



14th PEGASUS STUDENT CONFERENCE

UPM - ETSIAE
Thursday, April 19th , 2018



TIME	Paper	ROOM: A-013	STRUCTURES & MATERIAL
09:30h	EMA2	Meriem Bouakkaz	Characterization and modelling of the mechanical behaviour of a FKM for aircraft application
10:00h	NAP2	Paolo Russo	Analysis of a crashworthy sled test for light certified Aircrafts
10:30h	WUT1	Magdalena Gronowska	Wing Structural Analysis in Experimental Pulsejet Powered UAV
11:00h		Coffe break	Cafeteria on the basement
11:30h	EMA1	Juan Pablo Marquez Costa	Prediction of structure-properties relationships and durability of fiber-reinforced polymer composites exposed to fire
12:00h	ROM2	Agnese Caprara	Extension of the FDD technique for an automated tracking of modes, using environmental and flight data
12:30h	UPM1	Jorge Moledo Lamela	Analytical fibre bundle model to investigate the roles of fracture mechanics and dynamic stresses during the longitudinal tensile failure in fibre-reinforced composites
13:00h		Lunch break	Cafeteria on the basement
14:30h	ROM3	Federica Zaccardi	Multiscale analysis of multifunctional nanocomposites for aerospace applications



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TIME		ROOM: A-014	AERODYNAMICS, HEAT TRANSFER, COMBUSTION & PROPULSION
09:30h	UPM2	Jorge Garcia-Rivas Carmona	Multiple Logistic Regression and Neural Networks as predictive tools for High Pressure Combustion Regime
10:00h	NAP1	Mario Rapillo / Luca Pinto	Plasma Actuators for flow control: suppression of the Von Karman Vortex shedding past a D-Shaped body
10:30h	AAC1	Jan-Philipp Hofmann	Development of an Efficient Approach to Simulate Active Flow Control Methods for Interference Drag Reduction of a Strut-Braced Wing Configuration
11:00h		Coffe break	Cafeteria on the basement
11:30h	UPV3	Sinforiano Cantos Trigo	Numerical and experimental study of flutter in an airfoil
12:00h	EA1	Dorian Laversanne	Force and moment measurements on articulating nosecone missile at Mach 2
12:30h	NAP3	Mirko Zaccara	Infrared Thermography Data Reduction Technique for Heat Transfer Measurements in the Boeing/AFOSR Mach-6 Quiet Tunnel
13:00h		Lunch break	Cafeteria on the basement
14:30h	UPM3	Patxi Apoita Sanz	Experimental Evaluation of the Accuracy of an Enhanced Background Oriented Schlieren Technique



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TIME		ROOM: A-115	SPACE ENGINEERING & TECHNOLOGY
09:30h	TOR1	Nicoletta Bloise	Obstacle Avoidance, Guidance and Control for Rendezvous Maneuvers based on Artificial Potential Field
10:00h	SUP1	Baptiste Klein	Constraining Dark Matter distribution in galaxy clusters with MUSE
10:30h	BOL2	Anton Bahu	Automatic mass balancing and inertia identification for a dynamic CubeSat attitude simulator
11:00h		Coffe break	Cafeteria on the basement
11:30h	ROM1	Paolo Cappuccio & Gael Cascioli	ESA's JUICE End-to-End Orbit Determination Simulation to Calibrate On-Board Accelerometer
12:00h	SUP2	Paolo Panicucci	Perturbed Lambert's Problem Solver based on Differential Algebra Optimization
12:30h	TOR3	Dario Riccobono	Mechanical and Control System Development for a Full-scale Planar Motion Spacecraft Simulator
13:00h		Lunch break	Cafeteria on the basement
14:30h	MIL2	Anthea Comellini	The semi-controlled reentry: development of a simulator and feasibility study



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TIME		ROOM: A-120	SUBSYSTEMS, AVIONICS, CONTROL & MAINTENANCE
09:30h	MIL1	Andrea Bernasconi & Alberto Favier	Flexible mode controllers and randomized performance tests for gust load alleviation of a transport aircraft
10:00h	SUP3	Adrian Rubio Cubas	Interactions Analysis of the Powerplant with the Airframe and Study of the Energy Needs
10:30h	SEV1	Alvaro Diaz Campillejo & Amador Gomez Hidalgo	Simulation of electromechanical actuators with ballscrew and modelling of faults
11:00h		Coffe break	Cafeteria on the basement
11:30h	TOR2	Gianluca Lombardo	Preliminary study and modeling of a fly-by-wire rudder control system for STOL applications on the ATR 42-600
12:00h	SEV3	Jose Manuel Montilla Garcia & Tomas Sanchez Sanchez	Big data in aeronautics: Application to the predictive maintenance of the landing gear
12:30h	PRA1	Tomas Morong	Testing of the Interference Immunity of the GNSS Receiver for UAVs and Drones
13:00h		Lunch break	Cafeteria on the basement
14:30h	SEV2	German Jimena de la Resurreccion & Maria de los Dolores Lopez Fernandez	Development of an Integrated Anti-collision System



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TIME		ROOM: A-039	ROTARY WING, FLIGHT DYNAMICS, A/C DESIGN & AIR TRAFFIC CONTROL
09:30h	UPV1	Andres Cremades Botella	Stability and design criteria for UAV configurations
10:00h	GLA1	Richard Dunlop	Inverse Simulation as a Tool For Studying Helicopter Handling Qualities
10:30h	MIL3	Giacomo Gerosa	A Rotorcraft Conceptual Design Tool for Handling Qualities Evaluation
11:00h		Coffe break	Cafetería on the basement
11:30h	BOL1	Alessandro Davario & Vincenzo di Lella	Experimental Study of a Flow into an Engine Cylinder Using PIV
12:00h	UPV2	Davinia Gonzalez Morello	Simulation tool for an air traffic control system
13:00h		Lunch break	Cafetería on the basement