30 years
Manzato, Agostino (Tino); Fasano, Gabriele; Cicogna, Andrea; Sioni, Francesco; Pucillo, Arturo

P28: ECSS2023-43
Assessment of extremes hazards during thunderstorm in France 2000-2019
Bertrand, Nathalie; Gaonac'h, Adrien

P29: ECSS2023-136
An updated tornado climatology and associated meteorological environments in Greece
Sioutas, Michalis; Dafis, Stavros; Papavasileiou, George; Doe, Robert

P30: ECSS2023-70
Enhanced climatology of large hail in the UK: Radar-derived diurnal cycle and storm mode
Wells, Henry; Hillier, John; Garry, Freya; Dunstone, Nick; Chen, Huili; Kahraman, Abdullah; Keat, William; Clark, Matthew

P31: ECSS2023-24
Severe convective events in Russia: observed changes based on various data
Chernokulsky, Alexander V.

P32: ECSS2023-9
Tornadoes in France since 1900: A chronology and spatial analysis.
Lacroix, Matthieu; Gunnell, Yanni; Kermadi, Saïda

P34: ECSS2023-37
Convective indices trends in Cyprus
Ene, Dragos; Mamouri, Rodanthi-Elisavet; Nisantzi, Argyro; Michaelides, Silas; Hadjimitsis, Diofantos; Antonescu, Bogdan; Seifert, Patric

P35: ECSS2023-52
Influence of Moscow megacity on severe atmospheric convective events: results of high-resolution modeling for multiple summers
Platonov, Vladimir; **Chernokulsky, Alexander V.**; Varentsov, Mikhail; Shikhov, Andrey; Yarinich, Yulia

P36: ECSS2023-57
Empirical Relationship between U.S. Tornado Outbreak Probabilities and the Large-scale Environment
Malloy, Kelsey; Tippett, Michael

P38: ECSS2023-81
Convective environment in ALADIN Reanalysis
Vokoun, Martin; Zacharov, Petr

P39: ECSS2023-87
Climatological aspects of quasi-linear convective systems across Europe
Surowiecki, Artur; Pilguj, Natalia; Taszarek, Mateusz; Piasecki, Krzysztof; Pucik, Tomas

P40: ECSS2023-118
Climatology of derechos and wind squalls in Czechia during the last 25 years
Rýva, David

P41: ECSS2023-120
The climatology and nature of warm-season convective cells in cold-frontal environments over Germany
Pacey, George; Pfahl, Stephan; Schielicke, Lisa; Wapler, Kathrin

P42: ECSS2023-144
Influence of orography on supercells in Slovakia
Šinger, Miroslav

P43: ECSS2023-153
A-5-year climatology of squall from Moldova meteorological stations
Pruteanu, Daniela; Tiron, Gina; **Pasat, Carleta-Elena**; Oprea, Carolina-Irina

Session 12
Additional posters (Tuesday)

P44: ECSS2023-60
An early warning system for urban fluvial floods based on a predefined library of hazard maps and rainfall depth-duration thresholds: the case study of Palermo (Italy)
Pumo, Dario; Avanti, Marco; Francipane, Antonio; Noto, Leonardo

P45: ECSS2023-180
Convective parameters for severe weather forecasting and research in Australia
Warren, Rob; Blockley, Ivor; Sgarbossa, Dean; Richter, Harald

Wednesday, 10 May 2023

Location: Main Conference Room
09:00–13:00

Session 5
Forecasting and nowcasting of storms

09:00–09:30: ECSS2023-34
Marginal Tornado Environments: Tipping the Balance (solicited)
Anderson-Frey, Alexandra

09:30–09:45: ECSS2023-1
Nowcasting severe weather using geostationary satellite data and GLM-based lightning trends of thunderstorm cells
Erdmann, Felix; Poelman, Dieter R.

09:45–10:00: ECSS2023-59
Nowcasting thunderstorm hazards with radar polarimetry using deep learning
Rombeek, Nathalie; Leinonen, Jussi; Hamann, Ulrich

10:00–10:15: ECSS2023-44
On the Use of Helicity in Tornado Forecasting
Davies-Jones, Robert

10:15–10:30: ECSS2023-21
Current status of SINFONY - the combination of Nowcasting and Numerical Weather Prediction on the convective scale at DWD
Blahak, Ulrich and the Team SINFONY

10:30–10:45: ECSS2023-147
Using land surface information to improve nowcasts of mesoscale convective systems in West Africa
Klein, Cornelia; Anderson, Seonaid; Taylor, Christopher; Cole, Steven; Abdoulahat, Diop

10:45 Coffee break

11:30–11:45: ECSS2023-178
New convective guidance at the Australian Bureau of Meteorology
Warren, Rob; Richter, Harald; Blockley, Ivor; Sgarbossa, Dean

11:45–12:00: ECSS2023-20
SALAMA: A Machine Learning approach for lightning forecasting through post-processing of simulation data
Vahid Yousefnia, Kianusch; Bölle, Tobias; Zöbisch, Isabella

12:00–12:15: ECSS2023-67
Predictions of Severe Weather with Random Forests and the Global Ensemble Forecast System
Hill, Aaron; Schumacher, Russ

12:15–12:30: ECSS2023-84
Recent developments in convection forecasting at ECMWF
Tsonevsky, Ivan; Groenemeijer, Pieter; Battaglioli, Francesco; Púcik, Tomáš

12:30–12:45: ECSS2023-126
Typical setups and characteristics of strong tornadic storms in Central Europe shown by the tornado outbreak on 20 May 2022
Beyer, Marcus; **Wapler, Kathrin**

12:45–13:00: ECSS2023-89
Influence of the Orography of West-Central European Low Mountain Ranges on the Intensity of Deep Moist Convection
Sperschneider, Aaron; Bott, Andreas

END OF WEDNESDAY SCIENTIFIC PROGRAMME

14:30-14:40
Conference photo being taken at the conference venue

14:40–18:00
Guided tour through the Palace of the Parliament OR the city centre of Bucharest

Meeting point:
entrance area of conference venue

19:30–23:30
Conference dinner and giving of Nikolai Dotzek Award

Meeting point and location:
Restaurant Caru' cu Bere

Address of the restaurant, located in the old town:
Strada Stavropoleos 5, București

Walking distance from conference venue:
about 15 minutes

Thursday, 11 May 2023

Location: Main Conference Room
09:00–10:45

Session 8
Radar studies of storms and their environment

09:00–09:30: ECSS2023-71
Polarimetric signatures of severe convective storms in Lake Victoria: from waterspouts to downbursts in the tropics! (withdrawn) (solicited)
del Moral Méndez, Anna; Weckwerth, Tammy M.; Wilson, James W.; Roberts, Rita D.

09:30–09:45: ECSS2023-58
Detection of Differential Reflectivity columns using operational c-band radar and their relation to hail probability and size in Switzerland
Aregger, Martin; Martius, Olivia; Hering, Alessandro; Germann, Urs

09:45–10:00: ECSS2023-93
Comparison of hail detection techniques using dual-pol radar observations in Belgium
Watelet, Sylvain; Delobbe, Laurent; Reyniers, Maarten

10:00–10:15: ECSS2023-109
Observations of Severe-Wind Driven and other Wildfires with DOWs
Wurman, Joshua; Kosiba, Karen

10:15–10:30: ECSS2023-157
A derecho-like event in the southern part of Romania: 20th of July 2011
Cheval, Sorin; **Manta, Daniel-Robert**; Sipos, Zotan; Mihulet, Eugen

10:30–10:45: ECSS2023-79
Understanding the evolution of storms embedded in MCSs and associated three-dimensional structures using remote sensing observations
Tupsoundare, Manisha; Deshpande, Sachin; Feng, Zhe; Das, Subrata Kumar; Deshpande, Medha; Hanmante, Harshad

10:45 Coffee break

11:30–13:00

Session 7
Satellite studies of storms and their environment

11:30–11:45: ECSS2023-10
What will Meteosat Third Generation Bring to the Table for Severe Storm Analysis?
Lindsey, Dan

11:45–12:00: ECSS2023-137
Meteosat Third Generation Flexible Combined Imager for the continuous monitoring of severe storms from space
Strandgren, Johan; Burini, Alessandro; Meraner, Andrea; Grandell, Jochen

12:00–12:15: ECSS2023-135
Meteosat Third Generation Lightning Imager for the continuous monitoring of lighting from space
Enno, Sven-Erik; Viticchiè, Bartolomeo; Grandell, Jochen

12:15–12:30: ECSS2023-134
Seeing convection with the new eyes - An overview of the first EUMETSAT MTG-I RGB products
Strelec Mahović, Nataša; Smiljanic, Ivan; Bojinski, Stephan; Nietosvaara, Vesa

12:30–12:45: ECSS2023-139
Applications of FCI near-IR 0.91μm channel for detection of low-level humidity
Smiljanic, Ivan; Nietosvaara, Vesa

12:45–13:00: ECSS2023-131
Operational water-vapour products at EUMETSAT, latest evaluation in pre-convective situations and future plans
August, Thomas; Wagner, Tim; Spezzi, Loredana; Hultberg, Tim; Bozzo, Alessio; Crapeau, Marc

13:00 Lunch break

Location: Sala Albastră
14:30–16:00
Side event:
EUMETSAT CWG splinter meeting

Location: Main Conference Room
16:45–18:00

Session 2
Numerical modelling of storms, storm-scale data assimilation

16:45–17:00: ECSS2023-66
Testing very high-resolution simulations in a high-impact static convective system in Spain using HARMONIE-AROME model
Calvo-Sancho, Carlos; González-Alemán, Juan Jesús; Martín, Yago; Calvo, Javier; Martín, Maria Luisa; Martín Pérez, Daniel; Viana Jiménez, Samuel

17:00–17:15: ECSS2023-33
A modeling case study of a severe hail storm in complex topography
Brennan, Killian P.; Sprenger, Michael; Arpagaus, Marco; Walser, André; Wernli, Heini

17:15–17:30: ECSS2023-142
Statistical comparisons between observed and simulated ZDR columns using AROME model with different microphysics schemes
David, Cloé; Augros, Clotilde; Vié, Benoît; Bouttier, François

17:30–17:45: ECSS2023-90
Simulations of Rising Thermals Using a Lagrangian Stochastic Closure for the Subgrid Turbulent Fluxes
Jewtoukoff, Valerian; Abade, Gustavo; Waclawczyk, Marta

17:45–18:00: ECSS2023-28
thundeR - a rawinsonde package for processing convective parameters and visualizing atmospheric profiles
Taszarek, Mateusz; **Czernecki, Bartosz**; Szuster, Piotr

END OF THURSDAY ORAL PROGRAMME

Thursday posters

Location: Poster area
Attendance time: 14:30–16:00

Session 1 Convective storm and tornado dynamics
P1: ECSS2023-53
Estimation of storm life-cycle by machine learning to enhance ensemble nowcasting of cell objects
Josipovic, Lukas; Berndt, Christian; Blahak, Ulrich

P2: ECSS2023-76
Identification of convective precipitation events through lightning data in a Mediterranean area
Cipolla, Giuseppe; Treppiedi, Dario; Francipane, Antonio; Noto, Leonardo Valerio

P3: ECSS2023-92
What is a Mesocyclone?
Kumjian, Matthew; Lombardo, Kelly; Coffer, Brice; Dahl, Johannes

Session 2
Numerical modelling of storms, storm-scale data assimilation

P4: ECSS2023-7
Modelling fire-generated thunderstorms: Pedrógão Grande case study
Couto, Flavio T.; Filippi, Jean-Baptiste; Baggio, Roberta; Salgado, Rui

P5: ECSS2023-8
Ability of the new high-resolution atmospheric reanalysis ALADIN/PERUN to simulate heavy convective precipitation
Bliznak, Vojtech; Zacharov, Petr

P6: ECSS2023-31
Reconstruction of violent tornado environments in Europe: High-resolution dynamical downscaling of ERA5
Pilguj, Natalia; Taszarek, Mateusz; Kryza, Maciej; Brooks, Harold

P7: ECSS2023-105
Impact of mountains on environments and estimated precipitation intensity of supercells
Kvak, Robert; Zacharov, Petr; Okon, Luboslav; Bliznak, Vojtech; Meri, Ladislav; Kaspar, Marek

P8: ECSS2023-138
Tornado in Czech Republic – An ICON-RUC case study
Ulbrich, Sven; Zschenderlein, Philipp; Rempel, Martin; de Lozar, Alberto; Pucik, Tomas; Blahak, Ulrich

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

P9: ECSS2023-155
The impact of dry thunderstorms in Southwestern Romania
Brâncus, Mihaela; Burada, Cristina; Drîga, Florin

P10: ECSS2023-18
Toward a dedicated warning system of severe storms in Italy: the PRETEMP project
De Martin, Francesco; Carlon, Nicola; Pavan, Federico; Carpentari, Sebastiano; Giazzi, Marco; Peressutti, Gianandrea; Miglietta, Mario Marcello; Davolio, Silvio

P11: ECSS2023-82
CHMI Forecasters Supported by a Team of Convective Experts
Valachová, Michaela; Adamovský, Martin; Tom¨u, Radek; Piskala Gvo¸díková, Blanka

P12: ECSS2023-141
Tailoring SINFONY forecasts and other DWD products to flood forecasting applications following a co-design approach
Keller, Julia H.; Berndt, Christian; Blahak, Ulrich; Bondy, Jan; Fundel, Vanessa; Schmidt, Malte

Session 4
Flash floods

P13: ECSS2023-68
Characteristics and environments of flash-flood-producing storms in the UK
Clark, Matthew

P14: ECSS2023-78
Precipitation products tailored to the user needs: a clustering-based approach that combines ensemble information and reduces data volume. **Schmidt, Malte**; Bondy, Jan; Fundel, Vanessa; Blahak, Ulrich

P15: ECSS2023-97
Using dual-polarimetric radar moments to improve the precipitation estimate over Germany
Gottschalk, Matthias; Hengstebeck, Thomas

P16: ECSS2023-152
Radar-based extreme rainfall analysis for small areas
Goudenhoofdt, Edouard

Session 5
Forecasting and nowcasting of storms

P17: ECSS2023-23
The extreme phenomena from the end of June 2021 and the variations of the planetary boundary layer height, in Moldavia region
Cosmina, Apetroaie; Ingrid-Mihaela, Miclaus; Diana-Corina, Bostan; Adrian, Timofte; Marius-Mihai, Cazacu

P18: ECSS2023-49
Object-based Ensemble Prediction System KONRAD3D-EPS
Josipovic, Lukas; Pante, Gregor; Schnoor, Isabel; Brechtel, Andreas; Blahak, Ulrich

P20: ECSS2023-73
A New Ensemble System at DWD for Seamless Short-Term Forecasts of Convective Precipitation
Rempel, Martin; Schultze, Markus; Blahak, Ulrich

P21: ECSS2023-121
Addressing spatial uncertainty of convection in thunderstorm forecast verification
Jurkovic, Jadran; Soljan, Vinko

P22: ECSS2023-125
Combining GNSS meteorology and Instability Indices for derivation of classification functions in South Central Bulgaria.
Slavchev, Martin; Guerova, Guergana; Dimitrova, Tsvetelina

P23: ECSS2023-38
A Deep Learning approach for MCS detection: application for storm tracking and nowcasting
Arnould, Gabriel; Montmerle, Thibaut; Moisselin, Jean-Marc; Rottner, Lucie

P24: ECSS2023-39
Supercell interactions with surface baroclinic zones in the Carpathian Basin
Komjáti, Kornél; Csirmaz, Kálmán; Breuer, Hajnalka; Kurcsics, Máté; Horváth, Ákos

P25: ECSS2023-41
Hailstorm in Eastern Croatia - analysis and forecasting potential by convection-permitting numerical model
Renko, Tanja; Malecic, Barbara; Miku¨ Jurkovic, Petra; Kozaric, Tomislav; Horvath, Kristian

P26: ECSS2023-45
Severe thunderstorm in the central part of Croatia on 15th September 2022
Mikus Jurkovic, Petra; Kozaric, Tomislav; Kalin, Lovro; Renko, Tanja; Pirak, Tomislav

P27: ECSS2023-48
Integrating KONRAD3D into the nowcasting guidance system NowCastMIX at DWD
Debertshäuser, Michael; James, Paul; Werner, Manuel

P28: ECSS2023-54
DWD-Crowdsourcing: Are User Reports beneficial for Object-based Nowcasting?
Spitzer, Arne; Kempf, Harald; Jerg, Matthias; Werner, Manuel; Blahak, Ulrich

P29: ECSS2023-62
Predictions of convective cells from nowcasting, numerical forecasting and a combination of both
Schnoor, Isabel; Brechtel, Andreas; Josipovic, Lukas; Pante, Gregor; Posada, Rafael; Feige, Kathrin; Keller, Julia; **Blahak, Ulrich**

P30: ECSS2023-72
Development and Evaluation of Operational Lightning Forecasting System based on Lighting Detection Network
Son, MyoungJae; Kim, Hae-Lim; Nam, Kyung-Yeub

P31: ECSS2023-86
A Case study - Splitting Supercells over Berlin on July 10, 2020
Feige, Hendrik; Horn, Christian; Gatzen, Christoph

P32: ECSS2023-103
Forecasting Large Hail using Additive Logistic Regression Models and the ECMWF Reforecasts
Battaglioli, Francesco; Groenemeijer, Pieter; Tsonevsky, Ivan; Púcik, Tomáš

P33: ECSS2023-119
Overview of Recent Advancements in Convective Storm Nowcasting in the Czech Hydrometeorological Institute
Kyznarova, Hana; Novak, Petr

P34: ECSS2023-128
Identifying predictors of large hail, severe convective wind gusts, and tornadoes across Europe and North America: towards the development of global convective hazard models.
Battaglioli, Francesco; Pucik, Tomas; Groenemeijer, Pieter; Taszarek, Mateusz

P35: ECSS2023-129
Exceptionally heavy rainfall in Karlovo valley
Markova, Boryana; Kleshtanova, Viktoria; Kirilova, Anastasiya

P36: ECSS2023-148
Analysis of the high-end derecho in Corsica in 2022
Kreitz, Michaël; Gatzen, Christoph; Púcik, Tomáš

P37: ECSS2023-150
Operational usage of KONRAD3D, DWD's scheme for detection, tracking, and nowcasting of convective cells
Werner, Manuel; Feger, Robert; Josipovic, Lukas; Böhme, Tim

P38: ECSS2023-158
Evaluation of ESTOFEX convective outlooks from 2007 to 2021. Part 1: forecasters and regional performance of lightning predictions
van der Velde, Oscar and the ESTOFEX Team

P39: ECSS2023-166
Analysis and application of CNN to improve deterministic optical flow nowcasting at DWD
Friedrich, Ulrich

P40: ECSS2023-167
Evaluation of ESTOFEX convective outlooks from 2007 to 2021. Part 2: climatology and reliability of threat level polygons
Taszarek, Mateusz; Groenemeijer, Pieter; Pucik, Tomas; van der Velde, Oscar; Dafis, Stavros

P41: ECSS2023-169
Stormforecast.eu: real-time automated forecasts for hail and lightning based on post-processed NWP
Groenemeijer, Pieter; Battaglioli, Francesco; Púcik, Tomáš

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

P42: ECSS2023-106
Revisiting the unusual period of F4/F5 tornadoes in Europe from 1965 to 1971
Schyns, Jerome; Gatzen, Christoph; **Schielicke, Lisa**

P43: ECSS2023-5
Drone-based hail observations and the retrieval of the hail size distribution after a supercell passage in summer 2021 in Switzerland

Lainer, Martin; Brennan, Killian; Kopp, Jérôme; Monhart, Samuel; Wolfensberger, Daniel; Hering, Alessandro; Schauwecker, Zaira

P44: ECSS2023-19
Unique observational data from an automatic hail sensors network in Switzerland
Kopp, Jérôme; Manzato, Agostino; Martius, Olivia; Germann, Urs; Hering, Alessandro

P45: ECSS2023-80
A Verification of Hail Proxies with Insurance Data
Fischer, Jannick; Kunz, Michael

Friday, 12 May 2023

Location: Main Conference Room

09:00–10:45

Session 9
Storm microphysics, electrification, lightning and hail

09:00–09:30: ECSS2023-91
Does Low-level Vertical Wind Shear Matter for Hail Production? (solicited)
Kumjian, Matthew; Lombardo, Kelly; Nixon, Cameron; Allen, John

09:30–09:45: ECSS2023-22
Implementing physical assumptions about nonspherical hailstone shapes
Lin, Yuzhu; Kumjian, Matthew R.

09:45–10:00: ECSS2023-30
Combining convection-permitting reanalysis with satellite overshooting top detections for investigating hailstorm environments over south-central Europe
Giordani, Antonio; Kunz, Michael; Bedka, Kristopher M.; Punge, Heinz Jürgen; Paccagnella, Tiziana; Di Sabatino, Silvana

10:00–10:15: ECSS2023-63
Deep Learning for Hail Size Estimation Using Polarimetric Radar Data
Forcadell, Vincent; Augros, Clotilde; Dedieu, Kevin; Caumont, Olivier

10:15–10:30: ECSS2023-165
Microphysical evolution of thunderstorms in tropical environments associated with gigantic jet production using CM1
van der Velde, Oscar; Montanyà, Joan; López, Jesús; Mansell, Ted

10:30–10:45: ECSS2023-74
Analysis of Hail Characteristics and Detection of Hail Pre-Signal based on 3-dimensional Radar Data
Jung, Woomi; Ye, Bo-Young; Son, MyoungJae; Suk, Mi-Kyung; Cho, Ik-Hyun

10:45 Coffee break

Session 6
Severe weather forecaster training

11:30–11:45: ECSS2023-140
SIFT - An interactive tool for satellite data visualisation and analysis
Meraner, Andrea; **Strandgren, Johan**; Joro, Sauli

11:45–12:00: ECSS2023-145
EUMETSAT-ESSL Testbeds and Workshops for Meteosat Third Generation User Preparation
Holzer, Alois M.; Groenemeijer, Pieter; Púcik, Tomáš; Bojinski, Stephan; Strelec-Mahovic, Nataša

12:00–13:00

Session 7
Satellite studies of storms and their environment

12:00–12:15: ECSS2023-47
Observing deep convection with NASA's TROPICS mission
Bennartz, Ralf; Chen, Ruiyao; Blackwell, Bill; Leslie, Vince

12:15–12:30: ECSS2023-46
The effects of warm and cold core eddy processes on cyclone activity
Barbosa, Humberto; Buriti, Catarina; Buriti, Catarina

12:30: Collection of ballots
Votes for favourite poster and talk are being collected.

The ECSS is kindly supported by:

NIKOLAI DOTZEK AWARD LECTURES

12:30–12:45: ECSS2023-174
Toward the Development of Hailstorm Climatologies Derived from Reanalyses and Infared/Passive Microwave Satellite Imagers
Bedka, Kristopher; Scarino, Benjamin; Itterly, Kyle; Spangenberg, Douglas; Homeyer, Cameron; Allen, John; Bang, Sarah; Cecil, Daniel

12:45–13:00: ECSS2023-172
The Impact of Convective Storms on Global Atmospheric Transport Processes
Wang, Pao K.

13:00–13:30
Closing and Conference Awards Session

Organizing the ECSS is a statutory purpose of the

European Severe Storms Laboratory

European Meteorological Society

Local ECSS organizing partner: