

DAY 1 - TUESDAY 6TH SEPTEMBER

ROOM 1

09:00

OPENING CEREMONY

Blanche DEMARET - Chair of the 42th ERF - ONERA
Michel SCHELLER - President - 3AF
Nicolas LEBAS - Vice-President - Region Hauts-de-France

10:00

KEYNOTE ADDRESS

Jean Brice DUMONT - Executive Vice President Engineering - Airbus Helicopters

10:30

CEAS TECHNICAL AWARD

The recipient of the CEAS Technical Award 2016 is the BlueCopter demonstrator team, Airbus Helicopters Deutschland, represented by Dr Marius Bebesel

11:00

NETWORKING & REFRESHMENTS

11:30

1st PLENARY SESSION

Anne BRINDEJONC - Maintenance on Operational Helicopters of the French Forces, AIA (French MoD)
Mark D. WHITE - GARTEUR General Presentation and Research Activities of the Helicopter Group

12:30

NETWORKING LUNCH

DAY 1 - TUESDAY 6TH SEPTEMBER

	ROOM 1	ROOM 2	ROOM 3	ROOM 4
A	AERODYNAMICS 1	ACOUSTICS 1	FLIGHT MECHANICS 1	SIMULATION & TRAINING 1
Chair	R. MARKIEWICZ	J. HAKKAART	A.TAGHIZAD	J. NARKIEWICZ
13:30	20 Multi Fidelity Aerodynamic Optimization of a Helicopter Rotor Blade <u>J. BAILLY</u> , D. BAILLY <i>ONERA, FR</i>	113 Benchmark for Modelisation of Acoustic Transmission Loss Applied to Helicopter Trim Panels <u>F. SIMON</u> , T. HAASE, O. UNRUH, E.TIJS, H.Van der WALL, R.WIJNTJES <i>ONERA, FR - NLR, NL - DLR,DE - Microflown Technologies, NL</i>	52 The biplane stabilizer of the H160 helicopter - Design and Development <u>M. KELAIDIS</u> , M. ALLONGUE, S. LEYDER <i>AIRBUS HELICOPTERS, FR</i>	85 Towards Real Time Wake Computations using Lattice Boltzmann Method for Flight Dynamics Simulations <u>M.WOODGATE</u> , G. BARAKOS, R. STEIJL <i>University of Glasgow, UK</i>
14:00	34 An ONERA/JAXA Co-operative Research on the Assessment of Aerodynamic Methods for the Optimization of Helicopter Rotor Blades, Phase II <u>M. SUGIURA</u> , Y. TANABE, T. AOYAMA, B. ORTUN, J. BAILLY <i>JAXA, JP - ONERA, FR</i>	114 Benchmark for experimentation of Acoustic Transmission Loss applied to helicopter trim panels <u>F. SIMON</u> , T. HAASE, O. UNRUH, R. WIJNTJES, H. VAN DER WAL, E. TIJS <i>ONERA, FR - DLR, DE - NLR,NL - Microflown Technologies, NL</i>	30 Differences Between Quadrotor Helicopter Flight Configurations <u>R. NIEMIEC</u> , F. GANDHI <i>Rensselaer Polytechnic Institute, US</i>	169 Analytical Methods for Modeling Inflow Dynamics of a Co-axial Rotor System <u>J.V.R. PRASAD</u> , Y-B. KONG, D.A. PETERS <i>Georgia Institute of Technology, US - Washington University, US</i>
14:30	77 Numerical Simulation of Rotor Aerodynamics Using Quasi-1D Schemes on Unstructured Meshes <u>V.G. BOBKOV</u> , I.V. ABALAKIN, V.A. ANIKIN, T.K. KOZUBSKAYA <i>Keldysh Institute of Applied Mathematics of RAS, RU - Kamov Design Bureau, RU</i>	51 Experimental test of semi-active shunt damping on a helicopter trim panel <u>M. POHL</u> , T. HAASE <i>DLR, DE</i>	76 French-German Joint Research on Tactile Cueing for Reactive Obstacle Avoidance dedicated to Low Speed Helicopter Maneuvers <u>T. RAKOTOMAMONJY</u> , L. BINET, M. MÜLLHAÜSER <i>ONERA, FR - DLR, DE</i>	84 The use of Simulation Tools to Estimate Ship-Helicopter Operating Limitations - Pilot Model and Workload Prediction Components <u>J.M.P. FIGUEIRA</u> , A. TAGHIZAD, M. ABID <i>ONERA, FR - Université Aix-Marseille, FR</i>
15:00	32 Efficient Aero-Acoustic Simulation of HART II with Compact Pade Scheme <u>G. WILKE</u> <i>DLR, DE</i>	115 Concept of "fractal" helicopter trim panel <u>F. SIMON</u> , J. DERRE, V. FASCIO <i>ONERA, FR - ATECA, FR</i>	29 FitlabGui – a Versatile Tool for Data Analysis, System Identification and Helicopter Handling Qualities Analysis <u>S. SEHER-WEISS</u> <i>DLR, DE</i>	
15:30	NETWORKING & REFRESHMENTS			

