

Tuesday, 11th September 2007

Plenary Session in ECC Hall C

08:30-09:30 **Space Agencies Forum (Programmes)**

09:40 – 10:00	10:00 – 10:20	10:20 – 10:40	10:40 – 11:00
<b>Detecting and Characterising Aircraft Wake Vortices</b>			
Chair: F. Holzäpfel, DLR Oberpfaffenhofen, DE			
<b>CEAS-2007-001</b> <b>Acoustic Properties of Aircraft Wake Vortices</b> P. Böhning, Rolls-Royce Deutschland Ltd. & Co. KG, DE; U. Michel, German Aerospace Center, Institute of Propulsion Technology, DE	<b>CEAS-2007-002</b> <b>Comparison Between Arrival and Departure Wake Vortex Statistics Near the Ground</b> F.Y. Wang; S.M. Mackey; H. Wassaf; M. Soares; US DOT RITA Volpe National Transportation Systems Center, US	<b>CEAS-2007-003</b> <b>Ground-based and Air-Borne LIDAR for Wake Vortex Detection and Characterisation</b> A. Wiegele; S. Rahm; I. Smalikhov; German Aerospace Center (DLR), DE	<b>CEAS-2007-004</b> <b>Wake Vortex Data Collection and Analysis Using X-Band Radar</b> F. Barbaresco, THALES Air Systems, Surface Radar Business Line, Strategy Technology & Innovation, FR; A. Jeantet <sup>1</sup> ; U. Meier <sup>1</sup> ; <sup>1</sup> THALES Defence Deutschland GmbH, Land & Joint Business Line, DE

**STS**

**ECC Hall C**

11:20 – 11:40	11:40 – 12:00	12:00 – 12:20	12:20 – 12:40
<b>Controlling and Attenuating Wakes and Wake Encounters</b>			
Chair: S. Lang, Federal Aviation Administration, US			
<b>CEAS-2007-005</b> <b>Automated Pilot Assistance for Wake Vortex Encounters</b> C. Schwarz; K.-U. Hahn; DLR, DE	<b>CEAS-2007-006</b> <b>Wake Vortex Alleviation by Differential and Oscillating Flap Setting: A Comparative Numerical and Experimental Study</b> G. Voß; C. v. Carmer; R. Konrath; E. Stumpf; C.-P. Krückeberg; H. Meyer; H. Mattner; DLR, DE	<b>CEAS-2007-007</b> <b>Fundamental Vortex Phenomena: Instabilities and Interactions with Jets and Wakes</b> T. Schoenfeld <sup>1</sup> ; J.-F. Bousuge <sup>1</sup> ; S. Le Dizès <sup>2</sup> ; T. Leweke <sup>2</sup> ; <sup>1</sup> CERFACS, FR; <sup>2</sup> CNRS-IRPHE, FR	<b>CEAS-2007-008</b> <b>Wake Vortex Results from the Awiator Project</b> A.C. de Bruin, NLR, NL; G. Schrauf, Airbus, DE

**STS**

**ECC Hall C**

<b>Advanced Metallic Aerostructures</b>			
Chair: P. Horst, TU Braunschweig, DE			
<b>CEAS-2007-009</b> <b>Overview of WEL-AIR Project: Objectives and Achievements</b> D. Alléhaux <sup>1</sup> ; F. Palm <sup>1</sup> ; I. Bordesoules, ALCAN, FR; M. Kocak, GKSS, DE; E. Gratiot, Dassault Aviation, FR; G. Troiano, ALENIA, IT; <sup>1</sup> EADS IW, FR	<b>CEAS-2007-010</b> <b>Magnesium for Aerospace Applications</b> G. Khelifati, EADS Innovation Works, FR; E. Hombergmeier, EADS Deutschland GmbH, Innovation Works, DE	<b>CEAS-2007-011</b> <b>Potential Benefits of Integrally Stiffened Aircraft Structures</b> L.U. Hansen; S.M. Häusler; P. Horst; Inst. für Flugzeugbau und Leichtbau, TU Braunschweig, DE	<b>CEAS-2007-012</b> <b>Application of Fibre Metal Laminates to Aircraft Structures</b> F. Hashagen; K. Kalmer; Airbus, DE

**STS**

**ECC Hall D**

<b>Structures: Aeroelastics</b>			
Chair: H. Hönlinger, DLR Göttingen, DE			
<b>CEAS-2007-013</b> <b>Calculation of Unsteady Loads for the F/A-18 Vertical Tail Buffeting</b> M. Guillaume <sup>1</sup> ; J. Vos, CFS Engineering, CH; A. Gehri <sup>1</sup> ; B. Bucher <sup>1</sup> ; S. Merazzi <sup>2</sup> ; TH. Ludwig <sup>2</sup> ; <sup>1</sup> RUAG Aerospace, CH; <sup>2</sup> SMR SA, CH	<b>CEAS-2007-014</b> <b>Design and Analysis of an Aeroelastic Validation Experiment for Moving Flexible Airfoils</b> R. Unger <sup>1</sup> ; J. Kleinert <sup>1</sup> ; M.C. Haupt <sup>1</sup> ; P. Horst <sup>1</sup> ; J. Windte <sup>2</sup> ; S. Bansmer <sup>2</sup> ; C.J. Köhler <sup>2</sup> ; R. Radespiel <sup>2</sup> ; <sup>1</sup> TU Braunschweig, Institute of Aircraft Design and Lightweight Structures, DE; <sup>2</sup> TU Braunschweig, Institute of Fluid Mechanics, DE	<b>CEAS-2007-015</b> <b>Aeroelastische Untersuchungen an nachgiebigen Tragflächen</b> G. Thwapiah; L.F. Campanile; Eidgenössische Materialprüfungs- und Forschungsanstalt (EMPA), CH	<b>CEAS-2007-016</b> <b>New Aerodynamic Modelling for Aeroelasticity in an Industrial Environment</b> N. Forestier, Dassault-Aviation, FR; L. Daumas <sup>1</sup> ; T. Fanion <sup>1</sup> ; Z. Johan <sup>1</sup> ; <sup>1</sup> Dassault Aviation, FR

**ECC Hall D**

<b>Flight Guidance and Control: UAV Formation Flight &amp; Refueling</b>			
Chair: J. Wildi, RUAG Aerospace, CH			
<b>CEAS-2007-017</b> <b>PAZLAT - An Unmanned Aerial Refueling System</b> R. Avraham; R. Givoni; S. Elitzur; C. Haddad; G. Katz; S. Mironov; V. Niyazov; M. Pustilnik; J. Rosenthal; D. Weinstein; B. Landkof; Technion, Faculty of Aerospace Engineering, IL	<b>CEAS-2007-018</b> <b>Control Laws for UAV Formation Flying</b> M. Chiaramonti; G. Mengali; University of Pisa, Department of Aerospace Engineering, IT	<b>CEAS-2007-019</b> <b>Fuel Consumption Reduction for Unmanned Air Vehicles by Preplanned Formation Flights Using Mixed Integer Programming</b> T. Kopfstedt; J.W. Vervoort; Diehl BGT Defence GmbH & Co. KG, DE	<b>CEAS-2007-020</b> <b>Flight Test Validation of Modeling for Aerial Refuelling</b> J. Beck <sup>1</sup> ; O. Heller, Eurocopter, FR; E. Özger <sup>1</sup> ; <sup>1</sup> EADS Deutschland GmbH, Military Air Systems, DE

**Estrelsaal B**


<b>HMI - Displays</b>			
Chair: V. Gollnick, German Aerospace Centre, DLR, DE			
<b>CEAS-2007-021</b> <b>A System of Optimizing the Human-Machine Interface at Aircraft</b> C.J. Szczepanski, Telecommunications Research Institute, PL	<b>CEAS-2007-022</b> <b>Simulation and Optimisation of Cockpit Display Visibility</b> D.D. Dreyer, EADS Innovation Works, DE	<b>CEAS-2007-023</b> <b>Enhanced Airport Situational Awareness by Airport Moving Map and Electronic Pre-Flight Information Bulletin</b> C. Vernaleken; C. Urvoy; K. Koch; U. Klingauf; Technische Universität Darmstadt, DE	<b>CEAS-2007-024</b> <b>The New Tornado Mission Support System in the Context of Network Centric Operations</b> G. Gorgon; M. Kranich; EADS Deutschland GmbH/Military Air Systems, DE

**Estrelsaal B**

08:30-09:30 **Space Agencies Forum (Programmes)**

09:40 – 10:00	10:00 – 10:20	10:20 – 10:40	10:40 – 11:00	11:20 – 11:40	11:40 – 12:00	12:00 – 12:20	12:20 – 12:40	
<b>Aerodynamics Aero-Engine Components</b> Chair: H. Knittel, MTU Aero Engines, DE ECC Room 2				<b>Space Propulsion I</b> Chair: O. Haidn, DLR Lampoldshausen, DE ECC Room 2				
<b>CEAS-2007-449</b> <b>Numerical Simulation of Mixed Jet Exhaust System and its Verification</b> J.A. Lieser; B. Deinert; C. Möller; F. Müller; Rolls-Royce Deutschland Ltd. & Co. KG, DE	<b>CEAS-2007-026</b> <b>Combustor Liner Temperature Prediction: A Preliminary Tool Development and Its Application on Effusion Cooling Systems</b> A. Ceccherini <sup>1</sup> ; A. Andreini <sup>1</sup> ; C. Carcasci <sup>1</sup> ; B. Facchini <sup>1</sup> ; M. Surace <sup>1</sup> ; D. Coutandin <sup>2</sup> ; S. Gori <sup>2</sup> ; A. Peschiulli <sup>1</sup> ; <sup>1</sup> Dipartimento di Energetica "Sergio Stecco", IT; <sup>2</sup> Avio S.P.A., IT	<b>CEAS-2007-027</b> <b>Determination of Aerodynamic Damping from Axial-Compressor-Blades Using a Bidirectional Fluid-Structure-Simulation</b> A. Kühhorn; S. Schrape; J. Nipkau; Brandenburg University of Technology, Structural Mechanics and Vehicle Vibrational Technology, DE	<b>CEAS-2007-451</b> <b>Thrust Reverser Aerodynamic Design: CFD Analysis and Comparison with Experiments</b> C. Mundt <sup>1</sup> ; D. Kliche <sup>1</sup> ; R. Spieweg <sup>2</sup> ; R. Schweikhard <sup>2</sup> ; <sup>1</sup> Universität der Bundeswehr München, DE; <sup>2</sup> Rolls-Royce Deutschland Ltd. & Co. KG, DE	<b>CEAS-2007-029</b> <b>An Experimental Study on the Base Flow Plume Interaction of Booster Configurations</b> A. Henckels; A. Gülhan; D. Neeb; DLR, DE	<b>CEAS-2007-030</b> <b>Experimental Investigation of Coking Characteristics of Kerosene Jet A-1 with Respect to Practical Applications</b> J. Meinert, TU Dresden, Institute of Thermodynamics and Building Energy Systems, DE	<b>CEAS-2007-031</b> <b>Comparison between Supercritical Combustion Modelling for LO2-CH4 Rocket Engines at 15MPa Using Real and Ideal Gas Properties</b> A. Minotti; C. Bruno; University of Rome La Sapienza, IT	<b>CEAS-2007-032</b> <b>Preliminary Characterisation of Solar Sailing Materials</b> C.O.A. Semprinoschnig; A.W. Polsak; S. Heltzel; M. Gaud; ESA, NL	
<b>Space Systems-Programmatic Aspects</b> Chair: K. Brieß, TU Berlin, DE ECC Room 3				<b>Launcher Technologies I</b> Chair: P. Vits, Astrium Space Transportation, DE ECC Room 3				
<b>CEAS-2007-033</b> <b>Aligning Strategy with Capabilities: Towards a European Space Research Community</b> A. Boese, DLR, DE	<b>CEAS-2007-034</b> <b>The On-Orbit-Verification-Programme of the German Space Agency</b> P. Willemsen, German Aerospace Center - Space Agency, DE; M. Turk <sup>1</sup> ; R. Dittmann <sup>1</sup> ; <sup>1</sup> German Aerospace Center - Space Agency, DE	<b>CEAS-2007-035</b> <b>New Cooperation Methods between Industry and Academia: The Research Training Group (Graduiertenkolleg) - "Aspects of Future Satellite Reconnaissance Missions"</b> S. Fasoulas <sup>1</sup> ; K. Janschek, TU Dresden, Institut für Automatisierungstechnik, DE; K. Schönherr <sup>2</sup> ; G. Willich <sup>2</sup> ; A. Weber <sup>1</sup> ; <sup>1</sup> TU Dresden, Institut für Luft- und Raumfahrttechnik, DE; <sup>2</sup> EADS Astrium GmbH, DE	<b>CEAS-2007-036</b> <b>The Soyuz at the Guiana Space Centre Programme</b> H. Arend <sup>1</sup> ; D. Coulon <sup>1</sup> ; D. Crowther <sup>1</sup> ; J. Donadel <sup>1</sup> ; E. Lefort <sup>1</sup> ; J. Pascual <sup>1</sup> ; N. Pottier <sup>1</sup> ; J.-M. Astorg, CNES, FR; B. Gérard, Arianespace, FR; <sup>1</sup> ESA, FR	<b>CEAS-2007-037</b> <b>Enabling Technologies for the Next Generation Reignitable Cryogenic Upper Stage</b> M. Müller; J. Krüger; EADS Astrium, DE	<b>CEAS-2007-038</b> <b>PRORA-USV: the First Dropped Transonic Flight Test</b> G. Russo, CIRA, IT	<b>CEAS-2007-039</b> <b>Trends in the Use of Solid Rocket Motors and Effects on the Space Debris Environment</b> S. Stabroth <sup>1</sup> ; C. Wiedemann <sup>1</sup> ; P. Vörsmann <sup>1</sup> ; M. Oswald, Astrium GmbH, DE; H. Krag <sup>2</sup> ; H. Klinkrad <sup>2</sup> ; <sup>1</sup> Institute of Aerospace Systems, TU Braunschweig, DE; <sup>2</sup> Space Debris Office, ESA/ESOC, DE	<b>CEAS-2007-040</b> <b>TICTAC - Technology of Insert Conductive Thermally and Attenuator of Shock</b> S. Laborde, EADS ASTRIUM, FR; L. Mallet, SMAC, FR; R. Redondo, CNES, FR	
<b>Young Professional Conference I</b> Chair: U. Apel, Hochschule Bremen, DE ECC Room 1				<b>Young Professional Conference II</b> Chair: R. Henke, RWTH Aachen, DE ECC Room 1				
<b>CEAS-2007-041</b> <b>An Overview of the TU-Berlin UAV Student Project IFSys</b> F. Schindler; R. Luckner; Technical University of Berlin, DE	<b>CEAS-2007-042</b> <b>Maximierung der Nutzlastkapazität eines Modellflugzeugs und Teilnahme an der Air Cargo Challenge 2007</b> C. Kauer; C. Rößler, Akademische Modellfluggruppe München, DE  <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Presentation in German</div>	<b>CEAS-2007-043</b> <b>The Integrated Flapping Wing - Trying out a New Concept</b> K.-H. Helling, Modellflugclub Rossendorf e.V., DE	<b>CEAS-2007-044</b> <b>Luftbilder aus dem Modellflugzeug - Einsatzmöglichkeiten für landwirtschaftliche Nutzflächen</b> T. Elle; M. Klein; Modellflugclub Rossendorf e.V., DE  <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Presentation in German</div>	<b>CEAS-2007-045</b> <b>Design of a Monolithic VTP Leading Edge on Airbus Single Aisle Airplanes</b> S. Yammine, Université Toulouse/FH Aachen, DE	<b>CEAS-2007-046</b> <b>Extended Error State Modelling for Strapdown-INS-Systems</b> M. Becker, Technical University of Braunschweig, DE	<b>CEAS-2007-048</b> <b>Application of Multi-Objective Optimisation to Variable Stator Vane Schedule Improvement</b> P. Hecker, Brandenburg University of Technology Cottbus, DE	<b>CEAS-2007-049</b> <b>Untersuchungen zum anatomischen Aufbau eines Flugsaurierflugapparates aufgrund aerodynamischer, aeroelastischer und flugmechanischer Analysen</b> W. Krüger, DLR Göttingen  <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">Presentation in German</div>	

08:30-09:30 **Space Agencies Forum (Programmes)**

09:40 – 10:00	10:00 – 10:20	10:20 – 10:40	10:40 – 11:00
<b>Korean Session</b> Chair: R. Henke, RWTH Aachen, DE  <b>Room Paris</b>			
<b>CEAS-2007-049</b> <b>Korean Aerospace Industry and T-50 Advanced Trainer</b> A. Jun, Korea Aerospace Industries, KR	<b>CEAS-2007-050</b> <b>Satellite Development Status of Korea</b> J.J. Lee; J.J. Rhiu; J.M. Choi; Korea Aerospace Research Institute, KR	<b>CEAS-2007-051</b> <b>Supersonic Combustion in Ram Accelerator and Scramjet Engine Combustor</b> I.-S. Jeung, Seoul National University, Department of Aerospace Engineering, KR; J.-Y. Choi, Pusan National University, Department of Aerospace Engineering, KR	<b>CEAS-2007-052</b> <b>Development and Simulation of Nonlinear Aeroelastic Analysis System for Advanced Transonic Aircrafts</b> I. Lee; J.-Y. Kim; K.-S. Kim; Korea Advanced Institute of Science and Technology, KR

11:20 – 11:40	11:40 – 12:00	12:00 – 12:20	12:20 – 12:40
<b>Advanced Aero-Engine Concepts</b> Chair: I. Dubois, Snecma, FR <b>Room Paris</b>			
<b>CEAS-2007-053</b> <b>Toward ACARE 2020: Innovative Engine Architectures to Achieve the Environmental Goals?</b> S. Dron, Snecma, FR	<b>CEAS-2007-054</b> <b>The Geared Turbofan Technology - Opportunities, Challenges and Readiness Status</b> C. Riegler; C. Bichlmaier; MTU Aero Engines GmbH, DE	<b>CEAS-2007-055</b> <b>Active Core Technology within the NEWAC Research Program for Cleaner and More Efficient Aero Engines</b> J. Sieber; S. Bock; W. Horn; G. Wilfert; MTU Aero Engines, DE	<b>CEAS-2007-056</b> <b>Nacelle Lines for Small Next Generation Engines</b> R. Schweikhard; J.A. Lieser; Rolls-Royce Deutschland, DE

<b>Structures: Turbo Machines</b> Chair: C. Galinski, University Warsaw of Technology, PL <b>Estrelsaal A</b>			
<b>CEAS-2007-057</b> <b>Damping of a Compressor Vane Cluster</b> A. Hartung; U. Retze; MTU Aero Engines GmbH, DE	<b>CEAS-2007-058</b> <b>Influence of Air Flow on Blisk Vibration Behavior</b> B. Beirow; A. Kühorn; S. Schrape; Brandenburg University of Technology, Chair of Structural Mechanics and Vehicle Vibration Technology, DE	<b>CEAS-2007-059</b> <b>Advanced Coatings for Rotating Aero Engine Components</b> M. Peters <sup>1</sup> ; U. Schulz <sup>1</sup> ; B. Saruhan <sup>1</sup> ; M. Fröhlich <sup>1</sup> ; R. Braun <sup>1</sup> ; A. Flores Renteria <sup>2</sup> ; C. Leyens <sup>2</sup> ; <sup>1</sup> DLR, DE; <sup>2</sup> Technical University of Brandenburg, DE	<b>CEAS-2007-060</b> <b>Filament Winding Technology – Example of an Integral Engine Nose Cone</b> O. Lenk <sup>1</sup> ; M. Dieling <sup>1</sup> ; R. Grothaus, East-4D Carbon Technology GmbH, DE; <sup>1</sup> Rolls-Royce Deutschland, DE

<b>Structures - CF Manufacturing</b> Chair: J.F.M. Wiggendaad, National Aerospace Laboratory NLR, NL <b>Estrelsaal A</b>			
<b>CEAS-2007-061</b> <b>New Fibre Reinforced Ceramics - A Technology Driver for New Products</b> H. Voggenreiter; B. Heidenreich; J. Göring; German Aerospace Center (DLR), DE	<b>CEAS-2007-062</b> <b>Innovative Manufacture of Aerospace Structural Composites Applying the out of Autoclave Quickstep Process</b> C. Weimer, Eurocopter Deutschland GmbH, DE; M. Kaiser <sup>1</sup> ; C. Garschke <sup>2</sup> ; B. Fox <sup>2</sup> ; K. Drechsler <sup>1</sup> ; <sup>1</sup> Institut für Flugzeugbau - Universität Stuttgart, DE; <sup>2</sup> Deakin University Geelong, AU	<b>CEAS-2007-063</b> <b>Electromagnetic Assisted Manufacturing of Carbon Fiber Reinforced Plastics</b> M. Podkorytov <sup>1</sup> ; T. Stroehlein <sup>1</sup> ; M. Frauenhofer <sup>2</sup> ; M. Meyer <sup>1</sup> ; L. Herbeck <sup>1</sup> ; K. Dilger <sup>2</sup> ; <sup>1</sup> Deutsches Zentrum für Luft- und Raumfahrt e.V., DE; <sup>2</sup> Technical University Braunschweig, DE	<b>CEAS-2007-064</b> <b>Combined Prepreg and Infusion Technology - Integrated CFRP Primary Structural Components</b> R. Kaps <sup>1</sup> ; L. Herbeck <sup>1</sup> ; A. Herrmann, Composites Technology Center (CTC), DE; <sup>1</sup> German Aerospace Center, Institute of Composite Structures and Adaptive Systems, DE

<b>History</b> Chair: W. Heinzerling, DE <b>ECC Room 4</b>			
<b>CEAS-2007-065</b> <b>Historical Review and Analysis of Santos Dumont S 14-BIS</b> P. Greco; F. Catalano; Aerodynamic Laboratory/University of Sao Paulo/EESC-USP, BR	<b>CEAS-2007-066</b> <b>Statistical Investigations about Pioneers of Rocketry and Space Travel</b> D.B. Herrmann, Leibnitz-Sozietät der Wissenschaften zu Berlin e.V., DE	<b>CEAS-2007-067</b> <b>Albatros- und Heinkel-Flugzeuge bei der Fliegerschule der Reichswehr in Lipetz</b> P. Korrell, DE  <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: auto;">Presentation in German</div>	<b>CEAS-2007-068</b> <b>Sind die Flügel von Raffaels Amor in seiner Freske "Die drei Grazien" hochgeschwindigkeitstauglich?</b> H.-U. Meier, TU Clausthal, DE  <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: auto;">Presentation in German</div>

<b>Aerospace communications</b> Chair: T. Wittig, Euro Telematik, DE <b>ECC Room 4</b>			
<b>CEAS-2007-069</b> <b>Broadband Communications for Aeronautical Networks: The ATENAA Outer Optical Link Validation</b> C. Fuchs <sup>1</sup> ; H. Henniger <sup>1</sup> ; B. Epple <sup>1</sup> ; D. Giggenbach <sup>1</sup> ; M. Amirfeiz <sup>2</sup> ; M. Jentile <sup>2</sup> ; G. Di Nepi <sup>2</sup> ; F. Mazzi <sup>3</sup> ; G. Martini <sup>3</sup> ; <sup>1</sup> German Aerospace Center (DLR), DE; <sup>2</sup> Selex Communications, IT; <sup>3</sup> INSIS S.p.A., IT	<b>CEAS-2007-070</b> <b>A Comparison of Estimation Methods for the VHF Voice Radio Channel</b> M. Gruber, Graz University of Applied Sciences, AT; K. Hofbauer, Graz University of Technology, AT	<b>CEAS-2007-071</b> <b>The SANTANA Project</b> A. Geise <sup>1</sup> ; A.F. Jacob <sup>1</sup> ; K. Kuhlmann <sup>1</sup> ; H. Pawlak <sup>1</sup> ; R. Gieron <sup>2</sup> ; P. Siatchoua <sup>2</sup> ; D. Lohmann <sup>2</sup> ; S. Holzwarth <sup>2</sup> ; O. Litschke <sup>2</sup> ; M. Heckler <sup>3</sup> ; L. Greda <sup>3</sup> ; <sup>1</sup> TU Hamburg-Harburg, Institut für Hochfrequenztechnik, DE; <sup>2</sup> IMST GmbH, DE; <sup>3</sup> DLR, Institut für Kommunikation und Navigation, DE	<b>CEAS-2007-072</b> <b>B-AMC – Aeronautical Broadband Communication in the L-band</b> M. Ehammer <sup>1</sup> ; T. Gräupl <sup>1</sup> ; C.H. Rokitansky <sup>1</sup> ; M. Schnell <sup>2</sup> ; S. Brandes <sup>2</sup> ; S. Gligorevic <sup>2</sup> ; C. Rihacek <sup>3</sup> ; M. Sajatovic <sup>3</sup> ; <sup>1</sup> University of Salzburg, AT; <sup>2</sup> German Aerospace Center (DLR), DE; <sup>3</sup> Frequentis GmbH, AT

Tuesday, 11th September 2007

Plenary Session in ECC Hall C

08:30-09:30 **Space Agencies Forum (Programmes)**

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**Mechanical Architecture, Design and Engineering 1**  
Chair: H. Baier, TU München, DE

SSMMT

Estrelsaal C1

<p><b>CEAS-2007-073</b> <b>Deployment Analysis of Solar Arrays and Model Correlation</b> G. Ladurée; A. Carpine; Thales Alenia Space, FR</p>	<p><b>CEAS-2007-074</b> <b>The Influence of Load and Deformation on the Fracture Behavior of Specimens and Structures</b> G. Schullerer; M. Windisch; MT Aerospace AG, DE</p>	<p><b>CEAS-2007-075</b> <b>Functional Membranes – A Basis for Satellite Architectures of the Future</b> H. Baier; L. Datshvili; S. Rapp; TU Muenchen, DE</p>	<p><b>CEAS-2007-076</b> <b>Efficient Mechanism Simulation for Solar Array Deployment Analysis</b> B. Specht, EADS ASTRIUM, DE</p>
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**Inflatable / Deployable Structures 1**  
Chair: J. Block, DLR Braunschweig, DE

SSMMT

Estrelsaal C1

<p><b>CEAS-2007-077</b> <b>Slotted Thin Shell Deployable Reflectors</b> L.T. Tan, University College London, Department of Civil &amp; Environmental Engineering, GB</p>	<p><b>CEAS-2007-078</b> <b>Self-deploying Structures and Polymer Materials with Shape Memory</b> G.A. Pavlov, IPCP RAS, RU</p>	<p><b>CEAS-2007-079</b> <b>The Innovative Deorbiting Aerobrake System "IDEAS": The Gossamer Technology for Micro-Satellite Deorbiting</b> B. Santerre<sup>1</sup>; O. Le Couis<sup>1</sup>; C. Dupuy, CNES, FR; <sup>1</sup>EADS Astrium, FR</p>	<p><b>CEAS-2007-080</b> <b>Pressure Restraint Design for Inflatable Space Habitats</b> M. de Jong, Thin Red Line Aerospace Ltd., CA; A. Lennon, ABL Engineering Ltd., IE</p>
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**Random Vibration and Acoustics 1**  
Chair: J. Wijker, Dutch Space BV, NL

SSMMT

Estrelsaal C3

<p><b>CEAS-2007-081</b> <b>Vibro-Acoustic Study of Corot: Analysis and Test Correlation</b> R. Redondo; A. Pradines; CNES, FR</p>	<p><b>CEAS-2007-083</b> <b>Simulation of a Spacecraft Acoustic Test by Hybrid FE-SEA Method: Application to the CALIPSO Spacecraft and Comparison with Experimental Data</b> R. Knockaert, Thales Alenia Space, FR; S. Frikha, ESI Group, FR; V. Cotoni, ESI-US R&amp;D, US</p>	<p><b>CEAS-2007-084</b> <b>Herschel SVM STM Vibro-Acoustic Test / Prediction Comparison</b> L. Trittoni; P.C. Marucchi-Chierro; Thales Alenia Space Italia, IT</p>
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**Random Vibration and Acoustics 2**  
Chair: M. Link, Universität Kassel, DE

SSMMT

Estrelsaal C3

<p><b>CEAS-2007-085</b> <b>Introduction of JAXA Tool for Random Vibrations Prediction and Its Recent Upgrading</b> Q. Shi; S. Ando; M. Tsuchihashi; M. Saitoh; JAXA, JP</p>	<p><b>CEAS-2007-086</b> <b>Vibration Response of Spacecraft Under Fill Effect</b> S. Ando; Q. Shi; M. Tsuchihashi; Japan Aerospace Exploration Agency (JAXA), JP</p>	<p><b>CEAS-2007-087</b> <b>Level Homogeneity Versus Frequency in a Reverberant Chamber</b> E. Cavro; A. Girard; Intespace, FR</p>	<p><b>CEAS-2007-088</b> <b>Insights into the Equipment Random Vibration Environment Based on Simulations of an Acoustic Test Bench</b> B.J. Brevart, Thales Alenia Space, FR; A. Pradines, CNES, FR</p>
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**Short Course 1**  
Chair: TBD

ECC Room 5

**Short Course 2**  
Chair: TBD

ECC Room 5

**Short Course Aircraft Design**  
Details are be published on [www.ceas2007.org](http://www.ceas2007.org)

**Tuesday, 11th September 2007**

Plenary Session in **ECC Hall C**

14:00-15:00 **Airbus A380 Forum**  
*Speaker: R. Lafontan, Airbus, FR*

Chair: J. Szodruich, DLR Köln, DE

15:10 – 15:30	15:30 – 15:50	15:50 – 16:10	16:10 – 16:30	16:50 – 17:10	17:10 – 17:30	17:30 – 17:50	17:50 – 18:10
<b>Air Transport and Environment</b> Chair: J. König, Airbus, DE <span style="float: right;"><b>ECC Hall C</b></span>				<b>SESAR</b> Chair: T. Mühlhausen, DLR Braunschweig, DE <span style="float: right;"><b>STS</b> <b>ECC Hall C</b></span>			
<b>CEAS-2007-089</b> <b>Aviation and Climate Change: A Comparison of the Overflights of the Belgian Territory and the Local Aviation Activities</b> J. Matheys <sup>1</sup> ; T. Festraets <sup>2</sup> ; J. Van Mierlo <sup>1</sup> ; C. Macharis <sup>2</sup> ; N. Sergeant <sup>1</sup> ; J.-M. Timmermans <sup>1</sup> ; <sup>1</sup> Vrije Universiteit Brussel - ETEC, BE; <sup>2</sup> Vrije Universiteit Brussel - MOSI-T, BE	<b>CEAS-2007-090</b> <b>The Variability of Air Transport Specific CO2 Emissions and its Implications for Airline Strategies</b> M. R. Schaefer; W. Grimme; German Aerospace Center (DLR), DE	<b>CEAS-2007-091</b> <b>Investigations of Atmospheric Conditions in Fluids on Sonic Boom</b> S. Chernyshev; A.P. Kiselev; P.P. Vorotnikov; Central Aerohydrodynamic Institute n.a. Prof. N.E. Zhukovskiy, RU	<b>CEAS-2007-092</b> <i>Reinhardt Abraham - Lufthansa-Foundation-Award for his studies thesis with the topic:</i> <b>Preliminary Design of a Simulation Tool to Ascertain the Potential Economic Impact of Airplane Noise Reduction Measures</b> E. Anton, RWTH Aachen, DE	<b>CEAS-2007-093</b> <b>The Concept of Operations for the Future European Air Traffic Management System Being Defined by SESAR</b> S. Reed; J.R.F. Guy; Air Traffic Alliance, FR	<b>CEAS-2007-094</b> <b>An Airport's View on the SESAR Operational Concept</b> M. Huhnold, Fraport AG, DE	<b>CEAS-2007-095</b> <b>DFS Deutsche Flugsicherung GmbH Aligning Their Research &amp; Development Needs for the Single European Sky Air Traffic Management Research Programme (SESAR)</b> T. Bierwagen, DFS Deutsche Flugsicherung GmbH, DE	<b>CEAS-2007-096</b> <b>European Research Center Position and Contribution in European R&amp;D for Single European Sky Air Traffic Management Research Programme (SESAR)</b> K.-H. Keller, German Aerospace Center (DLR), DE
<b>Air Data and Navigation Sensor Systems</b> Chair: H. von Viebahn, Diehl Aerospace, DE <span style="float: right;"><b>ECC Hall D</b></span>				<b>Flow Simulation and Validation</b> Chair: T. Schönfeld, CERFACS, FR <span style="float: right;"><b>STS</b> <b>ECC Hall D</b></span>			
<b>CEAS-2007-097</b> <b>A Precision, Time-Relative GPS Approach for Measuring Kinematic Trajectories Using Miniaturized L1 GPS Receivers</b> J.P. Traugott <sup>1</sup> ; O. Montenbruck, DLR, DE; G. Sachs <sup>1</sup> ; <sup>1</sup> Technische Universität München, DE	<b>CEAS-2007-098</b> <b>Design and Implementation of an Integrated Wind-/Airdata- and Navigation System Based on Low-Cost Sensor Components</b> S. Myszchik, IABG mbh, DE; G. Sachs, Technische Universität München, DE	<b>CEAS-2007-099</b> <b>Angles of Attack and Sideslip Reconstruction Using Neural Networks</b> V. Poggi; A. Calia; F. Schettini; University of Pisa, Department of Aerospace Engineering, IT	<b>CEAS-2007-100</b> <i>Zeppelin-Foundation-Award of the City Friedrichshafen for his diploma thesis with the topic:</i> <b>Development of a Microcontroller Based Sensor Acquisition System for Uninhabited Aerial Vehicles</b> D. Höse, UniBw München, DE	<b>CEAS-2007-101</b> <b>QNET-CFD Knowledge-Base - A Platform for the Preservation of Knowledge Generated by EU Funded Projects</b> J. Vos, CFS Engineering, CH; A.G. Hutton, QinetiQ, GB; Ch. Hirsch, NUMECA, BE	<b>CEAS-2007-102</b> <b>Reynolds Number Effects on Blunt Leading Edge Delta Wings</b> S. Crippa; A. Rizzi; KTH, Dept. of Aeronautical and Vehicle Engineering, SE	<b>CEAS-2007-103</b> <b>Inlet Boundary Conditions for Embedded LES</b> L. Davidson, Chalmers University of Technology, SE	<b>CEAS-2007-104</b> <b>CFD Validation of Unsteady Installed Propeller Flows Using the DLR TAU-Code</b> A. Stuermer, DLR, DE
<b>Numerical Simulation</b> Chair: C. Rossow, DLR Braunschweig, DE <span style="float: right;"><b>STS</b> <b>Estrelsaal B</b></span>				<b>Flight Control - Functions and Control Laws</b> Chair: S. Levedag, DLR Braunschweig, DE <span style="float: right;"><b>Estrelsaal B</b></span>			
<b>CEAS-2007-105</b> <b>Future Simulation Concept</b> J. Klenner <sup>1</sup> ; K. Becker <sup>1</sup> ; M. Cross <sup>1</sup> ; N. Kroll, DLR, DE; <sup>1</sup> Airbus, FR	<b>CEAS-2007-106</b> <b>Future Simulation Technology Centers in Europe</b> K. Becker, Airbus, DE	<b>CEAS-2007-107</b> <b>Challenges for Development of Numerical Simulation</b> N. Kroll, DLR Braunschweig, DE	<b>CEAS-2007-108</b> <b>Future Design Concept</b> M. Cross; M. Aston; Airbus, GB	<b>CEAS-2007-109</b> <b>Nonlinear Flight-Path Control - A Flight Dynamics Perspective</b> F. Holzapfel, IABG mbh, DE; L. Höcht <sup>1</sup> ; F. Schuck <sup>1</sup> ; G. Sachs <sup>1</sup> ; <sup>1</sup> Lehrstuhl für Flugmechanik und Flugregelung, TU München, DE	<b>CEAS-2007-110</b> <b>Advanced Gust Load Alleviation System for Large Flexible Aircraft</b> S. Hecker, German Aerospace Center, Institute of Robotics and Mechatronics, DE; K.-U. Klaus-Uwe Hahn, German Aerospace Center, Institute of Flight Systems, DE	<b>CEAS-2007-111</b> <b>Direct Force Control Using Brake Flaps for Improving Flight Path Control</b> G. Sachs, Institute of Flight Mechanics and Flight Control of TU München, DE	<b>CEAS-2007-112</b> <b>Aircrafts Control Systems Design: An H<sub>∞</sub> Loop-Shaping Approach</b> R. Panesi; G. Mengali; University of Pisa, IT

**Tuesday, 11th September 2007**

Plenary Session in **ECC Hall C**

14:00-15:00 **Airbus A380 Forum**  
*Speaker: R. Lafontan, Airbus, FR*

Chair: J. Szodrich, DLR Köln, DE

15:10 – 15:30	15:30 – 15:50	15:50 – 16:10	16:10 – 16:30	16:50 – 17:10	17:10 – 17:30	17:30 – 17:50	17:50 – 18:10
<b>Aerodynamics 1</b> Chair: H. Rosemann, DLR Göttingen, DE <b>ECC Room 2</b>				<b>Optimisation of Aerodynamic Aircraft Configurations</b> Chair: C. Breitsamter, TU München, DE <b>ECC Room 2</b>			
<b>CEAS-2007-113</b> <b>Further Investigation on Vortex Turbulent Characteristics in Pattern Transition of a SFRJ Simulator</b> S.C. Lee, Yung Ta Institute of Technology and Commerce, TW	<b>CEAS-2007-114</b> <b>Active Flow Control on the Simplified Flapped Airfoil</b> M. Matejka <sup>1</sup> ; N. Souckova <sup>1</sup> ; L. Popelka, Academy of Science of the Czech Republic, Institute of Thermomechanics, CZ; J. Nozicka <sup>1</sup> ; <sup>1</sup> CTU in Prague, FME, CZ	<b>CEAS-2007-115</b> <b>Numerical Investigation of Upstream Moving Wave Phenomenon in Unsteady Transonic Airfoil Flow</b> V. Hermes, ShockWaveLaboratory/RWTH-Aachen University, DE; I. Klioutchnikov <sup>1</sup> ; A. Alshabu <sup>1</sup> ; H. Olivier <sup>1</sup> ; <sup>1</sup> ShockWaveLaboratory, DE	<b>CEAS-2007-116</b> <b>Steady Longitudinal Vortices in Separated Turbulent Flows</b> E. Schülein, DLR, DE; V. Trofimov, NSPU, RU	<b>CEAS-2007-117</b> <b>Towards Aerodynamic Design by Optimisation of Transonic Transport Aircraft in a Multi-Disciplinary Environment</b> G. Carrier; S. Mouton; M. Marcelet; C. Blondeau; ONERA, FR	<b>CEAS-2007-118</b> <b>Multi-Objective Optimisation of Aircraft Range and Fuel Consumption</b> W.J. Vankan; E. Kesseler; M. Laban; National Aerospace Laboratory NLR, Aerospace Vehicle Division, NL	<b>CEAS-2007-119</b> <b>VEGA RACS Waterhammer Analysis</b> F. Dengra Moya, HE Space Operations, DE; M. Gralher <sup>1</sup> ; B. Behrens <sup>1</sup> ; <sup>1</sup> Astrium ST, DE	<b>CEAS-2007-120</b> <b>Next Generation Missile Aerodynamic Visualisation with CFD</b> K. Weinand; D. Stern; MBDA LFK, DE  <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">Presentation in German</div>
<b>Planetary Exploration</b> Chair: H.-J. Heidmann, Astrium ST, DE <b>ECC Room 3</b>				<b>New Space Missions</b> Chair: P. Hofmann, Kayser-Threde, DE <b>ECC Room 3</b>			
<b>CEAS-2007-121</b> <b>The Radio Science Experiment "VeRa" Onboard ESA's Venus Express Spacecraft</b> R. Mattei <sup>1</sup> ; B. Häusler <sup>1</sup> ; M. Pätzold <sup>2</sup> ; S. Remus, VEGA, DE; W. Eidel <sup>1</sup> ; S. Tellmann <sup>2</sup> ; T. Andert <sup>1</sup> ; J. Selle <sup>1</sup> ; M.K. Bird, Argelander - Institut für Astronomie, Universität Bonn, DE; R.H. Simpson <sup>3</sup> ; G.L. Tylor <sup>3</sup> ; <sup>1</sup> Institut für Raumfahrttechnik, UniBw, DE; <sup>2</sup> Rheinisches Institut für Umweltforschung, Universität Köln, DE; <sup>3</sup> Department of Electrical Engineering, Stanford University, US	<b>CEAS-2007-122</b> <b>The Stuttgart Moon Orbiter LUNAR MISSION BW1</b> R. Laufer; H.-P. Roeser; Stuttgart University, Institute of Space Systems (IRS), DE	<b>CEAS-2007-123</b> <b>Regenerative Fuel Cells for Mars Applications</b> M. Hörenz, TU Dresden, Institute for Aerospace Engineering, DE; S. Fasoulas <sup>1</sup> ; T. Schmiel <sup>1</sup> ; K. Zajac <sup>1</sup> ; <sup>1</sup> TU Dresden, Institute for Aerospace Engineering, DE	<b>CEAS-2007-124</b> <b>Probenpräparation, Probenhandlung und Nutzlastaspekte für die Europäische ExoMars Mission</b> P. Hofmann, Kayser-Threde GmbH, DE  <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">Presentation in German</div>	<b>CEAS-2007-125</b> <b>Lunar Infrastructure for Exploration - European Roadmap and Reference Concept</b> H.-J. Heidmann, Astrium ST, DE	<b>CEAS-2007-126</b> <b>A Scientific and Technological Lunar Lander Mission</b> D. Wilde; P. Kyr; Astrium ST, DE	<b>CEAS-2007-127</b> <b>KAP - An In-Orbit Test Facility for Technology Demonstration and Scientific Use</b> C. Kaiser <sup>1</sup> ; G. Pont <sup>1</sup> ; A. Conde Reis, ESTEC/ESA, NL; <sup>1</sup> Kayser-Threde GmbH, DE	<b>CEAS-2007-128</b> <b>Time Resolved Measurement of Atomic Oxygen in Low Earth Orbit and its Benefits for Future Spacecraft Design</b> T. Schmiel; S. Fasoulas; J. Heisig; O. Przybiski; TU Dresden, DE
<b>Young Professional Conference III</b> Chair: M. Sölter, Astrium GmbH, DE <b>ECC Room 1</b>				<b>Young Professional Conference IV</b> Chair: C. Holze, machtwissen.de, DE		<b>Korean Presentations</b> Chair: R. Henke, RWTH Aachen, DE <b>ECC Room 1</b>	
<b>CEAS-2007-129</b> <b>Untersuchungen eines 2D-Flügelmodells im Wasseraufkanal zur Bestimmung der aerodynamischen Kennwerte im Hinblick auf mögliche Optimierung unter bionischen Aspekten</b> M. Schnitzer; R. Schomaker; H. Witte; University of Bremen, DE  <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">Presentation in German</div>	<b>CEAS-2007-130</b> <b>CubeSat in Dresden: Student's Oxygen Measurement Project - SOMP</b> S. Ernst, Technical University of Dresden, DE	<b>CEAS-2007-131</b> <b>Der WARR-Climber für die Beam Power Challenge (Space Elevator Games 2007)</b> J. Sturm; M. Bernert; WARR/Technische Universität München, DE  <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">Presentation in German</div>	<b>CEAS-2007-132</b> <b>Emergency Information Design in Extreme Space Environment</b> I. Schlacht, Technical University of Berlin, DE	<b>Introduction of DGLR Student Groups</b>		<b>CEAS-2007-133</b> <b>Aerodynamic Analysis and Design of a Propeller for MAV Propulsion</b> J. Cho, Hanyang University/School of Mechanical Engineering, KR; S. Lee <sup>1</sup> ; L. Cho <sup>1</sup> ; <sup>1</sup> Hanyang University/Department of Mechanical Engineering, KR	<b>CEAS-2007-134</b> <b>Tilt Rotor Development Status in Korea as Smart UAV Platform</b> O.S. Ahn; S.O. Koo; J.M. Kim; S.J. Kim; C.H. Lim; Korea Aerospace Research Institute, KR

14:00-15:00	<b>Airbus A380 Forum</b> <i>Speaker: R. Lafontan, Airbus, FR</i>	Chair: J. Szodruich, DLR Köln, DE			
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15:10 – 15:30	15:30 – 15:50	15:50 – 16:10	16:10 – 16:30	16:50 – 17:10	17:10 – 17:30	17:30 – 17:50	17:50 – 18:10
<b>Environment and noise</b> Chair: C. Mundt; Universität der Bundeswehr, DE				<b>Aero-Engine Components: Turbines / Combustors</b> Chair: H. Knittel, MTU Aero Engines, DE			

<b>CEAS-2007-135</b> <b>On the Development of Combustion Systems and their Design Methodologies for the Reduction of Pollutant Emissions from Aero-Engines - The European Project INTELLECT D.M.</b> R. v. d. Bank, Rolls-Royce Deutschland Ltd. & Co. KG, DE; N. Savary, Turbomeca, FR; M. Alden, Lunds Universitet, SE; M. Zedda, Rolls-Royce, GB; J. McGuirk, Loughborough University, GB; G. Cinque, AVIO, IT	<b>CEAS-2007-136</b> <b>Strategy for Environmentally Friendly Low Emissions Combustion Development in European Aeronautics</b> R. v. d. Bank, Rolls-Royce Deutschland, DE; C. Berat, Turbomeca, FR; M. Cazalens, SNECMA, FR; S. Harding, Rolls-Royce, GB	<b>CEAS-2007-137</b> <b>Influence of the Bypass Ratio on Low Altitude NOx Emissions</b> H. Hemmer; T. Otten; M. Plohr; M. Lecht; A. Döpelheuer; DLR, DE	<b>CEAS-2007-138</b> <b>Noise Radiation through Aero-Engine Exhausts - Large Scale Model Experiments</b> F. Arnold, Rolls-Royce Deutschland, DE; U. Tapken <sup>1</sup> ; R. Bauers <sup>1</sup> ; J. Zillmann, EADS Innovation Works, DE; <sup>1</sup> DLR, DE
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<b>CEAS-2007-139</b> <b>Preparation of Aero Technology for New Generation Aircraft Engine LP Turbines</b> J. Gier <sup>1</sup> ; I. Raab <sup>1</sup> ; T. Schröder <sup>1</sup> ; L. Enghardt, DLR, DE; <sup>1</sup> MTU Aero Engines, DE	<b>CEAS-2007-140</b> <b>Numerical Modeling of Aviation Gas Turbine Cooled Elements</b> A. Sadiqov; A. Pashayev; D. Askerov; A. Samedov; R. Mamedov; National Academy of Aviation, AZ	<b>CEAS-2007-141</b> <b>Passive Shroud Cooling Concepts for HP Turbine Blades</b> E. Janke, Rolls-Royce Deutschland, DE	<b>CEAS-2007-142</b> <b>Parametric Study of Soot Formation in an Aeroengine Model Combustor at Elevated Pressures by Laser-Induced Incandescence: Effect of the Fuel Phase</b> U. Meier <sup>1</sup> ; C. Hassa <sup>1</sup> ; K.-P. Geigle <sup>2</sup> ; O. Lammel <sup>2</sup> ; P. Kutne <sup>2</sup> ; <sup>1</sup> German Aerospace Center (DLR), Institute of Propulsion Technology, DE; <sup>2</sup> German Aerospace Center (DLR), Institute of Combustion Technology, DE
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<b>Structures - CF Application</b> Chair: G.A. Pavlov, IPCP RAS, RU	<b>Estrelsaal A</b>
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<b>Structures - Miscellaneous</b> Chair: A. Viviani, Seconda Università di Napoli, IT	<b>Estrelsaal A</b>
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<b>CEAS-2007-143</b> <i>Ludwig Bölkow-Foundation-Award for his diploma thesis with the topic:</i> <b>Analysis of the Interaction of Neighbouring Laminae in Fibre-Reinforced Plastics during Cyclic Loading</b> T. Hensel, Technische Universität Darmstadt, Maschinenbau, DE	<b>CEAS-2007-144</b> <i>Willy Messerschmitt-Award for his diploma thesis with the topic:</i> <b>Deformation Fields Estimation Using Fiber Bragg Gratings</b> S. Rapp, TU München, DE	<b>CEAS-2007-145</b> <i>Walther Blohm-Study-Award for his studies thesis with the topic:</i> <b>Vergleichende Analyse der konzentrierten Einzelkräfteinleitung in eine Rechteckscheibe mittels kontinuumsmechanischer und FEM-Berechnung sowie Experiment</b> R. Basan, Bundesanstalt für Materialforschung und -prüfung (BAM), DE <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">Presentation in German</div>
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<b>CEAS-2007-147</b> <b>The Delamination Behaviour of Carbon Composite Structures Manufactured with the Vacuum Assisted Process (VAP)</b> G. Spenninger, EADS Military Air Systems, DE; H. Bansemir <sup>1</sup> ; M. Schulz <sup>1</sup> ; <sup>1</sup> Eurocopter Deutschland GmbH, DE	<b>CEAS-2007-148</b> <b>Numerical Simulation of Advanced Folded Core Materials for Structural Sandwich Applications</b> S. Heimbs <sup>1</sup> ; P. Middendorf <sup>1</sup> ; S. Kilcher <sup>2</sup> ; A.F. Johnson <sup>2</sup> ; M. Maier, Institute for Composite Materials (IVW), Kaiserslautern University of Technology, DE; <sup>1</sup> EADS Innovation Works, DE; <sup>2</sup> German Aerospace Center (DLR), Institute of Structures and Design, DE	<b>CEAS-2007-149</b> <b>EMI Control in the Presence of Composites Materials</b> F. Thurecht <sup>1</sup> ; M. Leininger, Kayser-Threde GmbH, DE; C. Schöppinger, INVENT GmbH, DE; L. Trougnou, ESA-ESTEC, NL; E. Pfeiffer <sup>1</sup> ; <sup>1</sup> HPS GmbH, DE	<b>CEAS-2007-150</b> <b>Finite Elemente Simulation einer Notwasserung eines Transportflugzeugs zur Ermittlung der dabei auftretenden Lasten</b> T. Schmid-Fuertes; R. Curtius; J. Mandler; EADS Military Air Systems, DE <div style="border: 1px solid black; padding: 2px; width: fit-content; margin: 5px auto;">Presentation in German</div>
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<b>Aerospace Information Technologies and Electronics</b> Chair: P. Stütz, ESG Elektroniksystem- und Logistik-GmbH, DE	<b>ECC Room 4</b>
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<b>Space Control and Simulation</b> Chair: C. Wiedemann, TU Braunschweig, DE	<b>ECC Room 4</b>
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<b>CEAS-2007-151</b> <b>Secure Network-enabled Commercial Airplane Operations: It Support Infrastructure Challenges</b> R.V. Robinson <sup>1</sup> ; K. Sampigetha <sup>1</sup> ; M. Li <sup>1</sup> ; S. Lintelman <sup>1</sup> ; R. Poovendran, University of Washington, US; D. von Oheimb, Siemens, DE; <sup>1</sup> Boeing, US	<b>CEAS-2007-152</b> <b>Software: The Underestimated Component in Space Missions</b> S. Montenegro, Fraunhofer Institut FIRST, DE	<b>CEAS-2007-153</b> <b>Topological Design of a High Altitude Platform (HAP) using a System Design Language</b> M. Haq, TAO Technologies GmbH, DE; B. Kröplin, University of Stuttgart, Institute for Statics and Dynamics of Aerospace Structures, DE	<b>CEAS-2007-154</b> <b>Extension of EDA Toolbox for VHF Data Link System Simulation</b> H. Flühr, FH Joanneum Graz, AT
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<b>CEAS-2007-155</b> <b>Calibration of the Micro-Newton Propulsion System for the LISA Pathfinder Drag-Free Satellite</b> T. Ziegler <sup>1</sup> ; M. Göbel <sup>2</sup> ; A. Schleicher <sup>1</sup> ; W. Fichter <sup>2</sup> ; <sup>1</sup> EADS Astrium GmbH, DE; <sup>2</sup> University of Stuttgart, Institute of Flight Mechanics and Control, DE	<b>CEAS-2007-157</b> <b>Flight Software, Rigid Body, and Computational Fluid Dynamics Closed Loop Simulation</b> M.I. Panevsky; B.J. Pataky; P.T. Than; The Aerospace Corporation, US	<b>CEAS-2007-158</b> <b>Analytical Approach for the Solution of Super-/ Hypersonic Flow Fields</b> B. Thorwald; C. Mundt; Universität der Bundeswehr, München, DE
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Tuesday, 11th September 2007

Plenary Session in **ECC Hall C**

14:00-15:00 **Airbus A380 Forum**  
*Speaker: R. Lafontan, Airbus, FR*

Chair: J. Szodrich, DLR Köln, DE

15:10 – 15:30      15:30 – 15:50      15:50 – 16:10      16:10 – 16:30      16:50 – 17:10      17:10 – 17:30      17:30 – 17:50      17:50 – 18:10

**Inflatable / Deployable Structures 2**  
 Chair: S. Langlois, European Space Agency, ESA/ESTEC, NL      **SSMMT**      **Estrelsaal C1**

**Mechanical Architecture, Design and Engineering 2**  
 Chair: T. Henriksen, European Space Agency, ESA/ESTEC, NL      **SSMMT**      **Estrelsaal C1**

<b>CEAS-2007-159</b> <b>Large Deployable Membrane Structures</b> M. Straubel <sup>1</sup> ; C. Sickinger <sup>1</sup> ; S. Langlois, ESA/ESTEC, NL; <sup>1</sup> DLR - Institut für Faserverbundleichtbau und Adaptronik, DE	<b>CEAS-2007-160</b> <b>Bending-wrinkling Characteristics of the Inflated Boom</b> H. Tan <sup>1</sup> ; C. Wang <sup>1</sup> ; J. Yang, China Academe of Space Technology, CN; X. Du <sup>1</sup> ; X. He <sup>1</sup> ; <sup>1</sup> Harbin Institute of Technology, CN	<b>CEAS-2007-161</b> <b>Shape Memory Polymer Composite and its Application to Deployable Hinge for Solar Arrays</b> J.S. Leng; XH. Wang; X. Lan; YJ. Liu; Harbin Institute of Technology, Centre for Composite Materials and Structures, CN	<b>CEAS-2007-162</b> <b>Design and Analysis of Full-Scale Offset Stiffened-Spring Back Reflector</b> O. Soykasap, Afyon Kocatepe University, Department of Mechanics, TR; L.T. Tan, University College London, Department of Civil & Environmental Engineering, GB
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<b>CEAS-2007-163</b> <b>Failure Testing and Test Simulation of the ARIANE 5 EPC-BME Actuator Brackets</b> J. Hoogendoorn; J.F. Koorevaar; Dutch Space B.V., NL	<b>CEAS-2007-164</b> <b>Finite Element Based Initial Post-buckling Analysis of Conical Shell Structures</b> T. Rahman <sup>1</sup> ; E.L. Jansen <sup>1</sup> ; J.J. Wijker, Dutch Space BV, NL; <sup>1</sup> Delft University of Technology, NL	<b>CEAS-2007-165</b> <b>Testing of Flexible Cu(In,Ga)Se<sub>2</sub> Solar Cells for Space Applications</b> K. Zajac <sup>1</sup> ; S. Fasoulas <sup>1</sup> ; S. Brunner <sup>2</sup> ; K. Seifart <sup>2</sup> ; K. Otte, Solarion AG, DE; <sup>1</sup> Technische Universität Dresden, DE; <sup>2</sup> HTS GmbH, DE	<b>CEAS-2007-166</b> <b>Reliability of Shell Structures Through Sensitivity Analysis</b> M. Oberguggenberger; J. King; B. Schmelzer; University of Innsbruck, AT
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**Shock 1**  
 Chair: A. Capitaine, Astrium EADS SAS, FR      **SSMMT**      **Estrelsaal C3**

**Shock 2**  
 Chair: P. Camarasa, EADS ASTRIUM, FR      **SSMMT**      **Estrelsaal C3**

<b>CEAS-2007-167</b> <b>Statistical Processing of Shock Test Data</b> G. Ladurée, Thales Alenia Space, FR; S. Kiryenko, ESA/ESTEC, NL	<b>CEAS-2007-168</b> <b>Herschel SVM Shock Qualification Test / Prediction Comparison - An Industrial Experience</b> P.C. Marucchi-Chierro, Thales Alenia Space-I, IT; N. Riva, SOFITER SYSTEM ENGINEERING ENGINEERING, IT; P. Lodereau, Thales Alenia Space-F, FR; S.J. Kiryenko, ESA/ESTEC, NL	<b>CEAS-2007-169</b> <b>Main Outcomes of CNES Launcher Directorate Research Group on Shock Propagation into Launcher Structures</b> P. Roux, CNES, FR	<b>CEAS-2007-170</b> <b>Reliability Demonstration of the Pyrosoft Release Nut</b> M. Castarede <sup>1</sup> ; R. Tougeron <sup>1</sup> ; P. Thebault <sup>1</sup> ; D. Dilhan, CNES, FR; <sup>1</sup> Etienne Lacroix Tous Artifices S.A., FR
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<b>CEAS-2007-171</b> <b>Shock Inputs Derivation to Subsystems</b> G. Ladurée, Thales Alenia Space, FR; J.B. Bernaudin, EADS Astrium, FR; S. Kiryenko, ESA, NL; S. Mary, CNES, FR	<b>CEAS-2007-172</b> <b>Shock Propagation in Spacecraft Structure</b> J.B. Bernaudin <sup>1</sup> ; J.B. Vergniaud <sup>1</sup> ; E. Courau <sup>2</sup> ; S. Mary <sup>2</sup> ; <sup>1</sup> Astrium Satellites, FR; <sup>2</sup> CNES, FR	<b>CEAS-2007-173</b> <b>Qualification to Shock Environment in Vega Program by Full Scale Tests, Models and Similarity</b> R. Mancini; M. Fragnito; ELV SpA Mechanical System Development, IT	<b>CEAS-2007-174</b> <b>HSS3 - An Improved Concept for the Horizontal Separation System of the Ariane5 Payload Fairing and Its Qualification Status</b> P. Bodagala, CNES, FR; M. Rendina, Oerlikon Space, CH
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**Short Course 3**  
 Chair: TBD      **ECC Room 5**

**Short Course 4**  
 Chair: TBD      **ECC Room 5**

**Short Course Aircraft Design**  
 Details are bepublished on [www.ceas2007.org](http://www.ceas2007.org)



Wednesday, 12th September 2007

Plenary Session in ECC Hall C

08:30-09:30 **Towards Climate-optimized Aviation**  
*Speakers: U. Schumann, DLR Oberpfaffenhofen, DE; Cord Rossow, DLR Braunschweig, DE*

Chair: J. Szodruch, DLR Köln, DE

09:40 – 10:00	10:00 – 10:20	10:20 – 10:40	10:40 – 11:00	11:20 – 11:40	11:40 – 12:00	12:00 – 12:20	12:20 – 12:40		
<b>Wake Vortex Advisory Systems</b> Chair: T. Rötger, Airbus, DE <div style="text-align: right;"><b>STS</b></div>				<b>Wake Vortex R&amp;D</b> Chair: A. Reinke, Airbus, DE <div style="text-align: right;"><b>STS</b></div>				<b>ECC Hall C</b>	
<b>CEAS-2007-175</b> <b>Wake Vortex Avoidance System</b> W. Bryant <sup>1</sup> ; S. Lang <sup>1</sup> ; J. Tittsworth <sup>1</sup> ; S. Darr, Dynamic Aerospace Inc., US; <sup>1</sup> Federal Aviation Administration, US	<b>CEAS-2007-176</b> <b>Wake Turbulence Mitigation for Departures from Closely Spaced Parallel Runways: A Research Update</b> S. Lang <sup>1</sup> ; J. Tittsworth <sup>1</sup> ; D. Domino <sup>2</sup> ; C. Lunsford <sup>2</sup> ; D. Clark <sup>3</sup> ; F. Robasky <sup>3</sup> ; G. Lohr, NASA, US; <sup>1</sup> Federal Aviation Administration, US; <sup>2</sup> The Mitre Corporation, US; <sup>3</sup> MIT Lincoln Laboratory, US	<b>CEAS-2007-177</b> <b>The Wake Vortex Prediction and Monitoring System WSVBS - Part I: Design</b> F. Holzäpfel <sup>1</sup> ; T. Gerz <sup>1</sup> ; M. Frech <sup>1</sup> ; A. Tafferner <sup>1</sup> ; F. Köpp <sup>1</sup> ; I. Smalikh <sup>1</sup> ; S. Rahm <sup>1</sup> ; K.-U. Hahn <sup>2</sup> ; C. Schwarz <sup>2</sup> ; <sup>1</sup> DLR-Oberpfaffenhofen, DE; <sup>2</sup> DLR-Braunschweig, DE	<b>CEAS-2007-178</b> <b>The Wake Vortex Prediction and Monitoring System WSVBS - Part II: Performance and ATC Integration at Frankfurt Airport</b> T. Gerz <sup>1</sup> ; F. Holzäpfel <sup>1</sup> ; W. Gerling <sup>1</sup> ; A. Scharnweber <sup>1</sup> ; M. Frech, Deutscher Wetterdienst, DE; A. Wiegele <sup>1</sup> ; K. Kober <sup>1</sup> ; K. Dengler <sup>1</sup> ; S. Rahm <sup>1</sup> ; <sup>1</sup> DLR, DE	<b>CEAS-2007-179</b> <b>Wake Vortex R&amp;D in the USA - A Status of Current Progress and Plans</b> W.H. Bryant, NASA, US; J.P. Nicolaon, National Institute for Aeronautics, US; S.L. Lang <sup>1</sup> ; J.A. Tittsworth <sup>1</sup> ; <sup>1</sup> FAA, US	<b>CEAS-2007-180</b> <b>Parametric Study &amp; Simplified Approach to Wake Vortex Encounter Offline Simulation</b> D. Bieniek, University of Berlin, Institute of Aeronautics and Astronautics, DE; R. Luckner, University of Berlin, Institut of Aeronautics and Astronautics, DE	<b>CEAS-2007-181</b> <b>Investigation of Four Vortex System Wake Characteristics</b> A. Allen; C. Breitsamter; TU München, Institute of Aerodynamics, DE	<b>CEAS-2007-182</b> <b>A Comparison between CFD and Wind Tunnel Measurements for Wake Vortex Prediction</b> S. Melber-Wilkending, DLR Braunschweig, Institut für Aerodynamik und Strömungsmechanik, DE; A. Allen <sup>1</sup> ; C. Breitsamter <sup>1</sup> ; <sup>1</sup> TU München, Lehrstuhl für Aerodynamik, DE		
<b>Unmanned Aircraft Systems</b> Chair: C. Le Tallec, Onera, FR				<b>Air Transport System</b> Chair: H. Fricke, TU Dresden, DE				<b>ECC Hall D</b>	
<b>CEAS-2007-183</b> <b>A Solar Powered HALE-UAV for Arctic Research</b> H. Runge <sup>1</sup> ; W. Rack, University of Canterbury, NZ; A. Ruiz-Leon <sup>1</sup> ; M. Hepperle <sup>1</sup> ; <sup>1</sup> DLR, DE	<b>CEAS-2007-184</b> <b>Insertion of Unmanned Aircraft Systems in Non-Segregated Airspace: A Combined Technological and Regulatory Challenge</b> G. Mardiné, SAFRAN-Sagem Défense Sécurité, FR	<b>CEAS-2007-185</b> <b>Miniature UAVs Concepts for Outdoor Missions</b> A. Joulia; S. Bertrand; ONERA, FR	<b>CEAS-2007-186</b> <b>Conceptual Design Methodology of HALE UAV</b> C. Le Tallec; J. Hermetz; N. Bérend; S. Defoort; Onera, FR	<b>CEAS-2007-187</b> <b>EVTS Enhanced VFR Transport System</b> J. Groeneweg, National Aerospace Laboratory, NL; R. van Gent, TNO Defence, Security and Safety, NL; W.R. Berkouwer, Aerospace Software and Technologies Institute, NL	<b>CEAS-2007-188</b> <b>Level of Service for Aviation Infrastructure Markets?</b> E. Grunewald, DLR e.V., DE	<b>CEAS-2007-189</b> <b>SESAR: A Vision of the Future European Air Traffic Management System for 2020 and Beyond</b> S. Reed, Air Traffic Alliance, FR	<b>CEAS-2007-190</b> <b>Aviation Safety Plans - The Total Systems Approach and the Way Forward</b> F. Böhm; T. Mickler; BMVBS - Bundesministerium für Verkehr, Bau und Stadtentwicklung, DE		
<b>Flight Control for Missiles</b> Chair: H. Buschek, Diehl BGT Defence, DE				<b>Rotorcraft</b> Chair: B. Gmelin, DLR Braunschweig, DE				<b>Estrelsaal B</b>	
<b>CEAS-2007-191</b> <b>Case Study: TAURUS KEPD350 Integration on Tornado Fighter Aircraft</b> D. Fasol; H. Neubauer; MBDA Deutschland, DE	<b>CEAS-2007-192</b> <b>Comparison of Classical to H<sub>∞</sub>-Norm Optimal Robust Autopilot Design</b> B.J.E. Misgeld; A. Reindler; T. Kuhn; Diehl BGT Defence, DE		<b>CEAS-2007-194</b> <b>Multi-spectral Image Generation for Real-time Hardware-in-the-loop Simulations</b> R.G. Wiedemann; P. Schätz; K.M. Wanie; LFK-Lenkflugkoerpersysteme GmbH, DE	<b>CEAS-2007-195</b> <b>Helicopter Noise and Vibration Reduction with Adaptive Fiber Composites</b> T.H. Brockmann, EADS Eurocopter, DE	<b>CEAS-2007-196</b> <b>Structural Design and Optimization of the Integrated Active Trailing Edge Concept for a Helicopter Rotor Blade</b> E. Ahci; R. Pfaller; Eurocopter, DE	<b>CEAS-2007-197</b> <b>Crash Analysis of the "High Cabin"-Version of the NH90 Transport Helicopter Fuselage</b> J. Majamäki, Eurocopter Germany, DE	<b>CEAS-2007-198</b> <b>Piezoceramic Actuators for Morphing Helicopter Rotor</b> B.A. Grohmann; Ch. Maucher; P. Jänker; EADS Innovation Works, DE		

08:30- **Towards Climate-optimized Aviation**  
 09:30 *Speakers: U. Schumann, DLR Oberpfaffenhofen, DE; Cord Rossow, DLR Braunschweig, DE*

Chair: J. Szodruch, DLR Köln, DE

09:40 – 10:00		10:00 – 10:20		10:20 – 10:40		10:40 – 11:00		11:20 – 11:40		11:40 – 12:00		12:00 – 12:20		12:20 – 12:40							
<b>Transport Aircraft Aerodynamics</b> Chair: G.A. Dirks, Airbus, FR <span style="float: right;"><b>ECC Room 2</b></span>								<b>Advanced Wing Technologies and Flight Testing</b> Chair: J. König, Airbus, DE <span style="float: right;"><b>ECC Room 2</b></span>													
<b>CEAS-2007-199</b> <b>Parametric Effects on Spoiler Geometry Assessment with Chimera Technique</b> X. Bertrand, Airbus, FR								<b>CEAS-2007-200</b> <b>On the Comparison of Stalling Flow-Through Nacelles and Powered Inlets at Take-Off Conditions</b> S. Schulze; C. Kähler; R. Radespiel; TU Braunschweig, Institute of Fluid Mechanics, DE		<b>CEAS-2007-201</b> <b>Computations of Unsteady Aerodynamics due to Body Motion</b> H. Berglind, FOI, SE; V. Brunet, ONERA, FR; N. Caballero Rubiato, INTA, ES; N. Ceresola, Alenia, IT; R. Heinrich, DLR, DE; S. Leicher, EADS-M, DE; B. Prananta, NLR, NL		<b>CEAS-2007-202</b> <i>Ferdinand Schmetz-Award for his diploma thesis with the topic:</i> <b>Investigation of Boundary Layer Transition for Small Reynolds Numbers in Free Flight and Wind Tunnel Experiments</b> B. Kobiela, University Stuttgart, DE		<b>CEAS-2007-203</b> <b>Requirements and Results of Wake Vortex in-flight Measurements in AWIATOR</b> J. König, Airbus, DE		<b>CEAS-2007-204</b> <b>Forward Looking Clear Air Turbulence Measurement with the AWIATOR LIDAR Sensor</b> N.P. Schmitt <sup>1</sup> ; W. Rehm <sup>1</sup> ; T. Pistner <sup>1</sup> ; H. Diehl <sup>1</sup> ; P. Navé <sup>1</sup> ; G. Jenaro-Rabadan <sup>2</sup> ; P. Mirand <sup>2</sup> ; M. Reymond <sup>2</sup> ; <sup>1</sup> EADS Innovation Works, DE; <sup>2</sup> Airbus, FR		<b>CEAS-2007-205</b> <b>Validation of Low Noise Procedures in Simulator and Flight Tests</b> B. Boche <sup>1</sup> ; N. Kulwatz, Airbus, DE; R. Luckner <sup>1</sup> ; <sup>1</sup> TU Berlin, DE		<b>CEAS-2007-206</b> <b>Advanced Methods for In-flight Flap Gap and Wing Deformation Measurements in the Project AWIATOR</b> T. Kirmse; A. Wagner; DLR Göttingen, DE	
<b>Space Systems: Spacecraft Technologies</b> Chair: M. Sölter, Astrium GmbH, DE <span style="float: right;"><b>ECC Room 3</b></span>								<b>Space Systems: Launcher Technologies II</b> Chair: M. Sölter, Astrium GmbH, DE <span style="float: right;"><b>ECC Room 3</b></span>													
<b>CEAS-2007-207</b> <b>A Fleet Management System for Commercial Spacrafts in GEO Using SMART-OLEV</b> C. Kaiser, Kayser-Threde GmbH, DE; F. Sjöberg, SSC, SE; J.-M. Del Cura, Senar, ES; B. Eilersten, OSSL, GB		<b>CEAS-2007-208</b> <i>ZARM-Award for his diploma thesis with the topic:</i> <b>LISA Thermal Control Analysis in Context of the BayernSat Mission</b> S. Höfner, TU München, Institute of Astronautics, DE		<b>CEAS-2007-209</b> <b>Simulation of the Attitude Behaviour and Available Power Profile of the Delfi-c3 Spacecraft with Application of the OpSim Platform</b> F. te Hennepe; B.T.C. Zandbergen; R.J. Hamann; Delft University of Technology, NL		<b>CEAS-2007-210</b> <b>Imaging Radiometer METImage for Future Operational Earth Observation Platforms in Polar Orbits</b> A. Pillukat, Jena-Optronik GmbH, DE; H.-P. Nothaft, AIM GmbH, DE; C. Brüns, DLR, DE		<b>CEAS-2007-211</b> <b>Payload Adaptor System of High Performances and Low-Shock</b> M. Lanchó; E. Grande; J. Rivas; EADS, ES		<b>CEAS-2007-212</b> <b>Shock Attenuator System for Spacecraft and Adaptor</b> P. Camarasa, EADS-ASTRIUM, FR; S. Kiryenko, ESA/ESTEC, NL		<b>CEAS-2007-213</b> <b>Payload Adaptor System for James Webb Space Adapter</b> J. Vilanova; R. Rosa; EADS CASA Espacio, ES		<b>CEAS-2007-214</b> <b>Shock Attenuation System for Spacecraft and Adaptor (SASSA)</b> M. Lanchó; A. Fernandez; EADS, ES							
<b>Aero-Engine Components: Compressors I</b> Chair: U. Wenger, Rolls-Royce Deutschland, DE <span style="float: right;"><b>ECC Room 1</b></span>								<b>Aero-Engine Components: Compressors II</b> Chair: A. Kühhorn, BTU Cottbus, DE <span style="float: right;"><b>ECC Room 1</b></span>													
<b>CEAS-2007-215</b> <b>Blade Mistuning Induced Blisk Vibration</b> T. Klauke; A. Kühhorn; B. Beirrow; BTU Cottbus, Chair of Structural Mechanics and Vehicle Vibrational Technology, DE		<b>CEAS-2007-216</b> <b>The Capability of Influencing Secondary Flow in Compressor Cascades by Means of Passive and Active Methods</b> A. Hergt <sup>1</sup> ; R. Meyer <sup>1</sup> ; K. Engel, MTU Aero Engines GmbH, DE; <sup>1</sup> German Aerospace Center (DLR), Institute of Propulsion Technology, DE		<b>CEAS-2007-217</b> <b>A Feature Based Approach to High Pressure Compressor Preliminary Design for Civil Aircraft Propulsion Systems</b> S. Bretschneider; S. Staudacher; Stuttgart University, Institute of Aircraft Propulsion Systems, DE		<b>CEAS-2007-218</b> <b>Der Axialverdichter im Flugtriebwerk – gestern, heute und morgen</b> U.L.H. Schmidt-Eisenloher; O.E. Kosing; Atena Engineering GmbH, DE		<b>CEAS-2007-219</b> <b>Multi-objective Blade Design Using a Quasi-3d Non-dimensional Parameterization Approach</b> A.K. Dutta; P.M. Flassig; D. Bestle; Brandenburg University of Technology Cottbus (BTU Cottbus), DE		<b>CEAS-2007-220</b> <b>Multi-Objective Compressor Blade Optimisation Using a Non-Dimensional Parameterisation Approach</b> P.M. Flassig, BTU Cottbus, LS Technische Mechanik und Fahrzeugdynamik, DE		<b>CEAS-2007-221</b> <b>Multi Disciplinary Blading Design by Means of Multi Objective Optimisation</b> D. Otto; D. Bestle; Chair of Engineering Mechanics and Vehicle Dynamics, BTU, DE		<b>CEAS-2007-222</b> <b>Comparison of Different Parameterization and Optimization Approaches in the Field of Aerodynamic Compressor Blade Design</b> A. Keskin <sup>1</sup> ; M. Swoboda <sup>1</sup> ; J. Palluch <sup>2</sup> ; C. Abt <sup>2</sup> ; <sup>1</sup> Rolls-Royce Deutschland Ltd. & Co. KG, DE; <sup>2</sup> FRIENDSHIP SYSTEMS GmbH, DE							
								<div style="border: 1px solid black; padding: 2px; display: inline-block;">Presentation in German</div>													

**Wednesday, 12th September 2007**

Plenary Session in **ECC Hall C**

08:30-09:30 **Towards Climate-optimized Aviation**  
*Speakers: U. Schumann, DLR Oberpfaffenhofen, DE; Cord Rossow, DLR Braunschweig, DE*

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09:40 – 10:00	10:00 – 10:20	10:20 – 10:40	10:40 – 11:00	11:20 – 11:40	11:40 – 12:00	12:00 – 12:20	12:20 – 12:40
<b>Air and Space Medicine and Law</b> Chair: U. Müller, DLR Köln, DE <b>Room Paris</b>				<b>UAS: Innovative System Concepts</b> Chair: W. Engelhardt, MBDA Deutschland, DE <b>Room Paris</b>			
<b>CEAS-2007-223</b> <b>Aircraft Noise Effects on Sleep: DLR Research and Application to a German Airport</b> A. Samel; M. Basner; U. Isermann; H. Maaß; J. Quehl; DLR, DE	<b>CEAS-2007-224</b> <b>Noise-Reduced Landing Approaches and Pilots' Workload</b> E.-M. Elmenhorst; H. Maaß; M. Vejvoda; A. Samel; German Aerospace Center (DLR), DE	<b>CEAS-2007-225</b> <b>Perspectives for the Network of Centres in the Space Domain</b> W. Rathgeber, European Space Policy Institute (ESPI), AT		<b>CEAS-2007-227</b> <b>EADS Technology Activities in Communications</b> D. Hoffmann, EADS Deutschland, DE	<b>CEAS-2007-228</b> <b>Cost Appreciation of Morphing UAV Projects at a Conceptual Design Stage.</b> T. Melin; A. T. Isikveren; M.I. Friswell; University of Bristol, GB	<b>CEAS-2007-229</b> <b>Designing Future Unmanned Combat Air Systems from the Effector Point of View</b> J. Engel, MBDA/LFK, DE	<b>CEAS-2007-230</b> <b>Notwendigkeit adaptiver Flugsteuerungssysteme am Beispiel der Reglerentwicklung für den Technologiedemonstrator ARTIS</b> S. Lorenz, DLR, DE  <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: auto;">Presentation in German</div>
<b>Supersonic/Hypersonic: Thermal Protection</b> Chair: J.M.A. Longo, DLR Braunschweig, DE <b>Estrelsaal A</b>				<b>Structures - Optimisation</b> Chair: H. Hönlinger, DLR Göttingen, DE <b>Estrelsaal A</b>			
<b>CEAS-2007-231</b> <b>Plasma Windtunnel Tests at PARES Thermal Protection System</b> W.P.P. Fischer; R. Knoche; Astrium Space Transportation, DE	<b>CEAS-2007-232</b> <b>Thermal Qualification of Transpiration Cooling for Atmospheric Entry</b> B. Esser; A. Gülhan; M. Kuhn; DLR, DE	<b>CEAS-2007-233</b> <b>In Flight Research on Aerothermodynamics (ATD) and Thermal Protection Systems (TPS) for Space Transportation Systems</b> J.M. Muylaert; J. Gavira; H. Ritter; ESA/ESTEC, NL	<b>CEAS-2007-234</b> <b>Aerodynamic Analysis of Computed Plate / Jet - Interactions for Blunted Cone-Cylinder in Hypersonic Flow</b> S. Zahir; Z. Ye; Northwestern Polytechnical University, CN	<b>CEAS-2007-235</b> <b>Multidisciplinary, Large Scale Optimization of Composite Aircraft Structures</b> G. Schuhmacher; F. Daoud; J. D. Wagner; R. Zotemantel; EADS Military Air Systems, DE	<b>CEAS-2007-236</b> <b>Structural Optimization of Adaptive Airfoils Using Evolutionary Algorithms</b> J. Seeger; K. Wolf; TU Dresden, Institute of Aerospace Engineering, DE	<b>CEAS-2007-237</b> <b>The GA Optimization of Straight and Curved Laminated Composite Panels in Presence of a Cutout</b> A. Gorjippoor; B. Dehghanmanshadi; A. Abedian; Sharif University of Technology, IR	<b>CEAS-2007-238</b> <i>Claudius Dornier Jr. - Foundation-Award for his diploma thesis with the topic:</i> <b>Development of a Preprocessor for the Generation of Structural Beam Models for Multidisciplinary Optimisation</b> G. Wellmer, Department of Mechanics, RWTH Aachen, DE
<b>ICAO for Space</b> Chair: T. Sgobba, ESA/ESTEC, NL <div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 0 auto;">Workshop</div> <b>ECC Room 4</b>				<b>ICAO for Space, Panel Forum</b> Chair: T. Sgobba, ESA/ESTEC, NL <div style="border: 1px solid black; padding: 5px; display: inline-block; margin: 0 auto;">Workshop</div> <b>ECC Room 4</b>			
<b>CEAS-2007-239</b> <b>An ICAO for Space - WHY,</b> T. Sgobba, IAASS, NL	<b>CEAS-2007-240</b> <b>Space Traffic Management, K.-U. Schrogl, ESPI, Vienna, AT</b>	<b>CEAS-2007-241</b> <b>An ICAO for Space - HOW,</b> N. Bahr, BAH, Washington, US	<b>CEAS-2007-242</b> <b>The Role of the UN Committee for the Peaceful Uses of Outer Space (UN COPUOS) in Developing the International Legal Framework for Space Activities</b> G. Brachet, FR	Dr. G. Brachet, Chairman of UN COPUOS, FR Dr. K-U. Schrogl, Director of ESPI (European Space Policy Institute), AT Dr. I. Rongier, Safety Manager, CNES, FR Prof. S. Hobe Director, Institute of Air and Space Law, University of Cologne, DE Dr. L. Perek, Czech Academy of Sciences, CZ Mr. R. Coppinger, Technical Reporter of Flight International, GB Mr. N. Bahr, Safety Director, BAH, Washington, US Dr. Ing. T. Sgobba, IAASS President, NL			

**Wednesday, 12th September 2007**

Plenary Session in **ECC Hall C**

**08:30-09:30** **Towards Climate-optimized Aviation**  
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Chair: J. Szodruch, DLR Köln, DE

09:40 – 10:00		10:00 – 10:20		10:20 – 10:40		10:40 – 11:00		11:20 – 11:40		11:40 – 12:00		12:00 – 12:20		12:20 – 12:40			
<b>Columbia Accident</b> Chair: T. Henriksen, European Space Agency, ESA/ESTEC, NL				SSMMT		Estrelsaal C1				<b>Inflatable / Deployable Structures 3</b> Chair: J. Santiago Prowald, European Space Agency, ESA/ESTEC, NL				SSMMT		Estrelsaal C1	
<b>CEAS-2007-247</b> <b>The Space Shuttle Columbia Accident Investigation: Tools, Techniques, and Results</b> S. McDanel, NASA, Kennedy Space Center, US; M. Solomon, Boeing, Kennedy Space Center, US				<b>CEAS-2007-248</b> <b>Space Shuttle Orbiter Columbia Reconstruction and Investigation</b> M. Solomon, Boeing, US				<b>CEAS-2007-249</b> <b>Verification Methodology for Self-Deploying Support Frames</b> C. Sickinger; H. Assing; H. Koeke; M. Straubel; DLR - German Aerospace Center, DE				<b>CEAS-2007-250</b> <b>Topology Optimization Studies for a Contoured Beam Deployable Micro-Satellite Antenna</b> N. Fazli; S. Ghaffari; S.M.B. Malaek; A. Abedian; Sharif Univ. of Tec., IR		<b>CEAS-2007-251</b> <b>Lessons from Structural Design of a Highly-Flexible Space Structure: the Space-Tow Solar Sail</b> G. Tibert, KTH (Royal Institute of Technology), SE; A. Lennon, ABL Engineering Ltd., IE		<b>CEAS-2007-252</b> <b>Mechanical Behaviours and Fracture Mechanisms of Rigidizable Composites for Inflatable Structures</b> V. Calard, Austrian Research Centers GmbH, AT; B. Defoort, Astrium Space Transportation, FR; S. Langlois, ESA/ESTEC, NL	
<b>Composite Structures 1</b> Chair: R. Usinger, Oerlikon Space, CH				SSMMT		Estrelsaal C3				<b>Composite Structures 2</b> Chair: A. Obst, European Space Agency, ESA/ESTEC, NL				SSMMT		Estrelsaal C3	
<b>CEAS-2007-253</b> <b>Design of Multifunctional Folded Core Structures for Aerospace Sandwich Applications</b> Y. Klett <sup>1</sup> ; K. Drechsler <sup>1</sup> ; M. Kolax <sup>2</sup> ; H. Wentzel <sup>2</sup> ; R. Kehlre, Foldcore GmbH, DE; <sup>1</sup> University of Stuttgart, Institute of Aircraft Design, DE; <sup>2</sup> Airbus, DE		<b>CEAS-2007-254</b> <b>A New Concept for Testing Fatigue and Damage Tolerance at Aerospace Structure</b> B. Zapf; C. Rieß; RUAG Aerospace Structures GmbH, DE		<b>CEAS-2007-255</b> <b>Mechanical and Physical Evaluation of a New Carbon Fibre/ PEEK Composite System for Space Applications</b> J.P. Kilroy, Composites Testing Laboratory, IE; C.M. Ó Brádaigh, Composites Research Unit, IE; C.O.A. Semprinoschnig, European Space Agency (ESA/ESTEC), NL		<b>CEAS-2007-256</b> <b>Compressive Strength: The Key to Future CFRP Production</b> C. Arit; D. Röstermundt; T. Mahrholz; U. Riedel; L. Herbeck; German Aerospace Centre (DLR), Institute of Composite Structures and Adaptive Systems, DE		<b>CEAS-2007-257</b> <b>Thermo-mechanical qualification of Ultra High Temperature Ceramic structures for space application</b> R. Gardi <sup>1</sup> ; G. Marino <sup>1</sup> ; S. Di Benedetto <sup>1</sup> ; M. Marini <sup>1</sup> ; E. Trifoni <sup>1</sup> ; R. Savino, DIAS (univ. of naples), IT; <sup>1</sup> CIRA scpa, IT		<b>CEAS-2007-258</b> <b>Increase of Bolted Joint Performance by means of Local Laminar Hybridization</b> A. Fink, German Aerospace Center DLR, DE; P. Camanho, INEGI, Instituto de Engenharia Mecânica e Gestão Industrial, PT; M. Canay, EADS CASA Espacio, ES; A. Obst, European Space Agency, NL		<b>CEAS-2007-259</b> <b>Bioinspired Self-Healing Composite Materials for Space and Aerospace Applications</b> R. Trask <sup>1</sup> ; I. Bond <sup>1</sup> ; C. Semprinoschnig, European Space Agency/ESTEC, NL; G. Williams <sup>1</sup> ; H. Williams <sup>1</sup> ; <sup>1</sup> University of Bristol, Department of Aerospace Engineering, GB		<b>CEAS-2007-260</b> <b>Composite Fasteners for Aerospace Applications</b> J.W. de Haan, icotec, CH; M. Barbezat, EMPA, CH; A. Obst, ESA, NL			
<b>Short Course 5</b> Chair: TBD				ECC Room 5				<b>Short Course 6</b> Chair: TBD				ECC Room 5					

**Short Course Aircraft Design**  
**Details are be published on [www.ceas2007.org](http://www.ceas2007.org)**

14:00-15:00 **Objectives of the Bologna Process and Effects on Aerospace Engineer Education**

Speaker: J. Steinbach, TU Berlin, DE; Discussion with: S. Pantelakis, University Patras, GR; F. Schmith, Lufthansa Technik, DE; P. Greisler, BMBF, DE

Moderator: J.-M. Wiarda, DIE ZEIT, DE

15:10 – 15:50	15:50 – 16:10	16:10 – 16:30	16:50 – 17:10	17:10 – 17:30	17:30 – 17:50	17:50 – 18:10
<b>Poster Session 1</b>	<b>FLYSAFE</b> Chair: K. Burkhardt, Diehl Aerospace, DE		<b>Operations (Air and Ground)</b> Chair: T.M. Cerbe, Fachhochschule Braunschweig/Wolfenbüttel, DE			
<div style="border: 1px solid black; padding: 5px; width: fit-content;">                     Details for poster session please find at the end of this overview                 </div>	<b>CEAS-2007-261</b> <b>The European Research Project FLYSAFE: Evaluation of Novel Traffic Functionalities for Future Airliners</b> N. Barraci <sup>1</sup> ; C. Vernaleken <sup>1</sup> ; C. Urvoy <sup>1</sup> ; K. Koch <sup>1</sup> ; A. Andreas, Sindlinger, DE; G. Heidemeyer <sup>1</sup> ; U. Klingauf <sup>1</sup> ; <sup>1</sup> TU Darmstadt, Institut für Flugsysteme und Regelungstechnik, DE	<b>CEAS-2007-262</b> <b>FLYSAFE - Design of the Next Generation Integrated Surveillance System</b> M. Jirsch, Diehl Aerospace, DE	<b>CEAS-2007-263</b> <b>Optimized Minima Information on Data Driven Aeronautical Charts</b> T. Grasse; P. Wipplinger; T. Wiesemann; J. Schiefele; Jeppesen GmbH, DE	<b>CEAS-2007-264</b> <b>Highly Efficient Civil Aviation - An Opportunity for Present &amp; A Vision for Future</b> R.K. Nangia, Nangia Aero Research Associates, GB	<b>CEAS-2007-265</b> <b>The Impact of High Speed Intercity Train Access on Airport Choice in Germany</b> M.C. Gelhausen, German Aerospace Center (DLR), DE	<b>CEAS-2007-266</b> <b>Standardized Concept for Passenger Guidance Systems at Aerodromes</b> M. Schultz; A. Wachtel; H. Fricke; TU Dresden, DE
	<b>Poster Session 2</b>	<b>High Lift Aerodynamics 1</b> Chair: R. Rudnik, DLR Braunschweig, DE		<b>High Lift Aerodynamics 2</b> Chair: R. Rudnik, DLR Braunschweig, DE		
<div style="border: 1px solid black; padding: 5px; width: fit-content;">                     Details for poster session please find at the end of this overview                 </div>	<b>CEAS-2007-267</b> <b>An Overview on recent High-Lift Research Achievements from Airbus Aerodynamics</b> D. Reckzeh; H. Hansen; M. Sutcliffe; K. Bohannon; S. Galpin; Airbus, DE	<b>CEAS-2007-268</b> <b>Prediction Capabilities of Maximum Lift Effects for Realistic High-Lift-Commercial-Aircraft Configurations within the European Project EUROLIFT II</b> H. von Geyr; N. Schade; German Aerospace Center (DLR), Institute of Aerodynamics and Flow Technology, DE	<b>CEAS-2007-269</b> <b>High Lift Aerodynamics at NASA - Part 1</b> L. Leavitt; Washburn; Wahls; NASA, LaRC, US	<b>CEAS-2007-270</b> <b>High Lift Aerodynamics at NASA - Part 2</b> L. Leavitt; Washburn; Wahls; NASA, LaRC, US	<b>CEAS-2007-271</b> <b>Overview of Current Achievements and Future Challenges for High Lift Integration R&amp;T Projects</b> S. Bauß; B. Kiefner; Airbus, DE	<b>CEAS-2007-272</b> <b>Validation of In-Tunnel High Lift Computations</b> T. Delille; J.C. Courty; Dassault-Aviation, FR
	<b>Poster Session 3</b>	<b>Aviation Safety</b> Chair: H. Heinen, Diehl Aerospace, DE		<b>Rotorcraft Flight and Structural Dynamics</b> Chair: I.C. Hermans, NLR / AT Amsterdam, NL		
<div style="border: 1px solid black; padding: 5px; width: fit-content;">                     Details for poster session please find at the end of this overview                 </div>	<b>CEAS-2007-273</b> <b>Parametric Aircraft Trajectory Model for Takeoff and Departure</b> S. Amelsberg; R. Luckner; TU Berlin, DE	<b>CEAS-2007-274</b> <b>Safety in the Terminal Area - An Approach for a Quantitative Assessment</b> M. Kietzmann; H. Fricke; Dresden University of Technology, Air Transport Technology and Logistics, DE	<b>CEAS-2007-275</b> <b>EC135 System Identification for Model Following Control and Turbulence Modeling</b> S. Seher-Weiss; W. von Gruenhagen; DLR, DE	<b>CEAS-2007-276</b> <b>Prediction of Rate Limiter Effects on Rotorcraft Stability</b> V. Gollnick, German Aerospace Centre, DLR, DE; C. Gudrian, Fluidon, DE	<b>CEAS-2007-277</b> <b>Helicopter Rotor Blade Integrated Turbulence Detector for Noise and Vibration Reduction Measures</b> C. Gradolph <sup>1</sup> ; M. Knecht <sup>2</sup> ; T. Ziemann <sup>1</sup> ; W.J. Wagner <sup>3</sup> ; V. Klöppel <sup>1</sup> ; C. Breitsamer <sup>2</sup> ; N. Adams <sup>2</sup> ; J. Wilde, University of Freiburg, DE; G. Müller <sup>1</sup> ; A. Friedberger <sup>1</sup> ; <sup>1</sup> EADS Innovation Works, DE; <sup>2</sup> Technical University of Munich, DE; <sup>3</sup> Eurocopter Deutschland GmbH, DE	

14:00-15:00	<b>Objectives of the Bologna Process and Effects on Aerospace Engineer Education</b> <i>Speaker: J. Steinbach, TU Berlin, DE; Discussion with: S. Pantelakis, University Patras, GR; F. Schmith, Lufthansa Technik, DE; P. Greisler, BMBF, DE</i>			Moderator: J.-M. Wiarda, DIE ZEIT, DE
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15:10 – 15:50	15:50 – 16:10	16:10 – 16:30	16:50 – 17:10	17:10 – 17:30	17:30 – 17:50	17:50 – 18:10
<b>Poster Session 4</b> Details for poster session please find at the end of this overview	<b>Education 1</b> Chair: J. Thorbeck, TU-Berlin, DE <b>ECC Room 2</b>		<b>Education 2</b> Chair: W. Alles; RWTH Aachen, DE <b>ECC Room 2</b>			
	<b>CEAS-2007-279</b> <b>EPMA - European Postgraduate Master in Aeronautical Engineering</b> D. Scholz, Hamburg University of Applied Sciences, Dept. of Automotive and Aeronautical Engineering, DE	<b>CEAS-2007-280</b> <b>Education, Projects and other Aerospace Activities on Brno University of Technology (Czech Rep.)</b> J. Hlinka; A. Pistek; Brno University of Technology, Institute of Aerospace Engineering, CZ	<b>CEAS-2007-281</b> <b>An Implementation of an Aircraft Flight Mechanics Model for Flight Control Law Studies</b> L. Cruz, EMBRAER – Empresa Brasileira de Aeronáutica, BR; K. Kienitz, Instituto Tecnológico de Aeronáutica, BR	<b>CEAS-2007-282</b> <b>IFSYS - A TU Berlin UAV Student Project</b> A. Hoffmann; F. Schindler; R. Luckner; TU Berlin, Institut für Luft- und Raumfahrt, DE	<b>CEAS-2007-283</b> <b>A Strategy for Management and Leadership Training for the European Defence Community</b> H. Heumann, CONSULTUM, DE	<b>CEAS-2007-284</b> <b>Information Management vs. Education and Training: CIRA, Italian Aerospace Research Centre, Expertise and Future Developments</b> G.C. Rufolo; F. Diozzi; R. Sannino; CIRA, IT
<b>Poster Session 5</b> Details for poster session please find at the end of this overview	<b>Space Transportation 1</b> Chair: M.H. Obersteiner, Astrium SPACE Transportation, DE <b>ECC Room 3</b>		<b>Space Transportation 2</b> Chair: R. Janovsky, OHB-Technology, DE <b>ECC Room 3</b>			
	<b>CEAS-2007-285</b> <b>Space Transportation Systems – Demand / Market Analysis</b> Ch. Gritzner, German Aerospace Center - Space Agency, DE; M. Obersteiner, Astrium Space Transportation, DE	<b>CEAS-2007-286</b> <b>Space Transportation Systems – System Concepts</b> J. Kauffmann, ESA, FR	<b>CEAS-2007-287</b> <b>Space Transportation Systems - Propulsion, Structures &amp; Subsystems</b> R. Lo <sup>1</sup> ; H. Adirim <sup>1</sup> ; W. Zinner, Astrium Space Transportation, DE; R. Pernpeintner, MT-Aerospace, DE; <sup>1</sup> AI: Aerospace Institute, DE	<b>CEAS-2007-288</b> <b>Space Transportation Systems – Missions, Operations, and Ground Infrastructure</b> O. Kalden, Vega IT, DE; M.H. Gräßlin, Universität Stuttgart, DE	<b>CEAS-2007-289</b> <b>Development and Transportation Costs of Space Launch Systems</b> D.E. Koelle, TCS-TransCostSystems, DE; R. Janovsky, OHB-System AG, DE	<b>CEAS-2007-290</b> <b>Survey of Agency Programmes and Budgets Dedicated to Demonstration and Development Available for German Space Industry</b> R. Pernpeintner, MT-Aerospace AG, DE; D. Sygulla, MT Aerospace AG, DE
<b>Poster Session 6</b> Details for poster session please find at the end of this overview	<b>Space Propulsion II</b> Chair: O. Haidn, DLR Lampoldshausen, DE <b>ECC Room 1</b>		<b>Aero-Engine Components: Compressors III</b> Chair: A. Kühhorn, BTU Cottbus, DE <b>ECC Room 1</b>			
	<b>CEAS-2007-291</b> <b>Challenges of Test Facilities for Space Propulsion</b> K. Schäfer <sup>1</sup> ; G. Krühse <sup>1</sup> ; V. Schmidt <sup>1</sup> ; H. Zimmermann, German Aerospace Center, Institute of Space Propulsion, DE; <sup>1</sup> German Aerospace Center, Institute of Space Propulsion, DE	<b>CEAS-2007-292</b> <b>Multidisciplinary Simulation at the Ariane 5 Nozzle Section</b> J. Bartolome Calvo; H. Lüdeke; DLR (German Aerospace Center), DE	<b>CEAS-2007-293</b> <b>Aerodynamic Technology Integration on the TP400 and E3E Core Compressors</b> V. Gümmer; R. Digele; T. Gielt; Rolls-Royce Deutschland Ltd. & Co. KG, DE	<b>CEAS-2007-294</b> <b>Multi Objective Optimization of a Fan Blade Using an Advanced Parameterization Method</b> M. N. Diaye <sup>1</sup> ; G. Grondin <sup>1</sup> ; V. Kelher, University of Liège, BE; P. Ferrand, LMFA, FR; S. Moreau, VALEO Motors and Actuators, FR; <sup>1</sup> Fluorem SAS, FR		<b>CEAS-2007-296</b> <b>Hypersonic Nozzle Flow Analysis Using Equilibrium Chemistry Model</b> I. Mahmood; M. Bashir; S. Zahir; M. Khan; NESCOM, PK

Wednesday, 12th September 2007

Plenary Session in ECC Hall C

14:00-15:00 **Objectives of the Bologna Process and Effects on Aerospace Engineer Education**

Speaker: J. Steinbach, TU Berlin, DE; Discussion with: S. Pantelakis, University Patras, GR; F. Schmith, Lufthansa Technik, DE; P. Greisler, BMBF, DE

Moderator: J.-M. Wiarda, DIE ZEIT, DE

15:10 – 15:50	15:50 – 16:10	16:10 – 16:30	16:50 – 17:10	17:10 – 17:30	17:30 – 17:50	17:50 – 18:10
<b>Poster Session 7</b>	<b>Development Perspectives for Civil Aviation (Bauhaus Luftfahrt)</b> Chair: J. van Toor, EADS, DE		<b>Room Paris</b>			
<div style="border: 1px solid black; padding: 5px; width: fit-content;">                     Details for poster session please find at the end of this overview                 </div>	<b>CEAS-2007-297</b> <b>Implication of Ultra High Bypass Engines on Aircraft Design Features and Mission</b> A. Seitz; S. Donnerhack; J. Seifert; Bauhaus Luftfahrt e.V., DE	<b>CEAS-2007-298</b> <b>Perspectives of Vertical / Short Take Off and Landing in Commercial Aviation</b> C. Gologan; C. Heister; C. Kelders; A. Kuhlmann; J. Seifert; Bauhaus Luftfahrt e.V., DE	<b>UAS</b> Chair: A. Schöttl, MBDA, DE			
	<b>CEAS-2007-299</b> <b>Certification of "Small" UAV Systems</b> C. Battaglia <sup>1</sup> ; R. Querzoli <sup>1</sup> ; A. Grasso <sup>2</sup> ; G. Orsini <sup>2</sup> ; <sup>1</sup> Alenia Aeronautica S.p.A., IT; <sup>2</sup> Ministry of Defence, D.G.A.A., IT	<b>CEAS-2007-300</b> <b>An Efficient Approach to GPS/INS Integrity Monitoring</b> J. Wendell <sup>1</sup> ; J. Dambeck <sup>1</sup> ; G. Herbold <sup>1</sup> ; S. Kiesel <sup>2</sup> ; O. Meister <sup>2</sup> ; R. Mönikes <sup>2</sup> ; <sup>1</sup> MBDA Germany, DE; <sup>2</sup> University of Karlsruhe, DE	<b>CEAS-2007-301</b> <b>Flight Control for Micro Aerial Vehicles Using a Modular Neural Network Approach</b> T. Krüger <sup>1</sup> ; L. Krüger, Mavionics GmbH, DE; A. Kuhn, Andata Development Technologies, AT; J. Axmann, Volkswagen AG, DE; P. Vörsmann <sup>1</sup> ; <sup>1</sup> Institut für Luft- und Raumfahrtssysteme - TU-Braunschweig, DE	<b>CEAS-2007-302</b> <b>Plasma Flyer - The First MiniUAV with Plasma Flow Control</b> B. Göksel, Electrofluidsystems Ltd. Holding, DE		
<b>Poster Session 8</b>	<b>Launcher</b> Chair: A. Juhls, Astrium SPACE Transportation GmbH, DE		<b>Estrelsaal A</b>			
<div style="border: 1px solid black; padding: 5px; width: fit-content;">                     Details for poster session please find at the end of this overview                 </div>	<b>CEAS-2007-303</b> <b>History and Lessons Learnt from the Development of Mechanical Systems for Different Launch Vehicles</b> V. Gómez-Moliner, EADS CASA Espacio, ES	<b>CEAS-2007-304</b> <b>FLACON: Future high-altitude Flight - an attractive commercial niche?</b> J. Starke, Astrium, DE; J.-P. Belmont, DE; J. Longo, DE; Ph. Novelli, DE; W. Kordulla, DE	<b>Aircraft Concepts - Future Projects</b> Chair: F. Jouallec, Aerospace Valley, FR			
	<b>CEAS-2007-305</b> <b>Estimating Modification Efforts for New Aircraft Development Projects</b> C. Manz, HTWG Konstanz, University of Applied Sciences, DE	<b>CEAS-2007-306</b> <b>Aerodynamic Analysis and Design of a Future Air-speed Transit Flying Over the Nonplanar Ground Surface</b> J. Cho; J. Jeonghyun Cho; Hanyang University, KR	<b>CEAS-2007-307</b> <b>The Principles of the Constant 'g' Stability System</b> D. Reid, Aquaduck Aviation, NZ	<b>CEAS-2007-308</b> <b>Configuration Design of a Roadable Aircraft Fixed a Ring Wing</b> M. Nakajima; Y. Nishimiya; H. Kikukawa; Kanazawa Institute of Technology, JP		
<b>Towards Climate-optimized Aviation – The Challenge</b> Chair: U. Schumann, DLR Oberpfaffenhofen, DE		<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>Workshop</b> </div>	<b>Towards Climate-optimized Aviation – The Response</b> Chair: U. Schumann, DLR Oberpfaffenhofen, DE		<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>Workshop</b> </div>	<b>ECC Room 4</b>
<b>Introduction</b> Joachim Szodruich, DLR, DE		<b>ACARE Goals and DLR Contributions for Reduction of Aviation Climate Impact</b> Cord Rossow, DLR Braunschweig, DE		<b>Aircraft for Reduced Impact on Climate - How Aircraft Design can Contribute to Mitigating Global Warming</b> Regina Egelhofer, TU Munich, DE		<b>Engine Emissions Reduction Potential</b> Norbert Arndt, Rolls-Royce Germany, DE
<b>Global Climate Change - a Challenge for Aviation</b> Ulrike Lohmann, ETH Zürich, CH		<b>Climate Impact of Aviation: Issues and Present Assessment</b> Ulrich Schumann, DLR Oberpfaffenhofen, DE		<b>Conclusions</b> Ulrich Schumann, DLR Oberpfaffenhofen, DE		
<b>Climate Impact of Aviation: Atmospheric Science Progress and Uncertainties</b> David Lee, Univ. Manchester, GB						

14:00-15:00 **Objectives of the Bologna Process and Effects on Aerospace Engineer Education**

Speaker: J. Steinbach, TU Berlin, DE; Discussion with: S. Pantelakis, University Patras, GR; F. Schmith, Lufthansa Technik, DE; P. Greisler, BMBF, DE

Moderator: J.-M. Wiarda, DIE ZEIT, DE

15:10 – 15:50	15:50 – 16:10	16:10 – 16:30	16:50 – 17:10	17:10 – 17:30	17:30 – 17:50	17:50 – 18:10
<b>Poster Session 9</b>	<b>Mechanical Architecture, Design and Engineering 3</b> Chair: N. Gualtieri, Thales Alenia Space, IT		<b>Mechanical Architecture, Design and Engineering 4</b> Chair: N. Gualtieri, Thales Alenia Space, IT			
<div style="border: 1px solid black; padding: 5px; width: fit-content;">                     Details for poster session please find at the end of this overview                 </div>	<b>CEAS-2007-309</b> <b>Development of a Dimensionally Stable CFRP Structure for Supporting Optical Instruments in a Laser Communication Device</b> A. Di Carlo; R. Usinger; Oerlikon Space AG, CH	<b>CEAS-2007-310</b> <b>Development of a Dimensionally Stable Lightweight Structure for the LISA Pathfinder Science Module</b> HP. Gröbelbauer; M. Heer; Oerlikon Space AG, CH	<b>CEAS-2007-311</b> <b>A Hierarchical Approach for the Buckling Analysis of the Vega 1/2 Interstage</b> E. Jansen <sup>1</sup> ; J. Wijker, Dutch Space BV, NL; J. Arbocz <sup>1</sup> ; <sup>1</sup> Delft University of Technology, Faculty of Aerospace Engineering, NL	<b>CEAS-2007-312</b> <b>The Primary and Secondary Structures of ALADIN</b> C. Kaiser <sup>1</sup> ; C. Widani <sup>1</sup> ; K. Härtel <sup>1</sup> ; P. Haberler <sup>1</sup> ; O. Lecrenier, EADS Astrium SAS, DE; G. Labruyere, ESTEC/ESA, DE; <sup>1</sup> Kayser-Threde GmbH, DE	<b>CEAS-2007-313</b> <b>Efficient Structural-Thermal-Optical Performance Analysis Approach</b> B. Messerschmidt; B. Specht; EADS Astrium, DE	
	<b>Poster Session 10</b>	<b>Composite Structures 3</b> Chair: H. Baier, TU München, DE		<b>Stochastic Analysis</b> Chair: J.N. Bricout, CNES, FR		
<div style="border: 1px solid black; padding: 5px; width: fit-content;">                     Details for poster session please find at the end of this overview                 </div>	<b>CEAS-2007-315</b> <b>Polymerisation of Composite Structures in Free Space Environment</b> G. Nechitailo, Institute of Biochemical Physics, Russian Academy of Science, RU; A. Kondyurin, University of Sydney, AU	<b>CEAS-2007-316</b> <b>CESIC® - A Mature Technology for Space Applications</b> M.R. Kroedel, ECM, DE	<b>CEAS-2007-317</b> <b>Probabilistic Methods Applied to Fracture Control of Spaceflight Structures</b> G. Sinnema <sup>1</sup> ; C. Mattrand, IFMA, French Institute of Advanced Mechanics, FR; F. Novo <sup>1</sup> ; <sup>1</sup> European Space Agency, NL	<b>CEAS-2007-318</b> <b>PLEIADES HR SATELLITE - Mechanical and Thermal Architecture</b> V. Albouys, CNES, FR; P. Corberand <sup>1</sup> ; L. Larue <sup>1</sup> ; S. André <sup>2</sup> ; A. Soler <sup>2</sup> ; <sup>1</sup> EADS Astrium, FR; <sup>2</sup> Thales Alenia Space, FR	<b>CEAS-2007-319</b> <b>Identification of Numerical Modelling Uncertainty Based on Dynamic Fuzzy Finite Element Analysis</b> D. Moens; M. De Munck; D. Vandepitte; K.U.Leuven, Department of Mechanical Engineering, BE	<b>CEAS-2007-320</b> <b>Stochastic Simulation for the Robust Design of Space Optical Instruments</b> Lucarelli <sup>1</sup> ; C. Mottl, Technische Universität Berlin, DE; A. Weber, Technische Universität Dresden, DE; S. W. Konrad <sup>1</sup> ; <sup>1</sup> EADS Astrium GmbH, DE
		<b>Short Course 7</b> Chair: TBD		<b>Short Course 8</b> Chair: TBD		

**Short Course Aircraft Design**  
 Details are be published on [www.ceas2007.org](http://www.ceas2007.org)



Thursday, 13th September 2007

Plenary Session in **ECC Hall C**

08:30-09:30 **Space Technology Forum**  
with CEOs of EADS Satellites, EADS Space Transportation, AAS, OHB and SSTL

Moderator: C. Stavrinidis, ESA/ESTEC, NL

09:40 – 10:00		10:00 – 10:20		10:20 – 10:40		10:40 – 11:00		11:20 – 11:40		11:40 – 12:00		12:00 – 12:20		12:20 – 12:40	
<b>Air Traffic Management 1</b> Chair: A. Geisler, Österreichische Forschungsförderungsgesellschaft, AT								<b>Air Traffic Management 2</b> Chair: M. Schnell, DLR Oberpfaffenhofen, DE							
<b>CEAS-2007-321</b> <b>The Air Traffic Management System for 2050: Virtual - Global - Automated</b> M. Brochard, EUROCONTROL, FR		<b>CEAS-2007-322</b> <b>EMMA2 - European Airport Movement Management by A-SMGCS, Part 2</b> M. Roeder, DLR Institute of Flight Guidance, DE		<b>CEAS-2007-323</b> <b>Augmented Reality Technology for Control Tower - Analysis of Applicability Based on the Field Study</b> E. Pinska, EUROCONTROL Experimental Centre, FR; C. Tijus, Université Paris, Laboratoire Cognition & Usages, FR		<b>CEAS-2007-324</b> <b>Reliable Traffic Scenarios for Very Light Jets and their Impact onto the Air Traffic Control System</b> G. Naumann; T. Guenther; H. Fricke; Dresden University of Technology, Chair of Air Transport Technology and Logistics, DE		<b>CEAS-2007-325</b> <b>ANASTASIA : Airborne New and Advanced Satellites Techniques and Technologies in a System Integrated Approach</b> J.Y. Catros, THALES Avionics, FR		<b>CEAS-2007-326</b> <b>NEWSKY - Networking the Sky for Aeronautical Communications</b> F. Schreckenbach; M. Schnell; S. Scalise; German Aerospace Center (DLR), Institute of Communications and Navigation, DE		<b>CEAS-2007-327</b> <b>A Generic Platform for Building Air Traffic Environmental Internet Services</b> J. Weggemans; J. van Weert; National Aerospace Laboratory NLR, NL		<b>CEAS-2007-328</b> <b>Newsy – Novel Simulation Concepts for Future Air Traffic</b> T. Gräupl; C.H. Rokitansky; M. Ehammer; University of Salzburg, AT	
<b>Flight Mechanics: Handling Qualities</b> Chair: H.-C. Oelker, EADS Military Air Systems, DE								<b>Advanced Wind Tunnel Testing</b> Chair: J.W. Kooi, German-Dutch Wind Tunnels, NL							
<b>CEAS-2007-329</b> <b>Aircraft Flying Qualities and Flight Safety</b> A. Efremov; A. Ogloblin; A. Koshelenko; Moscow aviation institute, RU		<b>CEAS-2007-330</b> <b>Optimizing Motion Cueing for Research Flight Simulation</b> L. Fucke; R. Luckener; TU Berlin, Institut für Luft- und Raumfahrt, DE		<b>CEAS-2007-331</b> <b>Fine-tuning Handling Qualities on a High-performance Aircraft: Maximising Roll Acceleration While Avoiding Roll Ratchet</b> M. Hanel, EADS Deutschland GmbH, DE; S. Fallon, BAE Systems Plc., DE		<b>CEAS-2007-332</b> <b>A Method for Investigation of Pilot-vehicle System Dynamics in Wake Vortex Encounters</b> A. Schönfeld <sup>1</sup> ; R. Luckner <sup>1</sup> ; A.V. Efremov, Moscow Aviation Institute, RU; <sup>1</sup> ILR, Technical University of Berlin, DE		<b>CEAS-2007-333</b> <b>Noise Source Localization in Closed Test Sections With Microphone Arrays</b> A. Henning, DLR, DE; L. Koop, DLR, DE; P. Sijtsma <sup>1</sup> ; S. Oerlemans <sup>1</sup> ; <sup>1</sup> NLR, NL		<b>CEAS-2007-334</b> <b>Benchmark Tests of the Pressure Sensitive Paint Systems Developed within the European Windtunnel Association (EWA)</b> D. Hurst, Aircraft Research Association, GB; A. Davies, BAE Systems, GB; A. Auletta, CIRA, Italian Centre for Aerospace Research, IT; U. Henne, German Aerospace Center (DLR), DE; R. van Schinkel, DNW, NL; M.-C. Merienne, ONERA, FR; V. van der Haegen, VKI, BE		<b>CEAS-2007-335</b> <b>Development of Remote Controls for Movable Surfaces of Wind Tunnel Models</b> J. van Twisk, NLR, NL		<b>CEAS-2007-336</b> <b>Benchmark Testing of the Model Deformation Measurement Systems Developed within the European Windtunnel Association (EWA).</b> D. Hurst, Aircraft Research Association, GB; H. Frahnert, DLR, Göttingen, DE; R. van Schinkel, DNW, NL; H. Quix, ETW, DE; Y. Le Sant, ONERA, DAFE, FR	
<b>Advanced Technologies to Optimize Aircraft Availability &amp; Operability – 1</b> Chair: M. Worsfold, GE Aviation Systems, GB								<b>Advanced Technologies to Optimize Aircraft Availability &amp; Operability – 2</b> Chair: M. Worsfold, GE Aviation Systems, GB							
<b>CEAS-2007-337</b> <b>On-board Health Assessment of an Electro-mechanical Actuator Using Wavelet Features</b> J. Schaab, TU Darmstadt, DE; M. Harrington, GE Aviation, Bishops Cleeve, Cheltenham, GB; U. Klingauf, TU-Darmstadt, DE		<b>CEAS-2007-338</b> <b>Knowledge Space Model - Human Factors and Operability Concepts in the System of Aviation Industry</b> R. Morrison; P. Grommes; N. McDonald; Trinity College Dublin, School of Psychology, IE		<b>CEAS-2007-339</b> <b>Hydraulic Actuation Loop Degradation Diagnosis and Prognosis</b> E. Diez-Lledó <sup>1</sup> ; J. Aguilar-Martin <sup>1</sup> ; J.-R. Massé, Hispano-Suiza, Groupe Safran, FR; A. Sif, Teuchos, Groupe Safran, FR; E. Griful, ETSEIAT-UPC, ES; <sup>1</sup> LAAS-CNRS, FR		<b>CEAS-2007-340</b> <b>Landing Gear Health Monitoring</b> M. Yates; A. Mortimore, Airbus, GB		<b>CEAS-2007-341</b> <b>Condition Based Operational Risk Assessment An Innovative Approach to Improve Fleet and Aircraft Operability: Conditional View</b> M. Buderath, EADS-Military Air Systems, DE; A. Arnaiz <sup>1</sup> ; L. Susperregi <sup>1</sup> ; <sup>1</sup> Fundación Tekniker, ES		<b>CEAS-2007-342</b> <b>Condition-Based Operational Risk Assessment - An Innovative Approach to Improve Fleet and Aircraft Operability: Operational Risk</b> A. Schirrmann, EADS Deutschland GmbH, Innovation Works, DE		<b>CEAS-2007-343</b> <b>Condition based Operational Risk Assessment. An Innovative Approach to Improve Fleet And Aircraft Operability, Part 3: Maintenance Planning</b> P. Papachatzakis; N. Papakostas; G. Chryssolouris; University Patras, Dept. of Mechanical Engineering and Aeronautics, GR		<b>CEAS-2007-344</b> <b>Cost Benefit Analysis of a Health Management System</b> H. Fromm; S. Heck; M. Buderath; EADS Deutschland GmbH, DE	

Thursday, 13th September 2007

Plenary Session in **ECC Hall C**

08:30-09:30 **Space Technology Forum**  
with CEOs of EADS Satellites, EADS Space Transportation, AAS, OHB and SSTL

Moderator: C. Stavrinidis, ESA/ESTEC, NL

09:40 – 10:00		10:00 – 10:20		10:20 – 10:40		10:40 – 11:00		11:20 – 11:40		11:40 – 12:00		12:00 – 12:20		12:20 – 12:40					
<b>Aircraft Composite Structures</b> Chair: S. Pantelakis, University of Patras, GR				<b>STS</b>				<b>ECC Room 2</b>				<b>Aircraft Composite Structures / Structures - Analysis 1</b> Chair: R. Kroyer, MBDA Deutschland, DE				<b>ECC Room 2</b>			
<b>CEAS-2007-345</b> <b>ALCAS - Advanced Low Cost Aircraft Structures</b> H. Bommer, EADS Deutschland, DE; D. Phipps, Airbus, GB		<b>CEAS-2007-346</b> <b>ALCAS Centre Wing Box – Lower Cover Low Cost Resin Infusion Stringer Manufacturing</b> M. Kleineberg, DLR, DE; M. Schradick, Airbus, DE; E. Sperlich, ZIM, DE		<b>CEAS-2007-347</b> <b>Crashworthiness of Composite Aircraft Structures</b> G. Labeas, University of Patras, GR		<b>CEAS-2007-348</b> <b>New Challenges in Structural Design and Analysis of Composite Structures</b> C. Petiot; P. Lefebure; S. Chatel; C. Duval; EADS France, FR		<b>CEAS-2007-349</b> <b>Experimental and Computational Studies of Mechanically Fastened Joints in Composite Aircraft Structures</b> C. McCarthy; M. McCarthy; University of Limerick, Dept. of Mechanical and Aeronautical Engineering, IE		<b>CEAS-2007-350</b> <b>Finite Element Unit Cell Based Strength Prediction of Stitched CFRP Laminates</b> H. Heß; N. Himmel; Institut für Verbundwerkstoffe (IVW) GmbH, DE		<b>CEAS-2007-351</b> <i>MT Aerospace Innovation-Award for his diploma thesis with the topic: Fracture Mechanics Analysis of Novel Non-rectangular Stiffening Concepts in Comparison to Conventionally Rectangular Stiffened Fuselage Structures</i> S. Kébreau, TU Braunschweig, DE		<b>CEAS-2007-352</b> <b>Innovative Approaches for Integration of Functions in Composite Sandwich Structures by the Example of Cabin Interior</b> D. Krause; M. Pein; T. Gumpinger; Hamburg University of Technology, DE					
<b>Space Systems: Technology Aspects</b> Chair: M. Sölter, Astrium GmbH, DE								<b>ECC Room 3</b>											
<b>CEAS-2007-353</b> <b>The Advanced ISS Air Monitor ANITA - In Orbit Operations</b> T. Stufferl <sup>1</sup> ; G. Tan, ESA, NL; A. Honne <sup>2</sup> ; H. Mosebach <sup>1</sup> ; D. Kampf <sup>1</sup> ; H. Odegard <sup>2</sup> ; N. Henn, DLR, DE; <sup>1</sup> Kayser-Threde GmbH, DE; <sup>2</sup> SINTEF, NO		<b>CEAS-2007-354</b> <b>Structural Vibrations Induced by HVI - Application to the GAIA Spacecraft</b> J.B. Bernaudin <sup>1</sup> ; J.-B. Vergniaud <sup>1</sup> ; M. Guyot <sup>1</sup> ; M. Lambert, ESA, NL; F. Schafer <sup>2</sup> ; S. Ryan <sup>2</sup> ; S. Hiermaier <sup>2</sup> ; E. Taylor, Open University, GB; <sup>1</sup> EADS Astrium, FR; <sup>2</sup> EMI, DE		<b>CEAS-2007-355</b> <b>Orbit Error Estimations for ESA's Collision Risk Prediction Service</b> H. Krag <sup>1</sup> ; H. Klinkrad <sup>1</sup> ; J.-R. Alarcón-Rodríguez, GMV S. A., ES; <sup>1</sup> ESA/ESOC, DE		<b>CEAS-2007-356</b> <i>Reinhard-Furrer-Award for his dissertation with the topic: Modeling of Sodium-Potassium Droplets as a Contribution to the Orbital Object Population</i> C. Wiedemann, TU Braunschweig, DE		<b>CEAS-2007-357</b> <b>Landing Pallet: a Crushable Mission to Mars</b> P. Palmieri, Thales Alenia Space, IT		<b>CEAS-2007-358</b> <b>The Hypersonic Drag Balloon Archimedes and Its Research and Testing Program</b> H.S. Griebel <sup>1</sup> ; B. Häusler <sup>1</sup> ; C. Mundt, Institute of Thermodynamics, UniBw München, DE; H. Rapp, Institute of Light Weight Structures, UniBw München, DE; H.J. Gudladt, Institute of Material Sciences, UniBw München, DE; <sup>1</sup> Institute of Space Technology, UniBw München, LRT9, DE		<b>CEAS-2007-359</b> <b>Landing Impact Simulation and Testing Approaches-Alcatel Alenia Space Experience</b> P.C. Marucchi-Chierro <sup>1</sup> ; R. Riva, SOFITER SYSTEM ENGINEERING, IT; R. Ullio <sup>1</sup> ; F. Ouagliotti <sup>1</sup> ; <sup>1</sup> Alcatel Alenia Space-I, IT		<b>CEAS-2007-360</b> <b>Re-entry Risk Assessment for Launchers - Development of the New SCARAB 3.1L</b> T. Lips <sup>1</sup> ; B. Fritsche <sup>1</sup> ; M. Homeister <sup>1</sup> ; G. Koppenwallner <sup>1</sup> ; H. Klinkrad, European Space Agency/ESOC, DE; M. Toussaint, European Space Agency/HQ, FR; <sup>1</sup> HTG, Hypersonic Technology Göttingen, DE					
<b>Aero-Engine Control and Measurement Techniques</b> Chair: S. Staudacher, Universität Stuttgart, DE								<b>ECC Room 1</b>											
<b>CEAS-2007-361</b> <b>Application of Fuzzy-Logic Controller in Gas Turbine Speed Control and Surge Control on Transient Performance</b> A.A. Torghabeh; A.M. Tousi; Amirkabir University, IR		<b>CEAS-2007-362</b> <b>Dynamic Simulation and Control System Modelling of Solid Oxide Fuel Cell Hybrids</b> F. Kroll; A. Nielsen; S. Staudacher; Institut für Luftfahrtantriebe, Universität Stuttgart, DE		<b>CEAS-2007-363</b> <b>Installation Effects Characterisation of a Typical High Bypass Ratio Engine Using Numerical Simulations and Particle Image Velocimetry Part 1: Experimental Setup and Wind Tunnel Improvements</b> J. Julliard, Snecma, FR; O. Piccin, ONERA GMT, FR; R. Davy, ONERA DSNA, FR		<b>CEAS-2007-364</b> <i>Winfried Bierhals-Foundation-Award for his diploma thesis with the topic: Application of the Acoustic Emission Analysis to Highly Thermally Loaded Combustor Shielding Plates</i> F. Meinel, University of Karlsruhe, Institut für Thermische Turbomaschinen, DE		<b>CEAS-2007-365</b> <b>Recent Progress in Scramjet / Rocket based Combined Cycle Engines at JAXA, Kakuda Space Propulsion Center</b> S. Ueda; S. Sato; K. Itoh; K. Tani; S. Tomioka; T. Kanda; JAXA, Combined Propulsion Research Group, JP		<b>CEAS-2007-366</b> <b>Non Deterministic Analysis of a Scramjet Propulsion System</b> G. Schütte; S. Staudacher; Institute of Aircraft Propulsion Systems/University of Stuttgart, DE		<b>CEAS-2007-367</b> <b>Experimental Study of the Single Expansion Ramp Nozzle Flow Properties and its Interaction with the External Flow</b> C. Hirschen; A. Gülhan; German Aerospace Center (DLR), DE		<b>CEAS-2007-368</b> <b>Optimizing Aircraft Maintenance Efficiency in Global Start-up Support Projects</b> S. Hollmeier, Lufthansa Technik, DE					
<b>Hypersonic Propulsion Systems</b> Chair: J. von Wolfersdorf, Universität Stuttgart, DE								<b>ECC Room 1</b>											

Thursday, 13th September 2007

Plenary Session in **ECC Hall C**

08:30-09:30 **Space Technology Forum**  
with CEOs of EADS Satellites, EADS Space Transportation, AAS, OHB and SSTL

Moderator: C. Stavrinidis, ESA/ESTEC, NL

09:40 – 10:00		10:00 – 10:20		10:20 – 10:40		10:40 – 11:00		11:20 – 11:40		11:40 – 12:00		12:00 – 12:20		12:20 – 12:40			
<b>UAS - Sensors and Signal Processing</b> Chair: G. Trommer, Universität Karlsruhe, DE								<b>Flight Control - Actuation and Sensors</b> Chair: D. Scholz, HAW Hamburg, DE									
<b>CEAS-2007-369</b> <b>Optimal Manoeuvre Change-detection of Agile Aerial Systems</b> A. Schöttli, LFK – Lenkflugkörpersysteme GmbH, DE		<b>CEAS-2007-370</b> <b>Implementation of a Sense and Avoid System for Unmanned Aerial Vehicles</b> J.-B. Park; P. Vörsmann; Institute of Aerospace Systems, TU Braunschweig, DE		<b>CEAS-2007-371</b> <b>Sensor Suites for Future Autonomous Unmanned Aerial Vehicles</b> D. Hoffmann; T. Rapp; EADS Deutschland GmbH, DE		<b>CEAS-2007-372</b> <b>Stereo-based Obstacle Mapping from a Helicopter Platform</b> F. Andert; L. Goormann; Deutsches Zentrum für Luft- und Raumfahrt, DE		<b>CEAS-2007-373</b> <b>Advanced GPS/INS Integration for Autonomous Mini and Micro Aerial Vehicles and Scientific Payload Applications</b> A. Heindorf <sup>1</sup> ; T. Martin <sup>1</sup> ; M. Buschmann, Mavionics GmbH, DE; P. Vörsmann <sup>1</sup> ; <sup>1</sup> Technical University of Braunschweig, Institute of Aerospace Systems, DE		<b>CEAS-2007-374</b> <b>The Power Electronic Environment on More Electric Aircrafts A Way to Improve Signal Integrity by means of Shielded Cables</b> R. Tiedemann, Rolls-Royce Deutschland Ltd. & Co. KG, DE		<b>CEAS-2007-375</b> <b>Position and Load Control for Hybrid Primary Flight Controls with Electromechanical and Electrohydraulic Actuators</b> O. Cochoy; U.B. Carl; F. Thielecke; Hamburg University of Technology, DE		<b>CEAS-2007-376</b> <b>Anforderungen an Steuerungen in Segelflugzeugen und Motorseglern mit Servo-Übertragungs- und Regelungselementen</b> A. Gáb; J. Nowack; W. Alles; RWTH Aachen, DE		Presentation in German	
<b>Aerodynamics 2</b> Chair: H.-P. Kreplin, DLR Göttingen, DE								<b>Cabin architecture</b> Chair: L. Jonson, SAS, SE									
<b>CEAS-2007-377</b> <b>Numerical Simulation of the Flow around Circulation Control Airfoils</b> K.-C. Pfingsten; C. Jensch; K.W. Körber; R. Radespiel; TU Braunschweig, Institute of Fluid Mechanics, DE		<b>CEAS-2007-378</b> <i>Airbus-Awards of Airbus Deutschland GmbH for his dissertation with the topic: Aerodynamic Benefits of Pulsed Blowing Applied to High-lift Airfoils</i> R. Petz, TU Berlin, DE		<b>CEAS-2007-379</b> <b>Analysis of Plume Impact on Launch Pad During Lift Off</b> R. Sala <sup>1</sup> ; M. Galeotta <sup>1</sup> ; A. Veneziani, Politecnico di Milano, IT; <sup>1</sup> Carlo Gavazzi Space, IT		<b>CEAS-2007-380</b> <i>DLR-Technology-Award for his studies thesis with the topic: Detection of the Transition Point on the Wing of a Glider in Free Flight with the Help of a Thermography System</i> A. Wagner, TU Dresden, DE		<b>CEAS-2007-381</b> <b>Airbus Innovative Cabin Design</b> K.D. Kricke; I. Wuggetzer; Airbus, DE		<b>CEAS-2007-382</b> <b>Electrical Passenger Door Concepts</b> W. Buchs; J. Margraf; Eurocopter Deutschland, DE		<b>CEAS-2007-383</b> <b>Modelling of Passenger Movement Behaviour on Long-haul Flights</b> K. Ploetner, Institute of Aeronautical Engineering - TU München, DE		<b>CEAS-2007-384</b> <b>RODON®s Diagnostic Methods for New Generic System BITE Architectures</b> W. Seibold <sup>1</sup> ; D. Geiter, Airbus, DE; B. Kadmiry <sup>1</sup> ; <sup>1</sup> Soerman Information & Media AB, DE			
<b>Forum: Space Technology Perspectives</b> Coordinator: C. Stavrinidis, ESA/ESTEC, NL								<b>Micro - Nano Technology Developments for Space Applications</b> Coordinator: E. Kircher, ESA/ESTEC, NL									
<p><i>Forum and Discussion with</i></p> <p><b>CTOs of EADS Astrium, EADS Space Transportation, AAS, OHB and SSTL</b></p>								<p>11:20 – 11:40 <b>ESA-CTB Micro Nano Technology Dossier: Roadmaps and Perspectives for Space</b> O. Vendier, TAS, FR, for CTB MNT Working Group</p> <p>11:40 – 12:00 <b>MEMS Reliability for Space</b> A. Dommann, CSEM, CH</p> <p>12:00 – 12:15 <b>Development of a MEMS Rate Sensor for Space Applications</b> B. Olivier, D. Durrant, SEA, GB</p> <p>12:15 – 12:30 <b>MEMS 3D-System-in-Package - High Performance Air and Space Components</b> J. Bergman, Angstrom Aerospace, SE</p> <p>12:30 – 12:45 <b>MNT in the PRISMA Mission</b> T.A. Grönland, Nanospace, SE</p> <p>12:45 – 13:00 <b>NEOMEX - A Strawman Mission for MNT in Space</b> J. Köhler, ESA-ESTEC, NL</p>									

Thursday, 13th September 2007

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Moderator: C. Stavrinidis, ESA/ESTEC, NL

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<b>Mechanical Architecture, Design and Engineering 5</b> Chair: P. Mourey, CNES, FR								SSMMT		<b>Structural Dynamics &amp; Microvibrations 1</b> Chair: M. Sinapius, DLR Braunschweig, DE									
<b>CEAS-2007-393</b> <b>AlphaBus, the European High Capacity Platform for SatComs</b> S. Massier <sup>1</sup> ; G. Lubrano <sup>1</sup> ; P. Belliol, EADS Astrium, FR; A. Obst, ESA/ESTEC, NL; L. Petitjean, CNES, FR; <sup>1</sup> Thales Alenia Space, FR				<b>CEAS-2007-394</b> <b>Thermal Management Issues for Multifunctional Solar Arrays</b> J.A. Foster; G.S. Aglietti; University of Southampton, School of Engineering Sciences, GB				<b>CEAS-2007-395</b> <b>Innovation in Structures Engineering for Future Launch Vehicles - Facing the 21st Century Challenges</b> J. Martin, EADS CASA Espacio, ES				<b>CEAS-2007-396</b> <i>IABG-Foundation-Award for his diploma thesis with the topic: Study and Employment of the Monte Carlo Simulation for the Robust Design of Space Structures</i> A. Weber, TU Dresden, DE							
<b>Materials and Active Structures 1</b> Chair: H. Baier, TU München, DE								SSMMT		<b>Mechanical Testing 1</b> Chair: J.B. Bernaudin, EADS Astrium, FR									
<b>CEAS-2007-401</b> <b>High-Temperature Oxidation of SSIC in Plasma Flows</b> T. Laux, German Aerospace Center, DE				<b>CEAS-2007-402</b> <b>Nonlinear Modeling and Active Flatness Control of Membrane Structures</b> X. Wang; Y.-R. Hu; W. Zheng; C. Sulik; Y. Shen; Canadian Space Agency, CA				<b>CEAS-2007-403</b> <b>Strength Aspects for the Design of ZERODUR Glass Ceramics Structures</b> S. Lucarelli <sup>1</sup> ; P. Gath <sup>1</sup> ; P. Hartmann <sup>2</sup> ; K. Nattermann <sup>2</sup> ; T. Doehring <sup>2</sup> ; <sup>1</sup> EADS Astrium GmbH, DE; <sup>2</sup> Schott AG, DE				<b>CEAS-2007-404</b> <b>In-Orbit Monitoring and Re-Adjustment of Satellite Structures</b> S. Rapp; H. Baier; TU Muenchen, DE							
<b>CEAS-2007-397</b> <b>Micro-vibration Measurements on Thermally Loaded Multi-layer Insulation Samples</b> A. Grillenbeck <sup>1</sup> ; G. Deutsch <sup>1</sup> ; B. Pouilloux, CNES, FR; <sup>1</sup> IABG, DE								<b>CEAS-2007-398</b> <b>A Process with Quantified Accuracy for Predicting Electronic Equipment Vibration Response</b> R. Amy <sup>1</sup> ; G.S. Aglietti <sup>1</sup> ; G. Richardson, Surrey Satellite Technology Limited, GB; <sup>1</sup> School of engineering sciences, University of Southampton, GB				<b>CEAS-2007-399</b> <b>Aeroelastic Prediction and Validation Methods for USV1</b> M. Belardo; L. Di Palma; M. Pecora; CIRA Scpa, IT				<b>CEAS-2007-400</b> <b>Local Damping Identification from Spacecraft Sine Test</b> G. Ladurée <sup>1</sup> ; A. Carpine <sup>1</sup> ; R. Redondo, CNES, FR; <sup>1</sup> Thales Alenia Space, FR			
<b>CEAS-2007-405</b> <b>Mechanical Qualification of the Herschel Satellite</b> W. Teichert, European Testing Services, NL; M. v. Alberti, EADS Astrium, DE; Y. Roche, Thales Alenia Space, FR; A. Schnorhk, European Space Agency, NL								<b>CEAS-2007-406</b> <b>Optical Methods for Non Contact Measurements of Membranes for Space Structures</b> S. Roose <sup>1</sup> ; Y. Stockman <sup>1</sup> ; T. Kuhn <sup>2</sup> ; H. Baier <sup>2</sup> ; S. Langlois, ESTEC, European Space Agency, NL; G. Casarosa, AOES Group BV, NL; <sup>1</sup> Centre Spatial de Liège, BE; <sup>2</sup> Lehrstuhl für Leichtbau, Technische Universität München, DE				<b>CEAS-2007-407</b> <b>New Mechanical Test Data Handling Concept at IABG</b> A. Grillenbeck; S. Dillinger; S. Prause; IABG, DE				<b>CEAS-2007-408</b> <b>SmosPIm Mechanical Qualification Tests</b> M.A. Gil; J.M. Bajo; M.A. Plaza; EADS CASA Espacio, ES			
<b>Short Course 9</b> Chair: TBD								ECC Room 5		<b>Short Course 10</b> Chair: TBD								ECC Room 5	

**Short Course Aircraft Design**  
Details are be published on [www.ceas2007.org](http://www.ceas2007.org)

Thursday, 13th September 2007

Plenary Session in **ECC Hall C**

14:00-15:00 **Towards the Green Aviation**  
*Requestet Speakers: A. Garcia, Airbus, FR; R. Parker, Rolls-Royce, GB; F. Beyer, Liebherr-Aerospace, DE*  
 Chair: F. Abbink, NLR, NL

15:10 – 15:30      15:30 – 15:50      15:50 – 16:10      16:10 – 16:30      16:50 – 17:10      17:10 – 17:30      17:30 – 17:50      17:50 – 18:10

**Air Transport Research and Technology**  
 Chair: J. Reichmuth, DLR Köln / RWTH Aachen, DE **ECC Hall C**

<b>CEAS-2007-409</b> <b>Thinking Out of the Box</b> A. de Graaff, AD Cuenta, NL	<b>CEAS-2007-410</b> <b>Multiobjective Particle Swarm Optimization Technique as an Effective Tool for Aircraft Requirements Analysis</b> L. Blasi; S. Barbato; L. Iuspa; Second University of Naples, Department of Aerospace and Mechanical Engineering, IT	<b>CEAS-2007-411</b> <b>CELINA - Fuel Cell Application in A New Configured Aircraft</b> C. Schilo, Airbus, DE	<b>CEAS-2007-412</b> <b>Trajectory Optimization of a Solar Aircraft for Performance Improvement</b> G. Sachs <sup>1</sup> ; J. Lenz <sup>1</sup> ; H. Ross, IBR, DE; <sup>1</sup> Institute of Flight Mechanics and Flight Control of TU München, DE
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**Industrial and Research Cooperations**  
 Chair: S. Eelman, TU München, DE **ECC Hall C**

<b>CEAS-2007-413</b> <b>EREA, the Association of European Research Establishments in Aeronautics</b> F. Abbink, NLR, NL; A. Junior, DLR, DE; U. Möller, DLR Büro Brüssel, BE	<b>CEAS-2007-414</b> <b>GARTEUR: Long Term R&amp;T Collaboration in Europe</b> L. Vecchione; V. Puoti; CIRA, Italian Centre for Aerospace Research, IT	<b>CEAS-2007-415</b> <b>Aerospace Valley: The Cluster Effect Applied to the Aerospace Industry in South Western France</b> F. Jouailléc, Aerospace Valley, FR	<b>CEAS-2007-416</b> <b>In-House Integration of Space Payloads: CNES Facilities and Activities in Progress</b> V. Dubourg; C. Escande; P. Agogue; O. Maes; CNES, FR
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**Technologies for Highspeed Transport 1**  
 Chair: M. Mallet, Dassault Aviation, FR **ECC Hall D**



<b>CEAS-2007-418</b> <b>Development of MDO Techniques for the Design of a SSBJ</b> M. Ravachol, Dassault Aviation, FR; K. Giannakoglou, NTUA, GR	<b>CEAS-2007-419</b> <b>The Challenges of an "Acceptable" Sonic Boom</b> F. Coulouvrat, CNRS, FR	<b>CEAS-2007-420</b> <b>Alternative Engine Technologies for Supersonic Propulsion</b> J. Julliard; P. Coat; Snecma, FR
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**Technologies for Highspeed Transport 2**  
 Chair: M. Mallet, Dassault Aviation, FR **ECC Hall D**



<b>CEAS-2007-421</b> <b>Climate Impact of a Potential Supersonic Fleet</b> V. Grewe, DLR Oberpfaffenhofen, Institut für Physik der Atmosphäre, DE	<b>CEAS-2007-422</b> <b>Supersonic Laminar Flow Control Investigations within the Supertrac Project</b> D. Arnal, ONERA, FR	<b>CEAS-2007-423</b> <b>Automatic Shape Design for Low Boom and Low Drag High Speed Transport</b> V. Selmin, Alenia Aeronautica, IT	<b>CEAS-2007-424</b> <b>Solution of the Euler Equations for the Prediction of the Sonic Boom</b> A. Dervieux, INRIA, FR
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**Fault Detection in A/C Systems**  
 Chair: F. Thielecke, DLR Braunschweig, DE **Estrelsaal B**

<b>CEAS-2007-425</b> <b>Performance Degradation Analysis of Fault-Tolerant Aircraft Systems</b> C. Raksch; R. van Maanen; D. Rehage; F. Thielecke; U.B. Carl; Hamburg University of Technology, Institute of Aircraft Systems Engineering, DE	<b>CEAS-2007-426</b> <b>Fault Detection and Isolation of Actuator Failures for a Large Transport Aircraft</b> A. Varga, DLR - Oberpfaffenhofen, DE	<b>CEAS-2007-427</b> <b>Model-Based Failure Detection of a Trimmable Horizontal Stabilizer Actuator with Two Primary Load Paths</b> N. Wachendorf; U.B. Carl; F. Thielecke; Hamburg University of Technology, Institute of Aircraft Systems Engineering, DE	<b>CEAS-2007-428</b> <b>Predictive Maintenance in Avionics</b> P.-I. Maisonneuve <sup>1</sup> ; S. Ghelam <sup>1</sup> ; J.-P. Derain <sup>1</sup> ; Z. Simeu Abazi, FR; <sup>1</sup> Eurocopter, FR
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**Measurement Methods for Aerodynamics**  
 Chair: H.-P. Kreplin, DLR, DE **Estrelsaal B**

<b>CEAS-2007-429</b> <b>The TELFONA Pathfinder Wing for the Calibration of the ETW Wind Tunnel</b> G. Schrauf, Airbus, DE; K.H. Horstmann, DLR, DE	<b>CEAS-2007-430</b> <b>Stereo-PIV and Hot-Wire Investigations on Delta Wing with Sharp and Rounded Leading Edge</b> A. Furman; C. Breitsamer; Technische Universität München, Lehrstuhl für Aerodynamik, DE	<b>CEAS-2007-431</b> <b>Aerodynamic Optimization and Boundary Layer Control on Sailplane Wing Sections</b> L. Popelka, Academy of Sciences of the Czech Republic, Institute of Thermomechanics, CZ; M. Matejka <sup>1</sup> ; N. Souckova <sup>1</sup> ; <sup>1</sup> Czech Technical University in Prague, Faculty of Mechanical Engineering, CZ	<b>CEAS-2007-432</b> <i>Wolfgang Heilmann-Award of the MTU GmbH for his studies thesis with the topic:</i> <b>Background Oriented Schlieren - Möglichkeiten und Grenzen des Optischen Verfahrens zur Quantitativen Dichtegradientenbestimmung</b> T. Nafz; M. Ochs; H.-J. Bauer; Universität Karlsruhe, Institut für Thermische Strömungsmaschinen, DE
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Presentation in German

Thursday, 13th September 2007

Plenary Session in **ECC Hall C**

14:00-15:00 **Towards the Green Aviation**  
*Requestet Speakers: A. Garcia, Airbus, FR; R. Parker, Rolls-Royce, GB; F. Beyer, Liebherr-Aerospace, DE*

Chair: F. Abbink, NLR, NL

15:10 – 15:30	15:30 – 15:50	15:50 – 16:10	16:10 – 16:30	16:50 – 17:10	17:10 – 17:30	17:30 – 17:50	17:50 – 18:10
<b>Structures: Buckling</b> Chair: H. Voggenreiter, German Aerospace Center (DLR), DE <b>ECC Room 2</b>				<b>Structures: Analysis 2</b> Chair: H.-G. Reimerdes, RWTH Aachen, DE <b>ECC Room 2</b>			
<b>CEAS-2007-433</b> <b>Buckling Analysis and Qualification Static Load Testing of VEGA Interstage 1/2 Structure</b> J. Tyrrell; J. Cremers; J. Wijker; Dutch Space B.V., NL	<b>CEAS-2007-434</b> <b>Probabilistic Approach for Improved Buckling Knock-down Factors of CFRP Cylindrical Shells</b> R. Degenhardt <sup>1</sup> ; A. Bethge <sup>1</sup> ; A. Kling <sup>1</sup> ; R. Zimmermann <sup>1</sup> ; K. Rohwer <sup>1</sup> ; H. Klein <sup>1</sup> ; J. Tessmer <sup>1</sup> ; A. Calvi, ESA/ESTEC, NL; <sup>1</sup> DLR, DE	<b>CEAS-2007-435</b> <b>Buckling of Multilayered Metal Composite Domes</b> J. Blachut; P. Smith; The University of Liverpool, Mechanical Engineering, GB	<b>CEAS-2007-436</b> <b>Efficient Buckling Analysis of Stiffened Composite Airframe Parts</b> C. Mittelstedt, Airbus, DE	<b>CEAS-2007-437</b> <b>FEA Approach for the Prediction of the Void's Effects on the Elastic Properties of Unidirectional Fiber Reinforced Composites</b> L. Mormile <sup>1</sup> ; F. Romano <sup>2</sup> ; A. Riccio <sup>2</sup> ; L. Iuspa <sup>1</sup> ; <sup>1</sup> Second University of Naples, IT; <sup>2</sup> CIRA, IT	<b>CEAS-2007-438</b> <b>Postbuckling Mode Shapes of Composite Stiffened Fuselage Panels Incorporating Stochastic Variables</b> M. Lee <sup>1</sup> ; D. Kelly <sup>1</sup> ; A.C. Orifici, RMIT University, School of Aerospace, Mechanical & Manufacturing Engineering., AU; R.S. Thomson, Cooperative Research Centre for Advanced Composite Structures Limited, AU; <sup>1</sup> University of New South Wales, School of Mechanical and Manufacturing Engine, AU	<b>CEAS-2007-439</b> <b>FEM Simulation of the Inflicted Delamination to IMC Laminated Composites during Manufacturing Process</b> S. Khosoussi; M. Rezaei; A. Abedian; Sharif University of Technology, IR	<b>CEAS-2007-440</b> <b>Finite Element Analysis of Superplastic Behavior of MMCs in Presence of Some Manufacturing Defects</b> A. Abedian; A. Barakati; Sharif University of Technology, IR
<b>Galileo's First Steps and Promises</b> Chair: M. Meurer, DLR Oberpfaffenhofen, DE <b>ECC Room 3</b>				<b>Supersonic/Hypersonic Flow: Reentry</b> Chair: W. Kordulla, European Space Agency, NL <b>ECC Room 3</b>			
<b>CEAS-2007-441</b> <b>Galileo Evolution: Enhanced Error Correction Strategies and Integrity Assessments</b> B. Belabbas <sup>1</sup> ; P. Rémi, Technical University of Munich, Institute of Communications and Navigation, DE; M. Meurer <sup>1</sup> ; <sup>1</sup> German Aerospace Center (DLR), Institute of Communications and Navigation, DE	<b>CEAS-2007-442</b> <b>The GIOVE-A Mission - A Major Step Towards Galileo</b> B. Kl. Schlarman; M. Falcone; J. Hahn; M. Hollreiser; ESA/ESTEC, NL	<b>CEAS-2007-443</b> <b>BayNavTech - Monitoring GNSS Performance for Demanding Applications</b> J. Vilzmann; M. Söllner; M. Kirchner; EADS Astrium GmbH, DE	<b>CEAS-2007-444</b> <b>First Outdoor Positioning Results with Real Galileo Signals by Using the German Galileo Test and Development Environment - GATE</b> G. Heinrichs <sup>1</sup> ; E. Löhnert <sup>1</sup> ; E. Wittmann <sup>1</sup> ; R. Kaniuth, University FAF Munich, DE; <sup>1</sup> IfEN GmbH, DE	<b>CEAS-2007-445</b> <b>In Flight Aerodynamic Experiment for the Unmanned Space Vehicle FTB-1.</b> G.C. Ruffolo; M. Marini; P. Roncioni; S. Borelli; CIRA, Italian Centre for Aerospace Research, IT	<b>CEAS-2007-446</b> <b>Aero(thermo)dynamic CFD Analyses of the Pares Re-Entry Capsule Shape in Comparison to Recent Test Results</b> P. Noeding, EADS Astrium GmbH, DE; R. Molina, ESA-ESTEC, NL	<b>CEAS-2007-447</b> <b>Advanced Aerothermodynamic Analysis of SHEFEX I</b> T. Barth, DLR, DE	<b>CEAS-2007-448</b> <b>The Pre-X Lifting Body Computational Fluid Dynamics and Wind Tunnel Test Campaign</b> P. Baiocco <sup>1</sup> ; S. Guedron <sup>1</sup> ; J. Oswald <sup>1</sup> ; D. Ponziani <sup>1</sup> ; M. Dormieux <sup>2</sup> ; E. Cosson <sup>2</sup> ; J.-P. Tribot <sup>3</sup> ; A. Bugeau <sup>3</sup> ; <sup>1</sup> CNES, FR; <sup>2</sup> ASTRIUM SAS, FR; <sup>3</sup> Dassault Aviation, FR
<b>Aero Engine Components, Economic Design, Manufacturing and Maintenance</b> Chair: R. Lederer, MTU Aero Engines, DE <b>ECC Room 1</b>							
<b>CEAS-2007-450</b> <b>Experimental and Numerical Investigations of the Mixing Flow in Turbofan Engines in the Sub-Idle Operating Range</b> S. Staudacher; B. Banzhaf; Universität Stuttgart, Institut für Luftfahrtantriebe, DE	<b>CEAS-2007-453</b> <b>Empowering Engine Engineers: Advancing the State-of-the-Art in Collaborative Multi-National Multidisciplinary Engine Design</b> E. Kessler <sup>1</sup> ; P. Arendsen <sup>1</sup> ; M.H. van Houten <sup>1</sup> ; R. Parchem <sup>2</sup> ; B. Meissner <sup>2</sup> ; M. Nagel <sup>3</sup> ; J. Barner <sup>3</sup> ; H. Wenzel, Engineous, DE; <sup>1</sup> National Aerospace Laboratory, NL; <sup>2</sup> Rolls-Royce Deutschland, DE; <sup>3</sup> MTU Aero Engines, DE	<b>CEAS-2007-454</b> <b>Global Trends in the Industry of Commercial Aircraft Engine Maintenance</b> P. Schumacher, MTU Maintenance Berlin-Brandenburg GmbH, DE	<b>CEAS-2007-455</b> <b>Market-oriented Blisk Manufacturing - A Challenge for Production Engineering</b> E. Bayer; M. Bußmann; MTU Aero Engines GmbH, DE	Presentation in German			

**Thursday, 13th September 2007**

Plenary Session in **ECC Hall C**

14:00- **Towards the Green Aviation**

Chair: F. Abbink, NLR, NL

15:00 *Requestet Speakers: A. Garcia, Airbus, FR; R. Parker, Rolls-Royce, GB; F. Beyer, Liebherr-Aerospace, DE*

15:10 – 15:30	15:30 – 15:50	15:50 – 16:10	16:10 – 16:30	16:50 – 17:10	17:10 – 17:30	17:30 – 17:50	17:50 – 18:10
<b>UAS - Unmanned Helicopters</b> Chair: F. Holzapfel, IABG mbH, DE <b>Room Paris</b>				<b>UAS - Autonomous Flight</b> Chair: U. Klingauf, TU Darmstadt, DE <b>Room Paris</b>			
<b>CEAS-2007-457</b> <b>ARTIS - An Interdisciplinary Unmanned Rotorcraft Flight Test Demonstrator</b> J.S. Dittich, DLR Institute of Flight Systems, DE	<b>CEAS-2007-458</b> <b>UAV VTOL Research Testbed 'SHARC'</b> O. Heinzinger; R. Arning; EADS Germany Innovation Works, DE	<b>CEAS-2007-459</b> <b>VTOL-MAV for Security and Rescue Operations with Enhanced Geo-Positioning Capabilities</b> R. Monikes, University of Karlsruhe, Institute of Systems Optimization, DE; N. Frietsch <sup>1</sup> ; O. Meister <sup>1</sup> ; G.F. Trommer <sup>1</sup> ; <sup>1</sup> University of Karlsruhe, DE	<b>CEAS-2007-460</b> <b>A Sequence and Supervisory Control System for Onboard Mission Management of an Unmanned Helicopter</b> F.M. Adolf, German Aerospace Center (DLR), Institute of Flight Systems, DE	<b>CEAS-2007-461</b> <b>GARTEUR FM AG14 - Autonomy in UAVs - A Collaborative Research Forum Overview</b> J.T. Platts, QinetiQ, GB	<b>CEAS-2007-462</b> <b>Development of an Autonomous Avoidance Algorithm for UAVs in General Airspace</b> J. van Tooren <sup>1</sup> ; M. Heni, ATENA Engineering GmbH, DE; A. Knoll <sup>1</sup> ; J. Beck <sup>1</sup> ; <sup>1</sup> EADS Defence & Security, Military Air Systems, DE	<b>CEAS-2007-463</b> <b>UAV/UCAV Navigation Systems - Present and Potential Future</b> R.K. Arning; A. Langmeier; E. Stenzel; H. Diehl; G. Sobotta; EADS Germany Innovation Works, DE	<b>CEAS-2007-464</b> <b>Fast Range Image Based Landing Field Detection</b> R.M. Leitner; O. Heinzinger; EADS Germany Innovation Works, DE
<b>Cabin Environmental Control System Simulation and Test</b> Chair: K.-D. Kricke, Airbus, DE <b>Estrelsaal A</b>				<b>Cabin - Acoustics</b> Chair: K.-D. Kricke, Airbus, DE <b>Estrelsaal A</b>			
<b>CEAS-2007-465</b> <b>Stability of the Air Flow in a Two Aisle Cabin Model</b> M. Kühn; J. Bosbach; C. Wagner; German Aerospace Center, Institute of Aerodynamics and Flow Technology, DE	<b>CEAS-2007-466</b> <b>Dynamic Simulation of Innovative Aircraft Air Conditioning</b> C. Müller <sup>1</sup> ; D. Scholz <sup>1</sup> ; T. Giese, Airbus, DE; <sup>1</sup> Hamburg University of Applied Sciences, Dept. of Automotive and Aeronautical Engineering, DE	<b>CEAS-2007-467</b> <b>A Flexible Toolkit for the Design of Environmental Control System Architectures</b> M. Sielermann, DLR, Institute of Robotics and Mechatronics, DE; T. Giese <sup>1</sup> ; B. Öhler <sup>1</sup> ; M. Otter, DLR, DE; <sup>1</sup> Airbus, DE	<b>CEAS-2007-468</b> <b>The New Pressurised Fraunhofer Flight Test Facility Offered to the Scientific Cabin Environment Network</b> E. Mayer; G. Grün; R. Hellwig; A. Holm; Fraunhofer-Institut für Bauphysik, DE	<b>CEAS-2007-469</b> <b>High Soundproofing Ability of Porous Materials under Stress Using 4S Technology</b> D. Rakov, Russian Academy of Science / IMASH, RU; J. Thorbeck, TU-Berlin, Institute of Aeronautic and Astronautic, DE	<b>CEAS-2007-470</b> <b>Mock-up of a Loadmaster Area for Acoustic Ground Tests</b> S. Böhme <sup>1</sup> ; D. Sachau <sup>1</sup> ; T. Kleitschkowski <sup>1</sup> ; H. Breitbach, Airbus, DE; <sup>1</sup> