ERF
European Rotorcraft Forum

CEAS

43rd European Rotorcraft Forum

GENERAL INFORMATION AND PROGRAMME

Milan - ITALY
Politecnico di Milano - Bovisa
12th-15th September 2017

www.ERF2017.org

Welcome from the Organizing Committee

Dear colleagues,
On behalf of the International Committee of the European Rotorcraft Forum, it is a great pleasure for me to invite you to the 43rd ERF, which will take place in Milan.
This edition is particularly significant as it is held in conjunction with the 28th Symposium of the European Chapter of the Society of Flight Test Engineers. Its key theme this year is 'Shaping the future of flight testing".
A high level of product, service and manufacturing innovation requires an equally high level of experimental and testing capabilities. You are therefore also invited to take the opportunity to attend the Symposium.
ERF has always been an extraordinary chance for all of us to exchange experiences and views on the best way forward to face the challenges of the future and deliver greater and greater advantages to the users through the evolution and application of rotorcraft technology.
This year we are doing this in a city that today is central to Italian and European economy and innovation while in the past has seen the shining expression of Leonardo's genius.
Reminding ourselves of the life and achievements of the inventor of the Aerial Screw will help us nurture the spark of innovation in the spirit of true farsighted vision of our future, inspiring us to make possible what seems not.
I therefore hope you will join us for this important Event and I look forward to meeting you in Milan in September.

Fabio NANNONI
Chair of the Organizing Committee

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ERF International Committee

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General Information

Venue

MILAN

With a population of about 1.3 million, Milan is the capital of Lombardy and is located in the Po Valley, close to the Alps and with Lake Como, Lake Maggiore and Lake Lugano to the North.
Milan is the Italian economic and finance center, with the headquarters of the Stock Exchange and of many of the most important Italian industrial and financial institutions.
It is also the capital city of Italian fashion and design, hosting many of the main Italian fashion houses and international design fairs, including Milan Fashion Week and 'Salone del Mobile" (Milan Furniture Fair).
Several world famous cultural institutions are located in Milan an none more famous than Teatro alla Scala, the temple of lyric opera, as well as prose theatres such as the 'Piccolo Teatro" founded by Giorgio Strehler.
The city offers to visitors the possibility to admire a wide range of monuments, museums and buildings reflecting two thousands years of history and culture, from Roman vestiges to contemporary architectural masterpieces.

POLITECNICO DI MILANO - BOVISA CAMPUS

Founded in 1863, Politecnico di Milano is the largest school of Architecture, Design and Engineering in Italy, with 3 main campuses located in Milan, and 5 campuses based around the Lombardy region, one of the most industrialized areas of Europe.

Politecnico di Milano is one of the leading universities in the world, ranked 24th on a global scale, 7th in Europe, and 1st in Italy among technical universities, according to QS World University Ranking - Engineering & Technology 2017.
Thanks to a strong internationalization policy, several study programs are taught entirely in English, attracting an ever-increasing number of talented international students from more than 100 countries. In 2015/2016 21% of the students enrolled in Master of Science Programs were international.

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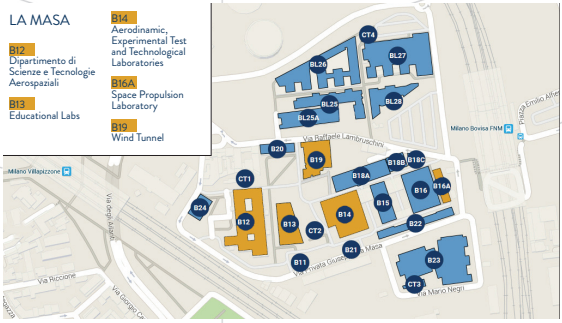
Strategic research is carried out mainly in the fields of energy, transport, planning, management, design, mathematics and natural and applied sciences, ICT, built environment, cultural heritage, with more than 250 laboratories.

The scientific community of Politecnico di Milano is made of more than 1,300 professors and research fellows, with 38,200 students (2013 update).

The Dipartimento di Scienze e Tecnologie Aerospaziali (Department of Aerospace Science and Technology, DAER- PoliMi) was established within Politecnico di Milano as an autonomous institute in the 1950s. The personnel of DAER- PoliMi is currently comprised of 43 faculty, 27 technical and administration staff, 70 research assistants and Ph.D. students. The main activity within the Department is scientific research.

Directions to Bovisa Campus



As you are likely to land in Malpensa, Linate or Orio al Serio airport, you can plan how to reach Milan following these suggestions.

Unfortunately there will be no Meet and Greet, but we're sure that if you keep these instructions ready at hand it won't be hard to reach us.

If you land at Linate Airport:

Air Bus to Centrale Railway Station: www.atm-mi.it

Bus no. 73 to Piazza San Babila: www.atm-mi.it

If you land at Malpensa Airport:

Malpensa Express Train to Cadorna Railway Station: www.malpensaexpress.it

Malpensa Shuttle to Centrale Railway Station: www.malpensashuttle.it

If you land at Orio al Serio Airport:

Terravision Bus to Centrale Railway Station: www.terravision.eu/milan_bergamo.html

Orio shuttle to Centrale Railway Station: www.orioshuttle.com

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Bovisa Campus

From the city center, get to one of the following subway stations: Porta Venezia (Red line), Repubblica (Yellow line) or Garibaldi (Green line), take the suburban railway called 'Passante ferroviario" and get off at Bovisa station.

Alternatively after reaching the Cadorna subway stop (Green or Red lines), from the subway station go to railway station above, board any train leaving from the station (except Malpensa Express) and get off at Bovisa station.

Exit Bovisa railway station, turn right to reach the Engineering Campus (Via La Masa 34).

Forum Registration

To apply for registration please go to **www.ERF2017.org/registration/**

Registration Fees

ERF (including SFTE-EC Symposium) Registration Fees	Early Registration Before July 7, 2017	Late Registration After July 7, 2017
Non Member	840 €	890 €
Member (CEAS)	800 €	850 €
Speaker/Chairman	740 €	790 €
PhD Student	600 €	650 €
BSc/MSc Student	300 €	300 €
Social Program for Accompanying Person	115 €	115 €

ERF (including SFTE-EC Symposium) registration fee for non-members/members/speakers/chairmen/PhD students includes:
ERF attendance, ERF documentation, SFTE EC attendance, SFTE EC documentation, coffee breaks, lunches, 1 welcome cocktail ticket, 1 gala dinner ticket.
CEAS Member:
Council of European Aerospace Societies (includes: 3AF, AAAR, AIAE, AIDAA, DGLR, FTF, HAES, NVvL, PSAA, RAeS, SWFV, TsAGI, CzAeS).
ERF (including SFTE-EC Symposium) registration fee for BSc/MSc students includes:
ERF attendance, ERF documentation, SFTE EC attendance, SFTE EC documentation, coffee breaks, lunches.
Please send a copy of your Student ID-Card (ERF2017@leonardocompany.com).

SFTE-EC Symposium (including partial ERF) Registration Fees	Early Registration Before July 7, 2017	Late Registration After July 7, 2017
Non Member	530 €	560 €
Member (CEAS)	475 €	505 €
Speaker/Chairman	440 €	470 €
PhD Student	360 €	390 €
BSc/MSc Student	180 €	180 €
Social Program for Accompanying Person	70 €	70 €

SFTE-EC Symposium (including partial ERF) registration fee for non-members/members/speakers/chairmen/PhD students includes:
SFTE EC attendance, SFTE EC documentation, partial ERF attendance (from September 13), ERF documentation, coffee breaks, lunches, 1 gala dinner tick
SFTE Member:
Society of Flight Test Engineers
please send a copy of your Student ID-Card (ERF2017@leonardocompany.com)
SFTE-EC Symposium (including partial ERF) registration fee for BSc/MSc students includes:
SFTE EC attendance, SFTE EC documentation, partial ERF attendance (from September 13), ERF documentation, coffee breaks, lunches.
Please send a copy of your Student ID-Card (ERF2017@leonardocompany.com).

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Insurance

Participants are advised to take out their own travel insurance and to extend any private polices for personal possessions they may bring with them. The Forum does not cover participants against cancellations of bookings or loss/theft of belongings.

Language

Conference language is English. Presentations and discussions are therefore in English.
There will be no simultaneous translation during the session.

Security - Passport and visa

In Italy everyone must have a valid identity card or passport. It is the responsibility of each delegate to obtain all the necessary documents, including visa if necessary.

Hotel Accomodation

Please use the link below to find hotel rooms for the best price.
www.ERF2017.org/accommodation/
We recommend to make your reservations as soon as possible.

Social Programme

Welcome cocktail

BLUE NOTE MILANO
Blue Note Milano is a jazz club and restaurant located at Via Borsieri 37 in the Isola district of Milan, Italy. Opened on March 19, 2003, Blue Note Milano is part of the Blue Note network alongside the historical Blue Note Jazz Club in Greenwich Village New York City and the Blue Note Clubs in Tokyo and Nagoya, Japan.

Gala Dinner

MUSEO DELLA SCIENZA E DELLA TECNOLOGIA LEONARDO DA VINCI
The National Museum of Science and Technology 'Leonardo da Vinci" is the pre-eminent museum of its kind in Italy and houses the largest collection of mechanical models realized on the basis of Leonardo da Vinci's drawings.
Next to research and conservation, education is one of the main functions of the Museum and one

of the fundamental purposes of the National Museum of Science and Technology Leonardo da Vinci Foundation.
Interactive laboratories and exhibitions promote discovery and exploration, helping visitors use their own knowledge and skills to interpret objects and phenomena and to independently shape their own learning process.
The Museum offers a path of discovery, experience, emotions and understanding accessible for all.

City of Milan: Vertical Flight Heritage Site Awards
We are very pleased to announce that during the Gala Dinner, the City of Milano will receive an important recognition from AHS International: The Vertical Flight Heritage Site Awards.
The Vertical Flight Heritage Sites program is intended to recognize and help preserve locations associated with the most noteworthy and significant contributions made in both theory and practice of vertical flight aircraft technology.
In 2016 the committee selected Milan as a site to be recognized for its historic significance.
Leonardo da Vinci's Studio in Milan was the site of the first known VTOL design (c. 1487).
Although the exact location is not known, Leonardo di Ser Piero da Vinci – while working for Ludovico Maria Sforza, Duke of Milan – designed the Helix Aerial Screw, a flying machine intended to be capable of vertical take-off and landing using a hand-cranked rotating wing. The Helix is generally considered to be the first known engineering design for a manned helicopter.

Technical Visit

Vergiate Site: Leonardo Helicopters Final Assembly Line and Flight Line
Vergiate, located in Lombardy close to Lake Maggiore, is a fundamental site for the Italian aviation history since 1937, when SIAI (Società Idrovolanti Alta Italia) started the production of fixed-wing aircraft. In 1969 Agusta acquired control of SIAI and of the Vergiate facilities, transferring part of its helicopter assembly activities. From 1997, when Agusta re-organised its business, and fixed-wing activities were transferred to Aermacchi, the Vergiate plant has been exclusively dedicated to helicopter assembly.
Today Vergiate plays a critical role in AgustaWestland's manufacturing operations, being home to final assembly lines for our main helicopter models. Aircrafts exit the assembly line for the near flight line, where they undergo preparations for delivers, occurring each week, and the customer acceptance."

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Programme at a Glance (Preliminary)- For further detail check on www.ERF2017.org

DAY 1 - TUESDAY 12th SEPTEMBER

09:00	Opening Cerimony				
11:30	PLENARY SESSION - HEMS				
12:30	Networking Lunch				
13:30	Aerodynamics	Flight Mechanics	Simulation and Training	Aircarft Design	Dynamics
16:00	Aerodynamics	Flight Mechanics	Simulation and Training	Aircarft Design	Dynamics
20:00	Welcome Reception - Blue Note				

DAY 2 - WEDNESDAY 13th SEPTEMBER

09:00	Aerodynamics	Flight Mechanics	Operational Aspects	Aircraft Systems	Test and Evaluation
11:00	AHS Best Paper - Plenary				
11:30	KEYNOTE ADDRESS - POLIMI Industria 4.0 - Prof. Taisch				
12:30	Networking Lunch				
13:30	Aerodynamics	Flight Mechanics	Dynamics	Aircraft Systems	Test and Evaluation
16:00	Aerodynamics	Flight Mechanics	Acoustics	Engine and Propulsion	History of Rotorcraft
20:00	Gala Dinner- Museo della Scienza e della Tecnologia L. Da Vinci				

DAY 3 - THURSDAY 14th SEPTEMBER

09:00	Airworthiness	Flight Mechanics	Dynamics	Structures and Materials	Crew Station and Human Factors
11:00	KEYNOTE ADDRESS - EASA				
11:30	KEYNOTE ADDRESS - UAV				
12:30	Networking Lunch				
13:30	Aerodynamics	Avionic and Sensors	Acoustics	Structures and Materials	Test and Evaluation + Manufacturing
18:00	END of CONFERENCE				

DAY 4 - FRIDAY 15th SEPTEMBER

09:00 12:00	TECHNICAL VISIT at VERGIATE Final Assembly Line and Flight Line

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Programme (Preliminary)- For further detail check on www.ERF2017.org

Day 1 - Tuesday 12th September					
9.00	OPENING CEREMONY F. NANNONI				
11.00	Coffee Break				
11.30	PLENARY SESSION HEMS				
12.30	Networking Lunch				
13.30	AERODYNAMICS 608 Optimal Placement of an airflow probe at a multirotor UAV for airborne wind measurements Molter Christian	FLIGHT MECHANICS 524 System identifications of three-axis gyro model and base model of a RC helicopter without stabilizer bar Wu Mei-Li-Wen	SIMULATION & TRAINING 533 Pilot Modelling for Boundary Hazard Perception and Reaction Study Lu Linghai	AIRCRAFT DESIGN 574 The overview of new carbon propeller development for 32kg Gross Weight Agricultural Multicopter(Octocopter) Kim Deog-Kwan	DYNAMICS 632 Using Multibody Dynamics for the Stability Assessment of a new Rotor Test Rig Arnold Juergen
14.00	AERODYNAMICS 602 CFD analysis during the design of Fuel Equipment Ripolles Frederic	FLIGHT MECHANICS 582 Dynamic inflow and ground effect in multirotor UAV attitude dynamics Riccardi Fabio	SIMULATION & TRAINING 683 Wind characterization around offshore platform for real-time helicopter simulator Scala Stefano	AIRCRAFT DESIGN 606 An Enhanced Prediction Methodology for Rapid Performance and Control Design of Highly Maneuverable UAVs Smith Marilyn	DYNAMICS 729 IMPROVEMENT OF WHIRL FLUTTER STABILITY OF TILTROTOR USING GURNEY FLAPS Quaranta Giuseppe
14.30	AERODYNAMICS 715 Measurements on a Yawed Model Rotor Blade Pitching in Reverse Flow Smith Luke	FLIGHT MECHANICS 731 Reliability Assessment of Small-scale Rotorcraft models Avanzini Giulio	SIMULATION & TRAINING 638 THE DEVELOPMENT AND USE OF A PILOTED FLIGHT SIMULATION ENVIRONMENT FOR ROTARY-WING OPERATION TO THE QUEEN ELIZABETH CLASS AIRCRAFT CARRIERS Kelly Michael	AIRCRAFT DESIGN 527 Performance Improvement of Variable Speed Rotors by Gurney Flaps Han Dong	DYNAMICS 707 Nonlinear stability analysis of whirl flutter for a tiltrotor wing-nacelle system Rezgui Djamel
15.00	AERODYNAMICS 699 Flowfield Measurements of Reverse Flow on a High Advance Ratio Rotor Lind Andrew	FLIGHT MECHANICS 702 Finite-State Wake Inflow Models for Rotorcraft Flight Dynamics in Ground Effect Cardito Felice	SIMULATION & TRAINING 520 Real TimeWake Computations using Lattice Boltzmann Method on Many Integrated Core Processors Barakos George	AIRCRAFT DESIGN 562 A multidisciplinary process for integrated rotorcraft design Weiand Peter	DYNAMICS 609 Aeromechanics of Self-Twisting Blades in High-Speed Slowed Rotor Flight Ward Elizabeth
15.30	Coffee Break				
16.00	AERODYNAMICS 625 A novel hybrid method for helicopter cost effective aeroelastic simulations Riziotis Vasilis	FLIGHT MECHANICS 685 Validation of a Dynamic Inflow Model Based on a Flight Dynamics Model and a Lattice-Boltzmann Fluid Solver Using Flight Test Data Bludau Jakob	SIMULATION & TRAINING 616 Real-time Piloted Simulation using Rotorcraft Comprehensive Analysis with a Virtual Reality Interface Sridharan Ananth	AIRCRAFT DESIGN 593 Clean Sky 2: Exploring new rotorcraft high speed configurations Cabrit Philippe	DYNAMICS 678 Vibratory Load Predictions of a High-Advance Ratio Coaxial Rotor System Validated by Wind Tunnel Tests Feil Roland
16.30	AERODYNAMICS 577 Numerical simulation of the laminar-to-turbulent transition for helicopter rotor flows with $\tilde{I}^2$-Re$_{\tilde{I}^2,t}$ transition model Richez Francois	FLIGHT MECHANICS 693 The role of black-box models in rotorcraft attitude control Cortigiani Nicola	SIMULATION & TRAINING 712 Effects of Motion-Cueing on the Quasi-Transfer of Training for Inexperienced Helicopter Pilots Fabbroni Davide	AIRCRAFT DESIGN 597 Static aeroelastic response of rotor blade to internal preloading Dibble Robert	DYNAMICS 687 A VIRTUAL ENVIRONMENT FOR ROTORCRAFT VIBRATION ANALYSIS Tamer Aykut
17.00	AERODYNAMICS 516 TOWARDS HIGH-ORDER METHODS FOR ROTORCRAFT APPLICATIONS Barakos George	FLIGHT MECHANICS 732 Developing an Observation Methodology for Non-Measurable Rotorcraft States Trainelli Lorenzo	SIMULATION & TRAINING 679 A numerical model-based approach for helicopter harsh landing identification Sbarufatti Claudio	AIRCRAFT DESIGN 614 Integration of Physics Based Weight Models into Rotorcraft Design Sizing Govindarajan Bharath	DYNAMICS 667 INDIVIDUAL BLADE CONTROL WITH THE SMART SPRING â€˜ A CLOSED-LOOP INDEPENDENT HARMONIC CONTROL APPROACH Nitzsche Fred
17.30	AERODYNAMICS 579 AEROELASTIC SIMULATION OF THE TAIL SHAKE PHENOMENON SchÃ¤rlein Ulrich	FLIGHT MECHANICS 535 Rotorcraft model identification: a black-box time/frequency domain approach Bergamasco Marco	SIMULATION & TRAINING 646 Using Piloted Simulation to Measure Pilot Workload of Landing a Helicopter on a Small Ship Owen Ieuan	AIRCRAFT DESIGN 672 On the Analyses of Rotorcraft Dynamics and Rapid Aerodynamic Loads Estimation for Flight Control Actuation Hashim Farahani	DYNAMICS 666 Physics Based Approaches for Active Rotor Modeling and Control Sankar Lakshmi
20.00	Welcome Reception - Blue Note Milano				

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Day 2 - Wednesday 13th September					
	AERODYNAMICS	FLIGHT MECHANICS	OPERATIONAL ASPECTS	AIRCRAFT SYSTEMS	TEST & EVALUATION
9.00	578 Investigation of Dynamic Stall on a Rotor with Cyclic Pitch Control Letzgus Johannes	631 Use of Harmonic Decomposition Models in Rotorcraft Flight Control Design for Alleviation of Vibratory Loads Saetti Umberto	627 Improve HEMS through PBN (SBAS) Avi Arrigo	561 Health monitoring on hydraulic pumps – lessons learnt Paulmann Gregor	695 A Need to Rewrite the Takeoff and Landing Acceptable Compliance Methods (AMC/AC 27&29) for Multiengine Rotorcrafts Paggi Bernardino
	AERODYNAMICS	FLIGHT MECHANICS	OPERATIONAL ASPECTS	AIRCRAFT SYSTEMS	TEST & EVALUATION
9.30	711 Performance Prediction of High Efficiency Novel Coaxial Rotor Configuration with Asymmetric Rotors Ramanujam Rahul	688 AW169 Tail Rotor Loss Simulation Bianco Mengotti Riccardo	525 On the establishment of Class 2 helipad takeoff and landing Performance for the BK117 C-2: a comprehensive approach based on limited testing and simulation Garavello Andrea	691 Automatic temperature control of a Hydraulic System via stepped pressure modulation, a dual stage valve optimization via jet flows Bacchiega Giacomo	610 Degraded Visual Environment Mitigation (DVE-M) Program NATO Flight Trials: U.S. Army Flight Test and Results Fujizawa Brian
	AERODYNAMICS	FLIGHT MECHANICS	OPERATIONAL ASPECTS	AIRCRAFT SYSTEMS	TEST & EVALUATION
10.00	570 Large Eddy Simulation of Advancing Rotor for Near to Far Wake Assessment Caprace Denis-Gabriel	613 Stabilization of External Loads on a Rotorcraft in High Speed Flight Using an Active Cargo Hook Singh Ajay	512 Helicopter Wake Encounters in the Context of RECAT-EU Barakos George	662 Advances in Helicopter Electric Tail Rotor Drive Brunetti Massimo	658 Ship/helicopter Qualification Testing for a non-naval helicopter Ciotola Antonio
10.30	Coffee Break				
11.00	Plenary Session - AHS Best Paper				
11.30	POLIMI Industria 4.0 - Prof. Marco Taisch				
12.30	Networking Lunch				
	AERODYNAMICS	FLIGHT MECHANICS	DYNAMICS	AIRCRAFT SYSTEMS	TEST & EVALUATION
13.30	682 Predicting Aerodynamic Performance of a Hovering Rotor Near Stall Sheng Chunhua	673 Simulation of Tiltrotor Maneuvers using Linear Parameter Varying Models Muscarello Vincenzo	713 A LTI/LQE Scheme for Real Time Rotor Component Load Estimation Prasad JVR	595 AUTOPILOT DESIGN FOR THE ERICA TILT-ROTORCRAFT Sollazzo Adolfo	539 Live Optical Digitization of Flight Instruments for Flight Guidance in Helicopter Noise Measurements Timmerman Bart
	AERODYNAMICS	FLIGHT MECHANICS	DYNAMICS	AIRCRAFT SYSTEMS	TEST & EVALUATION
14.00	538 EXPERIMENTAL EVALUATION OF AN ACTIVE CONTROLLED L-SHAPED TAB FOR DYNAMIC STALL ALLEVIATION Zanotti Alex	664 Development of augmented control laws for a tiltrotor in low and high speed flight modes Viganò Luca	725 Rotor State Evaluation and Structural Health Monitoring Through Strain Sensors Serafini Jacopo	637 Helicopter Vibration Health Monitoring Systems Featuring Engine Vibration Monitoring Bendisch Stefan	657 Individual Blade Control of a 5â€ bladed Rotor using the Multiple Swashplate System Kuefmann Philip
	AERODYNAMICS	FLIGHT MECHANICS	DYNAMICS	ENGINES & PROPULSION	TEST & EVALUATION
14.30	536 Influence of an Active Gurney Flap upon the Aerodynamic and Performance Properties of a Main Rotor in Various States of Helicopter Flight Stalewski Wienczyslaw	692 Atmospheric Turbulence Estimation for Helicopter FCS Design Cortigiani Nicola	696 Moving Towards A-Priori Identification of Undesirable Pilot Biometrics for Collective Bounce Instability Zanoni Andrea	601 HELICOPTER TURBOSHAFT ENGINE: THE SPECIFICITIES TO MEET AIRFRAMER REQUIREMENTS AND CUSTOMER NEEDS Ripolles Frederic	652 Control design of a tilting mechanism for the UK National Rotor Test Rig Facility Morales-Viviescas Rafael
	AERODYNAMICS	FLIGHT MECHANICS	DYNAMICS	ENGINES & PROPULSION	TEST & EVALUATION
15.00	700 Refined Measurement and Validation of Performance and Loads of a Mach-Scaled Rotor at High Advance Ratios Trollinger Lauren	647 Distributed Turbulence Model with Accurate Spatial Correlations for Helicopter Handling Quality Analysis Chen Renliang	615 Performance and Vibration Analyses of Lift-offset Helicopters using a Rigid Coaxial Rotor Park Jae-Sang	572 Light Helicopter Demonstrator with High Compression Engine (HCE): flight tests results Mercier Christian	663 EXPERIMENTAL ASSESSMENT OF TILTROTOR AIR INTAKE DUCT SHAPE OPTIMIZATION Gibertini Giuseppe
15.30	Coffee Break				

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16.00	AERODYNAMICS 592 HELICOPTER FUSELAGE MODEL DRAG REDUCTION BY ACTIVE FLOW CONTROL SYSTEMS De Gregorio Fabrizio	FLIGHT MECHANICS 531 Adaptive Control based Flying Quality Design for Helicopters Wu Wei	ACOUSTICS 650 Analysis of the flow produced by a low-Reynolds rotor optimized for low noise applications. Part II: Acoustics Serre Ronan	ENGINES & PROPULSION 554 ANALYSIS METHOD FOR OPTIMAL DESIGN OF HELICOPTER MAIN GEARBOX WITH COMBINATION OF STRUCTURAL AND THERMAL INFLUENCE Park Youn	HISTORY OF ROTORCRAFT 694 Enrico Forlaniniâ€™s contribution to fixed and rotary wing aircraft development Cardani Cesare
16.30	AERODYNAMICS 573 Validation of CFD Codes for the Helicopter Wake in Ground Effect Sugiura Masahiko	FLIGHT MECHANICS 733 A Model-Based Design Framework for Rotorcraft Trim Control Laws Trainelli Lorenzo	ACOUSTICS 596 Assessment of a Comprehensive Aero Acousto-Elastic Solver for Rotors in BVI Conditions Serafini Jacopo	ENGINES & PROPULSION 686 Analysis of a Helicopter Main Gearbox by means of Numerical Modelling approach.pdf Manes Andrea	HISTORY OF ROTORCRAFT 690 The engineer Leonardo and the Leonardo engineer: designing rotorcrafts under his name five centuries later bianco-mengotti riccardo
17.00	AERODYNAMICS 635 Investigation of the blade tip vortex on a rotating and pitching blade Goerttler Andreas	FLIGHT MECHANICS 515 About the Impact of Wind Energy Wake Vortices on Helicopter Trim and Rotor Blade Motion van der Wall Berend G.	ACOUSTICS 518 APPLICATION OF LATTICE-BOLTZMANN METHOD FOR ROTORCRAFT AERODYNAMICS AND AEROACOUSTICS PREDICTION Romani Gianluca	ENGINES & PROPULSION 584 COMPOUND-SPLIT DRIVETRAINS FOR ROTORCRAFT Paschinger Pierre	HISTORY OF ROTORCRAFT 727 EARLY DEVELOPMENT OF TILTROTOR CONVERTIBLE AIRCRAFT IN THE UNITED KINGDOM D'Andrea Andrea
17.30	AERODYNAMICS 605 Trailed Circulation of Hovering Rotors with Leading-Edge Protuberances Cully Brian	FLIGHT MECHANICS 604 Control Allocation Optimization Methods for a Coaxial Compound Helicopter Ivler Christina	ACOUSTICS 618 A New Grid Based Method for General Long-Range Rotorcraft Acoustics Chitta Subha	ENGINES & PROPULSION 717 Conceptual and Preliminary Design of a Hybrid Dust Filter for Helicopter Engines Bojdo Nicholas	HISTORY OF ROTORCRAFT 543 Unbuilt prototypes from Agusta early years (1956-1970) Ricci Moretti Luigi
20.00	Gala Dinner - Museo Della Scienza e della Tecnica				

Day 3 - Thursday 13th September					
9.00	AIRWORTHINESS 668 Harmonization across the Atlantic of guidance material related to digital systems aspect of certification Fabre Louis	FLIGHT MECHANICS 576 First Attempts to Account for Flexible Modes in ACT/FHS System Identification Seher-Weiss Susanne	DYNAMICS 709 Effect of Three Dimensional Dynamic Stall on Rotorcraft Stability Ramanujam Vellingiri	STRUCTURES & MATERIALS 575 HEALTH STRUCTURE MONITORING FOR AIRCRAFT AND ROTORCRAFT THROUGH INVERSE FINITE ELEMENT METHOD (IFEM) Papa Umberto	CREW STATION & HUMAN FACTORS 680 Integrating Data and Sensor Based Obstacle Information in a Conformal Landing Display for Helicopter Lueken Thomas
9.30	AIRWORTHINESS 749 From operational considerations to airworthiness requirements: an offshore approach example Smerals Alexandros	FLIGHT MECHANICS 706 EVALUATION OF OPTIMAL MODEL FOLLOWING CONTROLLERS IN TERMS OF HANDLING QUALITIES Okcu Ilgaz	DYNAMICS 726 Mars Helicopter: Flight Dynamics, Guidance, and Control Grip Havard	STRUCTURES & MATERIALS 710 Interlaminar damage detection in composite elements by means of optical fibre sensors Bettini Paolo	CREW STATION & HUMAN FACTORS 617 Physiological and Psychological Response Modelling of the Helicopter Pilot through Vibration Simulation Khaksar Zeinab
10.00	AIRWORTHINESS 528 IMPLEMENTATION OF THE HEALTH MONITORING DATA FOR ROTORCRAFT FATIGUE SPECTRUM Rustici Sara	FLIGHT MECHANICS 689 iMission - Leonardo Helicopters integrated performance simulation: consolidating decades of lessons learnt and keeping the door open to the lessons to be learnt Bianco Mengotti Riccardo	DYNAMICS 522 Whirl and Stall Flutter Simulation Using CFD Barakos George	STRUCTURES & MATERIALS 633 MULTIFIELD VARIATIONAL SECTIONAL ANALYSIS FOR COMPOSITE BLADES BASED ON GENERALIZED TIMOSHENKO-VLASOV THEORY Jung Sung	CREW STATION & HUMAN FACTORS 559 Workload Reduction Through Steering Wheel Control for Rotorcraft Schuchardt Bianca I.
10.30	Coffee Break				
11.00	Keynote Address - EASA				
11.30	Keynote Address - UAV				
12.30	Networking Lunch				

GENERAL INFORMATION AND PROGRAMME

13.30	AERODYNAMICS 530 FORCES ON OBSTACLES IN ROTOR WAKE - A GARTEUR ACTION GROUP Visingardi Antonio	FLIGHT MECHANICS 716 Modeling Pilot Pulse Control Bachelder Edward	ACOUSTICS 588 Numerical Simulation of Rotor Aerodynamics and Acoustics Using High-Accuracy Schemes on Unstructured Meshes Bobkov Vladimir	STRUCTURES & MATERIALS 703 Basic aeroelastic stability studies of hingeless rotor blades in hover using geometrically exact beam and finite-state inflow Amoozgar Mohammadreza	TEST & EVALUATION 607 Experimental Validation of a Fluidic Pitch Link Model Treacy Shawn
14.00	AERODYNAMICS 540 Simulation of Helicopter Aerodynamics in the Vicinity of an Obstacle using a Free Wake Panel Method Schmid Matthias	AVIONICS & SENSORS 526 Advanced pilot assistance to perform oil rig approaches Canale Nicolas	ACOUSTICS 521 Computational Aeroacoustic Analysis of Propeller Installation Effects Barakos George	STRUCTURES & MATERIALS 599 A stress based critical-plane approach for study of rolling contact fatigue crack propagation in planet gears Pierre Depouhon	TEST & EVALUATION 585 Measurement of Blade Deflections of an unmanned intermeshing Helicopter Andreas Voigt
14.30	AERODYNAMICS 623 Rotorcraft flight in interaction with obstacles Riziotis Vasilis	AVIONICS & SENSORS 675 Differential GPS landing system: an instant-on tactical and precision approach capability Bardi Massimo	ACOUSTICS 730 Acoustical methods and experiments for studying rotorcraft fuselage scattering Yin Jianping	STRUCTURES & MATERIALS 620 Fatigue Substantiation and Damage Tolerance Evaluation of Rotorcraft Horizontal Tail Rayavarapu Vijayakumar	TEST & EVALUATION 611 Experimental investigation and validation of structural properties of a new design for active twist rotor blades Kalow Steffen
15.00	AERODYNAMICS 580 Helicopter-Obstacle Aerodynamic Interaction in Windy Conditions Zagaglia Daniele	AVIONICS & SENSORS 656 First results of LiDAR aided helicopter approaches during NATO DVE-Mitigation trials Zimmermann Michael	ACOUSTICS 660 An emission surface approach for noise propagation from high speed sources Vigevano Luigi	STRUCTURES & MATERIALS 517 VISCOELASTIC SHEAR DAMPING MECHANISM FOR VIBRATION REDUCTION ON A HELICOPTER ANTI TORQUE BEAM Bottasso Luigi	TEST & EVALUATION 718 Design and Manufacture of Instrumented Rotor Blades for a Helicopter Test Rig Filippone Antonio
15.30	Coffee Break				
16.00	AERODYNAMICS 557 Experimental and numerical investigation of the aerodynamic interactions between a stationary helicopter and surrounding obstacles Gallas Quentin	AVIONICS & SENSORS 719 Helicopter Autopilot Fly-Away Mode After Loss of Engine Zaccuri Rocco Cristian	ACOUSTICS 661 Examination of the Influence of Empiric Parameters on the Aero-acoustic Results of the Free Wake Code FIRST Kranzinger Patrick	STRUCTURES & MATERIALS 698 Structural Test Rig Design Optimisation Smith Drew	MANUFACTURING 721 AUTOMATED INSERTION OF Z-PINS INTO THICK COMPOSITE LAMINATES Imperiale Vita
16.30	AERODYNAMICS 568 Simulation of unsteady aerodynamic load for rigid coaxial rotor in forward flight with vortex particle method Jianfeng Tan	AVIONICS & SENSORS 612 ELECTRONIC COUPLED ACTIVE SIDESTICKS IN DUAL PILOT HELICOPTERS FOR INSTRUCTIONAL FLIGHTS dos Santos Sampaio Rodolfo	ACOUSTICS 566 Analysis of the flow produced by a low-Reynolds rotor optimized for low noise applications. Part I: Aerodynamics Gourdain Nicolas	STRUCTURES & MATERIALS 641 Soluzioni Schermanti Su Velivoli con Utilizzo di Tessili Elettricamente Conduttivi Accoppiati con Carbonio , Kevlar ed Altri in Alternativa Alla Copper Mesh Soliani Ivano	MANUFACTURING 648 FTK ROTOR BLADES: DESIGN, MANUFACTURING AND TESTING Mainz Henning

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