DAY 1 - TUESDAY 6TH SEPTEMBER

	ROOM 1	ROOM 2	ROOM 3	ROOM 4	
B	AERODYNAMICS 2	TEST & EVALUATION 1	STRUCTURES & MATERIALS 1	AVIONICS & SYSTEMS1	
Chair	K. PAHLKE	P. KRÄMER	J. BERTHE	P. SIG	
16:00	<p>38</p> <p>The Behavior of Wake and Air Loads of Helicopter Hover Simulations from the AIAA Hover Prediction Workshop <u>E.P.N. DUQUE</u>, A. TOYODA, M. D. BURKLUND, N. HARIHARAN, C.P. STONE <i>Intelligent Light, US - HPCMP CREATE-AV, US - Computational Science & Engineering, US</i></p>	<p>143</p> <p>A Novel Contactless Sensor for Helicopter Blade Motion In-flight Measurements <u>M. REDAELLI</u>, L. TRAINELLI, E. ZAPPA, P. CORDISCO, E. VIGONI, A. ROLANDO, F. ROSSI, R. LIU <i>Politecnico di Milano, IT -Vicoter, IT - Leonardo Helicopters, IT</i></p>	<p>23</p> <p>Assessment of gravelling impact phenomenon on helicopter glass windshields <u>G. LANGEVIN</u>, A. PERRET, J.C SANGLEBOEUF, U.EBERTH <i>AIRBUS HELICOPTERS, FR - Institut de Physique de Rennes, FR</i></p>	<p>19</p> <p>Helicopter ClearVision <u>O. RIBERON</u>, Y. NETZER <i>Elbit Systems , FR</i></p>	
16:30	<p>21</p> <p>Closed-Form Solutions for the Optimum Rotor in Hover and Climb <u>D. PETERS</u>, R. MODARRES, W. LUER, B. RAHMING, S. HYUNBAE <i>Washington University in St Louis, US</i></p>	<p>98</p> <p>Testing Active Rotor Control Applications using DLR's Multiple Swashplate Control System in the LLF of DNW <u>R. BARTELS</u>, P. KÜFMANN, B. G. VAN DER WALL, O. SCHNEIDER H. HOLTHUSEN, J. GOMES, J. POSTMA <i>DLR, DE - DNW, NL</i></p>	<p>44</p> <p>Application of flaw tolerance methodologies on rotorcraft metallic principal structural elements <u>M. HERMAN</u>, J-M. BESSON <i>AIRBUS HELICOPTERS, FR</i></p>	<p>96</p> <p>Advanced integrated embedded platforms for advanced TCAS, situation awareness and (Semi-) autonomous piloting <u>J. GATARD</u>, M. JAKOVljeVIC <i>TTTech, AT</i></p>	
17:00	<p>74</p> <p>Helicopter drag mitigation during the CARD project: numerical investigation of rotor and pylon fairings <u>D. DESVIGNE</u>, D. ALFANO <i>AIRBUS HELICOPTERS, FR</i></p>	<p>87</p> <p>A new method of dynamic and static stall detection using infrared thermography <u>A. GARDNER</u>, C.C. WOLF, M. RAFFEL <i>DLR, DE</i></p>	<p>92</p> <p>Damage assessment of composite main rotor blade by finite element simulation and experiment <u>KR. PRASHANTH</u>, C.VENKATESAN HAL, IN - Indian Institute of Technology, IN</p>	<p>43</p> <p>Dynamic decision-support application for in-flight collision risk assessment <u>K. NIKOLAJEVIC</u>, N. BELANGER <i>AIRBUS HELICOPTERS, FR</i></p>	
19:00	WELCOME RECEPTION - Hotel de Ville, Lille				

DAY 2 - WEDNESDAY 7TH SEPTEMBER

ROOM 1					
08:30	<p align="center">2nd PLENARY SESSION</p> <p align="center">An efficient OEM/Operator partnership contributing successfully to H175 entry into service Eric VAN HAL – NHV - CEO of NHV & Marc ALLONGUE – Airbus Helicopters – H175 Program V P</p>				
09:30	<p align="center">KEYNOTE ADDRESS</p> <p align="center">Monique LEGRAND-LARROCHE, Directrice des Opérations - Direction Générale de l'Armement (French MoD)</p>				
	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5
C	AERODYNAMICS 3	ENGINES & PROPULSION 1	FLIGHT MECHANICS 2	DYNAMICS 1	SIMULATION & TRAINING 2
Chair	D. ALFANO	R. MIRGAZOV	J. NARKIEWICZ	P. SIG	P. KRÄMER
10:00	<p align="center">164</p> <p align="center">Investigating the autorotational performance of scaled Samara Rotor in Foward and Vertical Flight <u>D. REZGUJ</u>, B. JUNG <i>Bristol University, UK</i></p>	<p align="center">26</p> <p align="center">Light Helicopter demonstrator with High Compression Engine <u>A. GIERCZYNSKI</u> <i>AIRBUS HELICOPTERS, FR</i></p>	<p align="center">33</p> <p align="center">Efficient Method for Inverse Simulation of Helicopter Maneuver Flight <u>W. WU</u> <i>Nanjing University of Aeronautics and Astronautics, CN</i></p>	<p align="center">97</p> <p align="center">High-Fidelity Structural Loads Analysis of the ONERA 7A Rotor <u>H. YEO</u>, M. POTSDAM, B. ORTUN, K. V. TRUONG <i>US Army ADD, US - ONERA, FR</i></p>	<p align="center">150</p> <p align="center">Safe and Green Integration of Tiltrotors into the Future Air Transport System <u>G. MAISANO</u>, G. NEGRO, V. MOTTA, L. FRIGERIO, F. DE SANTIS, G. BRUNO, L. RIVIELLO <i>Leonardo Helicopters, IT - IDS, IT - SICTA, IT</i></p>
10:30	<p align="center">168</p> <p align="center">Vortex Ring State Prediction and Analysis <u>P. MULLEN</u>, G. BERNINI <i>Leonardo Helicopters, UK</i></p>	<p align="center">108</p> <p align="center">Possible technologies for a variable rotor speed rotorcraft drive train <u>H. AMRI</u>, P. PASCHINGER, M. WEIGAND <i>Technische Universirät Wien, AT</i></p>	<p align="center">49</p> <p align="center">Impact of Wind Energy Rotor Wakes on Fixed-Wing Aircraft and Helicopters <u>B. G. VAN DER WALL</u>, D. FISCHENBERG, P.H. LEHMANN, L. B. VAN DER WALL <i>DLR, DE</i></p>	<p align="center">69</p> <p align="center">Modeling aerodynamics for comprehensive analysis of helicopter rotors <u>K.V. TRUONG</u> <i>ONERA, FR</i></p>	<p align="center">25</p> <p align="center">The directional stability of autogyros illustrated with the example of I-28B experimental autogyro <u>D. ULMA</u>, <u>R. ZURAWSKI</u> <i>Institute of Aviation, PL</i></p>
11:00	<p align="center">NETWORKING & REFRESHMENTS</p>				

DAY 2 - WEDNESDAY 7TH SEPTEMBER

	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5
D	AERODYNAMICS 4	OPERATIONS 1	TEST & EVALUATION 2	DYNAMICS 2	AVIONICS & SYSTEMS 2
Chair	P. MASARATI	B. MIALON	J. HAKKAART	L. MEDICI	P. ABDEL NOUR
11:30	<p>56</p> <p>Aerodynamic study of tiltrotor blades <u>A. JIMENEZ-GARCIA</u>, G. BARAKOS <i>University of Glasgow, UK</i></p>	<p>102</p> <p>50-Years Dutch helicopter-ship qualification <u>P. BOOIJ</u>, J. VAN DER VORST <i>NLR, NL</i></p>	<p>101</p> <p>Advanced Vibration Diagnostic Techniques for Overhaul Costs Saving of Helicopter Engines <u>A. MIRONOV</u>, V. BADEKHA, P. DORONKIN, A. PRIKLONSKY <i>D un D centrs, LAT - Ural Work of Civil Aviation, RU</i></p>	<p>73</p> <p>BLUECOPTER DEMONSTRATOR: Mastering dynamics challenges <u>R. RAMMER</u>, A. KUS, J-B. MAURICE, O. DIETERICH, P. KONSTANZER <i>AIRBUS HELICOPTERS, DE</i></p>	<p>72</p> <p>Preliminary Design of More-electric Actuation System for Safety-critical Rotorcraft Applications <u>F. HASHIM</u>, C. LAWSON <i>Cranfield University, UK</i></p>
12:00	<p>103</p> <p>Wing-Rotor Aerodynamic Interference on a Tiltwing Aircraft in the First Part of Conversion Manœuvre <u>G. GIBERTINI</u>, G. DROANDI, D. GRASSI, G. CAMPANARDI, C. LIPRINO, M. BERTAGNINI <i>Politecnico di Milano, IT</i></p>	<p>109</p> <p>HELOSHIP guidance material for flight test crews to define operating capabilities <u>I. VOLPOET</u>, L. ARLEN <i>DGA-EV, FR - French Navy, FR</i></p>		<p>78</p> <p>A Tunable Mast Vibration Absorber for Variable RPM Rotorcraft <u>L.M. BOTTASSO</u>, L. MEDICI, G. V. BERNARDI, E. FOSCO <i>Leonardo Helicopters, IT</i></p>	<p>128</p> <p>Novel Space-Time Helicopter Flight Display <u>E. BACHELDER</u> <i>San Jose State University, US - AMRDEC AFDD, US</i></p>
12:30	NETWORKING LUNCH				

DAY 2 - WEDNESDAY 7TH SEPTEMBER

	ROOM 1	ROOM 2	ROOM 3	ROOM 4	ROOM 5
E	AERODYNAMICS 5	ACOUSTICS 2	AIRCRAFT DESIGN 1	DYNAMICS 3	STRUCTURES & MATERIALS 2
Chair	K. PAHLKE	V. GARETON	A. OKHONKO	A. IRWIN	P. BEAUMIER
13:30	<p><u>BEST PAPER AHS 2016</u> <u>Alfred Gessow Award</u></p> <p>Adjoint-based Aeroacoustics Design-Optimization of Flexible Rotors in Forward Flight <u>E. FABIANO</u> University of Wyoming, US</p>	<p>141</p> <p>Development and Testing of Innovative Solutions for Helicopter In-flight Noise Monitoring and Enhanced Control Based on Rotor State Measurements <u>L. TRAINELLI</u>, M. GENNARETTI, E. ZAPPA, M. LOVERA, A. ROLANDO, P. CORDISCO, R. GRASSETTI, M. REDAELLI Politecnico di Milano, IT - University Roma 3, IT - Vicoter, It - Leonardo</p>	<p>148</p> <p>Enhanced efficiency and flight envelope by variable main rotor speed for different helicopter configurations <u>W. GARRE</u>, T. PFLUMM, M. HAJEK TU München, DE</p>	<p>146</p> <p>Validation of Predicted Vibratory Loads of a Coaxial Rotor at High Advance Ratios with Wind Tunnel Test Data <u>J. SCHMAUS</u>, I. CHOPRA University of Maryland, US</p>	<p>37</p> <p>H160 HELICOPTER: Development of a carbon thermoplastic hub <u>J.-M. BESSON</u>, M. A. CELLI, N. CAPELLE AIRBUS HELICOPTERS, FR</p>
14:00	<p>104</p> <p>CFD Assessment of the Helicopter and Ground Obstacles Aerodynamic Interference <u>D. ZAGAGLIA</u>, G. GIBERTINI, G. DROANDI, P. ANTONIAZZA, A. OREGIO CATELAN Politecnico di Milano, IT</p>	<p>135</p> <p>Experimental/Numerical acoustic correlation of helicopter unsteady manoeuvres <u>M. GENNARETTI</u>, G. BERNARDINI, S. HARTJES, A. SCANDROGLIO, L. RIVIELLO, E. PAOLONE Roma Tre University, IT - Leonardo Helicopters, IT</p>	<p>53</p> <p>Variable Speed Tail Rotors for Helicopters with Variable Speed Main Rotors <u>D. HAN</u>, G. BARAKOS, V. PASTRIKAKIS University of Glasgow, UK - NANJING University, CA</p>	<p>144</p> <p>Computational and Experimental Aeromechanics Analysis of a Coaxial Rotor System in Hover and Forward Flight <u>R. FEIL</u>, J. RAULEDER, M. HAJEK, C.G. CAMERON, J. SIROHI Technical University of Munich, DE / University Texas at Austin, US</p>	<p>99</p> <p>Helicopter Vibration Controller Design with Specified Closed Loop Damping <u>S. HANAGUD</u> Georgia Institute of Technology, US</p>
14:30	<p>155</p> <p>Aeroacoustic Validation of the Free Wake Method FIRST on the basis of an EC145-T2 Main Rotor in Descent Flight <u>P. KRANZINGER</u>, M. KESSLER, E. KRAEMER IAG, DE</p>	<p>136</p> <p>Demonstration and Testing of the Pilot Acoustic Indicator on a Helicopter Flight Simulator <u>A. ROLANDO</u>, F. ROSSI, L. TRAINELLI, D. LEONELLO, G. MAISANO, M. REDAELLI Politecnico di Milano, IT Leonardo Helicopters, IT</p>	<p>138</p> <p>Direct integration of comprehensive analysis into design sizing of a high-speed asymmetric compound helicopter <u>I. CHOPRA</u>, A. SRIDHARAN, B. GOVINDARAJAN, V.T. NAGARAJ, University of Maryland, US</p>	<p>121</p> <p>Collective Bounce Problems on Tiltrotors <u>G. QUARANTA</u>, V. MUSCARELLO, P. MASARATI Politecnico di Milano, IT</p>	<p>47</p> <p>Modelling of water impact during ditching event <u>A.VAGNOT</u>, S.HALBOUT, J.MARKMILLER AIRBUS HELICOPTERS, FR - AIRBUS HELICOPTERS, DE</p>
15:00			<p>67</p> <p>Helicopter fuselage optimisation <u>A. BATRAKOV</u>, A.N. KUSYUMOV, S.A. MIKHAILOV, G. BARAKOS KNRTU-KAI, RU - Glasgow University, UK</p>	<p>163</p> <p>Validation of Aeromechanics Predictions for a Full 3 D Structural Analysis Model of the Tilt Rotor Aeroacoustic Model (TRAM) Proprotor <u>W. STARUK</u>, I. CHOPRA, A. DATTA, B. JAYARAMAN University of Maryland, US - AMRDEC, AFDD, US</p>	
15:30	NETWORKING & REFRESHMENTS				

