

AGENDA

12 Sept	September 12	
13:00 - End	Registration Open	
	Opening Session (Auditorium)	
15:00 - 15:30	Opening	
15:30 - 16:00	Keynote 1 <i>Dr. Franck Flourens</i> "De-carbonation of aviation, new modes of air transport: does it bring new challenges for EMH and lightning protection?"	
16:00 - 16:30	Keynote 2 <i>Prof. Carmen Guerra Garcia</i> "A gas discharge physics perspective to lightning protection of aircraft"	
16:30 - 17:00	Coffee Break	
17:00 - 17:30	Keynote 3 <i>Prof. Joan Montanyà</i> "Electric, atmospheric and microphysical properties of thunderstorms producing lightning to wind turbines"	
17:30 - 18:00	Keynote 4 <i>Dr. Christian Karch</i> "A multidisciplinary design approach of aircraft radomes"	
	Exhibitors Presentations (Auditorium)	
18:00 - 18:30	Presentation by DUCOMMUN "Lightning Diversion System (LDS) - Lightning Protection for Aerospace and Wind Energy Markets"	
18:30 - 19:00	Presentation by DAYTON-GRANGER "Lightning and Electrostatic Protection Products for Aircraft"	
19:00 - 19:30		
19:30 - 21:00	Welcome Party	

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8:00 - End	Registration Open	
	Session 1A Lightning Direct Effects (Auditorium)	Session 1B Lightning Effects on Wind Turbines (Room C)
9:00 - 9:20	Current Distribution and Capability on Carbon Fibre Composite Materials, Copper Foil and Fasteners	A New Coating for Reducing Wind Turbine Blade Lightning Damage
9:20 - 9:40	Development of a Technique to Measure Voltages on CFRP Surfaces during Lightning Direct Effects Testing	Investigation of Weather Conditions Leading to Different Types of Lightning Strikes Measured in Wind Turbine Blades
9:40 - 10:00	Analysis of Lightning Current Distribution in the Joints of a Carbon Fiber Composite Applied to an Aircraft	Wind Turbine Blade LPS Design Process Revisited – Leveraging on Latest Knowledge From Actual Lightning Measurements in Wind Turbines
10:00 - 10:20	Influence of Discharge Electrode Shape on Lightning Test of Composite Laminate	Enhanced Lightning Protection for Wind Turbine Blades (Revisited 2022)
10:20 - 10:40	Lightning-Induced Degradation of Fastened Composite Systems	
10:45 - 11:15	Coffee Break	
	Session 2A Numerical Modeling and Analysis 1 (Auditorium)	Session 2B Lightning Standards, Tests and Safety (Room C)
11:20 - 11:40	Numerical Analysis of Lightning Induced Transients in Electro-Electronic Systems Interfacing an Externally Mounted Sensor	Improvements in Lightning High Voltage Testing
11:40 - 12:00	Prediction of Lightning Strike-Induced Damage of Composite Aircraft Structures	High Voltage Test for a Research of Reducing the Number of Aircraft Lightning Strike
12:00 - 12:20	Shock Waves from a Lightning Discharge	Experimental Studies of the Sweeping of Lightning Arcs Along an Aeronautical Material and the Arc Reattachment Phenomenon
12:20 - 12:40	Lightning Simulation versus DCI Technique Applied to Lightning Phenomenon	Methodology and Detection of Lightning Strikes in Down Conductors Via Sigfox Network
12:40 - 13:00	Influence of Specimen Size on Damage Region Prediction in Numerical Modelling of CFRP Panels Exposed to Lightning Strike	Noise Reduction in Actual Transient Measurement of Aircraft Lightning Testing by Utilizing Component A Generator with a Semiconductor Switch
13:05 - 15:00	Lunch	
	Exhibitors Presentations (Auditorium)	
14:30 - 15:00	Presentation by EMC PARTNER: "AVI-LV3 Indirect Lightning Test System"	
15:00 - 18:00	Technical Tour - LCOE	

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8:00 - End	Registration Open	
	Session 3A Lightning Indirect Effects and Zoning (Auditorium)	Session 3B Electrostatics (Room C)
9:00 - 9:20	Research On Lightning Protection of Heavy Helicopter	Electrified Ice Needles Fast Formation under the Influence of Electric Fields
9:20 - 9:40	Determination of Lightning Induced Effects in Aeronautic Systems by Analytical Formulation	ESD Threat at Tanker-Receiver Contact Phase During Air-to-Air Refuelling Operations – Overview and Key Test Aspects
9:40 - 10:00	Correlation Between High Level and Low Level Transfer Functions of Induced Lightning Strike Testing	Experimental Investigation of Precipitation-Static Dischargers in Winds
10:00 - 10:20	Evolution of the Lightning Zoning Guideline and Coming Challenges for Lightning Protections of Unconventional Platforms	Progress Towards Atmospheric Correction for Aerospace Electric Discharge Applications
10:20 - 10:40	Computational Zoning of Unconventional Aircraft	Experimental Study of the Charge Saturation Levels of an Aircraft with an Active Electrostatic Charge Control System
10:45 - 11:15	Coffee Break	
	Session 4A Lightning Protection of Materials, Devices and Systems 1 (Auditorium)	Session 4B Lightning and Atmospheric Phenomenology (Room C)
11:20 - 11:40	Automated Fiber Placement of Lightning Protection Surfaces for Carbon Fiber Reinforced Plastic	Interferometer Observations of Upward Lightning at the Sântis Tower – Preliminary Results
11:40 - 12:00	Electromagnetical Characterization of Aluminum Foam Panels for Application in Avionics Bay	"Transferred Charge of Lightning Current Waveform Observed at Tokyo Skytree "
12:00 - 12:20	Initiation of Electrical Discharge at the Triple Junction of the Lightning Protection of an Aircraft Radome	Winter Lightning Triggered by Wind-Turbines: the Case of Snowstorm Filomena
12:20 - 12:40	Development of Thin Copper Coatings by Physical Vapour Deposition as an Alternative to Traditional Lightning Strike Protection Methods	On-Site Experiments and Electromagnetic Modelling to Characterize Corona Discharges in VHF-Band
12:40 - 13:00		
13:05 - 15:00	Lunch	
	Session 5A Numerical Modeling and Analysis 2 (Auditorium)	Session 5B Fuel Tanks and Fuel Systems (Room C)
15:00 - 15:20	Using Simulations to Evaluate Harness Transients in Small Composite Aircraft for Lightning and HIRF Environments	Development of Material Verification Test Procedure for Edge Glow Protection Performance
15:20 - 15:40	DC Computation on a Full FDTD Model Designed for Indirect Lightning Effects	Fuel Tank Fastener Sparking: Development of a Threshold Database and the Benefits of Computational Electromagnetics Simulation for Certification
15:40 - 16:00	Numerical Simulation of Electrical Coronas in Aircraft Application to Assessing the Impact of Wind, Geometry and Altitude on Artificial Charge Control of Aircraft	Benefit and Drawback of an Explicit Two Protection Features Approach for Compliance with 25.954
16:00 - 16:20	Sensitivity Analysis of Aircraft Shieldings for Lightning Indirect Effects by a Novel S-FDTD	Pressure Measurements Near Fasteners Exposed to Lightning Strike Conditions
16:20 - 16:40		
16:45 - 17:15	Coffee Break	
	Session 6A Lightning Protection of Materials, Devices and Systems 2 (Auditorium)	Session 6B Lightning Effects on Other Vehicles (Room C)
17:20 - 17:40	In Situ X-Ray Phase-Contrast Imaging of Spark Erosion of Aeronautical Fasteners	Transition of Lightning Attachment Points and Damages on Automobiles Based on Latest Statistical Data Up to 2021
17:40 - 18:00	Electrical Resistance Measurements of Carbon Fibre Reinforced Polymer (CFRP) materials. Measurement Techniques, Methods and Pitfalls to Avoid: A Case Study	Overvoltage and Overcurrent Inside the Vehicle Due to Lightning Strike
18:00 - 18:20	Design of Lightweight Perforated Copper Foil for Lightning Protection of Fiber Reinforced Plastic	Lightning Current Distribution on a Small Four-Wheel Drive Vehicle
18:20 - 18:40	Calculation of Partial Lightning Current and Overvoltages induced into Pipeline Caused by a Nearby Lightning and its Surge Protection	Effects of Lightning on UAM Aircraft: Lightning Zoning and Indirect Effects on the Cable Harness
18:40 - 19:00		
19:45 - 21:15	Cultural Tour - Prado Museum	
21:30 - 23:00	Banquet	

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9:00 - End	Registration Open	
	Closing Session (Auditorium)	
10:00 - 10:30	Keynote 5 <i>Prof. Kazuo Yamamoto</i> "Necessity of countermeasures against lightning damage in automobiles"	
10:30 - 11:00	Keynote 6 <i>Prof. Pedro Llovera Segovia</i> "Electrostatic charge measurements: measurement equipment and special configurations"	
11:00 - 11:30	Coffee Break	
11:30 - 12:00	Keynote 7 <i>Dr. Ulrich Jakobus</i> "Advances on EMH simulation from board to system level, including lightning"	
12:00 - 12:30	Keynote 8 <i>Mr. José Ignacio Plaza Gomez / Mr. Fernando Cano Perez</i> "Particularities and future challenges of lightning and ESD protection in military platforms"	
12:30 - 13:00	Closing	
13:05 - 15:00	Lunch	