DAY 2 - WEDNESDAY 7TH SEPTEMBER

	ROOM 1	ROOM 2	ROOM 3	ROOM 4	
F	AERODYNAMICS 6	ACOUSTICS 3	HUMS	SAFETY	
Chair	R. MARKIEWICZ	Y. DELRIEUX	L. MEDICI	A. IRWIN	
16:00	54 Viscous Flow Simulations of Coaxial Rotors <u>L. SANKAR</u> , N. OBAYASHI, JVR PRASAD, J. KIM <i>Georgia Institute of Technology, School of Aerospace Engineering, US - ART, US</i>	35 Acoustic comfort optimization in a H175 helicopter <u>V. GARETON</u> , J. CAILLET, G. ROULOIS L. LAMOTTE, S. PAILLASSEUR R. HALLEZ <i>AIRBUS HELICOPTERS, FR - MicrodB, FR - Siemens, FR</i>	63 Implementing a Real-time avionic application on a many-core processor <u>M. LO</u> , N. VALOT, F. MARANINCHI, P. RAYMOND <i>AIRBUS HELICOPTERS, FR - Université Grenoble, FR - CNRS-VERIMAG, FR</i>	75 What technologies to improve helicopter flight safety ? <u>D. TRISTRANT</u> - M. GREILLER <i>ONERA, FR - AIRBUS HELICOPTERS, FR</i>	
16:30	71 Identification of coaxial-rotors dynamic wake inflow for flight dynamics and aeroelastic applications <u>J. SERAFINI</u> , M. GENNARETTI, F. CARDITO, R. GORI, G. BERNARDINI, <i>Roma Tre University, IT</i>	82 BLUECOPTER™ demonstrator: The state-of-the-art in low noise design <u>S. SCHNEIDER</u> , R. HEGER <i>AIRBUS HELICOPTERS Deutschland GmbH, DE</i>	123 Rotor Blade Shape Estimation with Fiber Optical Sensors for a Health and Usage Monitoring System <u>S. SUESSE</u> , M. HAJEK <i>Technical University of Munich, DE</i>	81 Trajectory following method for on-line reconfiguration and recovery after actuator jamming <u>D. TRISTRANT</u> <i>ONERA, FR</i>	
17:00	94 Numerical Simulations of Aerodynamic Interactions Between Multiple Rotors <u>Y. TANABE</u> , T. AOYAMA, M. SUGIURA, H. SUGAWARA, S. SUNADA, K. YONEZAWA, H. TOKUTAKE <i>JAXA, JP - Ryogyu Systems, JP- OSAKA University, JP -Kanazawa University, JP</i>	161 Prediction of Rotor-Wake Interaction Noise using Finite-State Dynamic Wake Inflow Model <u>S. NAIR</u> , D. R. RAMASWAMY, S. PEDNEKAR, R. MOHAN <i>Indian Institute of Technology Madras, IN</i>	41 Health monitoring of helicopter drive train components based on support vector data description <u>V. CAMERINI</u> , G. COPPOTELLI, S. BENDISCH <i>AIRBUS HELICOPTERS, DE - University Roma Tre, IT</i>	165 Ballistic impact analysis for damage assesment of rotorcraft tail rotor drive shaft <u>N.T. DSOUZA</u> , R. VIJAYAKUMAR <i>Hindustan Aeronautics Limited, IN</i>	
19:30	CONFERENCE DINNER - Couvent des Minimes, Lille				

DAY 3 - THURSDAY 8TH SEPTEMBER

ROOM 1				
09:00	<p align="center">3rd PLENARY SESSION</p> <p align="center">Marc HÖFINGER - DLR- Co Chair of the Group "Future Military Rotorcraft Requirements - A NATO STO perspective" Bruno SAINJON -CEO of ONERA- ONERA Research Strategy, and new challenges for rotorcraft</p>			
	ROOM 1	ROOM 2	ROOM 3	ROOM 4
G	AERODYNAMICS 7	FLIGHT MECHANICS 3	ENGINES & PROPULSION 2	DYNAMICS 4
Chair	B. MIALON	P. ABDEL NOUR	P. KRÄMER	P. BEAUMIER
10:00	<p align="center">27</p> <p>Numerical Analysis of the Internal and External Flows of the Fenestron® under Complex Flight Conditions <u>M. MARINO</u>, G. LEGRAS, N. GOURDAIN, D. ALFANO, J-F. BOUSSUGE <i>AIRBUS HELICOPTERS, FR - ISAE, FR - CERFACS, FR</i></p>	<p align="center">65</p> <p>Visually controlled helicopter: a control scheme for helicopter landing <u>Q.H. TRUONG</u>, T. RAKOTOMAMONJY, J-M. BIANNIC <i>ONERA, FR</i></p>	<p align="center">118</p> <p>Design of an Airworthy Turboshaft Engine Quick-Start System with Compact Pressurized Air Supply for Rotorcraft Application <u>M. KERLER</u>, C. SCHÄFFER, W. ERHARD, V. GÜMMER <i>Institute for Turbomachinery and Flight Propulsion, Technical University of Munich, DE</i></p>	<p align="center">36</p> <p>Weak Coupling Approach to Study the Effect of the Control System Flexibility on the Helicopter Dynamic Behavior <u>R. COISNON</u>, D. DELOFFRE, P. CRANGA, F. MALBURET <i>AIRBUS HELICOPTERS, FR - A&M ParisTech Aix, FR</i></p>
10:30	<p align="center">50</p> <p>Experiments on the Helicopter-Obstacle Aerodynamic Interference in Absence of External Wind <u>D. ZAGAGLIA</u>, G. GIBERTINI, M. GIUNI, R.B. GREEN <i>Politecnico di Milano, IT - University Glasgow, UK</i></p>	<p align="center">68</p> <p>Autorotation Maneuver Analysis of Main Rotor and Aircraft Flight from Engine Failure to Ground Contact <u>L. BINET</u>, J. N. MARTIN, C. BRACKBILL <i>ONERA, FR - AMRDEC, AED, US</i></p>	<p align="center">126</p> <p>Experimental and CFD analysis to assess the performance and optimize a low NOx combustor <u>G. COTTIN</u>, H. VERDIER <i>TURBOMECA, FR</i></p>	<p align="center">57</p> <p>Dynamic analysis of helicopter blades and rotor assemblies through advanced beam formulations <u>M. FILIPPI</u>, E. CARRERA <i>Politecnico di Torino, IT</i></p>
11:00	NETWORKING & REFRESHMENTS			
11:30	<p align="center">45</p> <p>A Dynamic Inflow-Based Induced Power Model for General and Optimal Rotor Performance <u>J. HONG</u>, D. A. PETERS - R.A. ORMISTON <i>Washington University in St Louis, US - AFDD, US</i></p>	<p align="center">93</p> <p>Control Optimization of Tiltrotor Aircraft Autorotation after One Engine Failure <u>R. CHEN</u>, X. YAN <i>Nanjing University Aeronautics & Astronautics, CN</i></p>	<p align="center">137</p> <p>The TURBOMECA spinning flame combustor concept to meet customer needs <u>N. SAVARY</u>, G. TALIERCIO <i>TURBOMECA, FR</i></p>	<p align="center">106</p> <p>Inverse Flight Dynamics Using Comprehensive Analysis for Unsteady Maneuver Loads Prediction <u>A. ABHISHEK</u>, R. PRASAD <i>IIT Kanpur, IN</i></p>
12:00	<p align="center">149</p> <p>Experimental and Computational Investigation on Different Rotor Blades with Spanwise Blowin <u>S. PLATZER</u>, J. RAULEDER, M. HAJEK, J. MILLUZZO <i>Technical University of Munich, DE - US</i></p>		<p align="center">125</p> <p>Prediction of unequal load sharing due to manufacturing errors and operational system deflections and its effect on gear dynamic excitation <u>Y. PARK</u>, J. TORRES <i>Romax Technology Ltd., UK</i></p>	<p align="center">156</p> <p>Use of the discrete vortex cylinder method when the loads calculating on helicopter unsteady rotation regimes <u>E. NIKOLAEV</u>, M. NIKOLAEVA <i>Kazan Helicopters, RU</i></p>
12:30	NETWORKING LUNCH			

DAY 3 - THURSDAY 8TH SEPTEMBER

	ROOM 1	ROOM 2	ROOM 3	ROOM 4	
H	AERODYNAMICS 8	AIRCRAFT DESIGN 2	ACOUSTICS 4	DYNAMICS 5	
Chair	P. BEAUMIER	L. BINET	R. MIRGAZOV	A. OKHONKO	
13:30	<p>90</p> <p>The HiPerTilt Project: Developing New Aerodynamics Methods Adapted for Tilt Rotor Aircraft <u>F. DEHAEZE</u>, C.B. ALLEN, G.N. BARAKOS Leonardo Helicopters, UK -University of Bristol, UK - University of Glasgow, UK</p>	<p>66</p> <p>CleanSky Green Rotorcraft New Technologies – Maximizing Noise And Emissions Benefits <u>J. STEVENS</u> - C. SMITH - L. THEVENOT - R. D’IPPOLITO - E. GIRES, A. CASTILLO PARDO, V. PACHIDIS NLR, NL - Leonardo Helicopters, UK - AIRBUS HELICOPTERS, FR - NOESIS Solutions NV, NL - Cranfield University, UK</p>	<p>62</p> <p>Acoustical methods towards accurate prediction of rotorcraft fuselage scattering <u>D. BIANCO</u>, M. BARBARINO, J. YIN, M. LUMMER, G. REBOUL, M. GENNARETTI, G. BERNARDINI, C. TESTA CIRA, IT - DLR, DE - ONERA, FR - Roma 3 University, IT - CNR-INSEAN, IT</p>	<p>145</p> <p>Detection and Control of Ground Resonance using Phase of Fuselage Attitude Rates <u>S. NAIR</u>, R. MOHAN IIT MADRAS, IN</p>	
14:00	<p>55</p> <p>Prediction of the propeller / ground interaction of an unmanned aerial vehicle in hover flight with a Lattice Boltzmann flow solver <u>N. GOURDAIN</u>, D. SINGH, T. JARDIN, S. PROTHIN ISAE-Supaero, FR</p>	<p>111bis</p> <p>Multicopter Coordinate Transformation for Orthogonal Control Modes of Regular Multicopters <u>R. NIEMIC</u>, F. GANDHI Rensselaer Polytechnic Institute, US</p>	<p>127</p> <p>Acoustic scattering experiments on spheres for studying helicopter noise scattering <u>J. YIN</u>, K-S. ROSSIGNOL, J. BULTÉ DLR, DE - ONERA, FR</p>	<p>159</p> <p>Studies on a Multi-functional Lead-lag Damper Electrical Energy Harvester Device based on the Smart Spring Concept <u>P. SCHOLLE</u>, F. NITZSCHE, W. G. VIEIRA, M. SINAPIUS Carleton University, CA - University Sao Paulo, BR, TU Braunschweig, DE</p>	
14:30		<p>142</p> <p>Estimation of interface loads by multi-body dynamics simulation/modeling and validation with flight test data <u>M. MINCIOTTI</u>, H. KÖNIG AIRBUS HELICOPTERS, DE</p>	<p>60</p> <p>Acoustic Liner Design for FENESTRON® Noise Reduction <u>R. PONGRATZ</u>, D. REDMANN AIRBUS Group, DE</p>	<p>88</p> <p>FXLMS vs Principal Components in On-Blade Control Applications <u>R. M. MORALES</u> University of Leicester, UK</p>	

DAY 3 - THURSDAY 8TH SEPTEMBER

	ROOM 1	ROOM 2	ROOM 3		
I	AERODYNAMICS 9	CYBERSECURITY	OPERATIONS 2		
Chair	D. ALFANO	P. SIG	B. DEMARET		
15:00	107 Numerical investigation of the flow separation on a helicopter rotor in dynamic stall configuration <u>F. RICHEZ</u> , B. ORTUN ONERA, FR	48 Cyber security threat on Airbus Helicopters products <u>M-C. MOURET</u> , S. CHOPART AIRBUS HELICOPTERS, FR	112 Determining Robust Control Methods for Coordinated UAVs in Varying Mission Environments <u>J. BANAS</u> , K.GRIENGLING, D.MAVRIS Georgia Institute of Technology, US		
15:30	83 Influence of a Back-Flow Flap on the Dynamic Stall Flow Topology <u>C. C. WOLF</u> , A. D. GARDNER, C. B. MERZ, S. OPTIZ DLR, DE	160 Security-Informed Safety Case: Helicopter Offshore Transport <u>J. CORREA DE SA</u> Freelancer, PT			
16:00	END OF ERF2016				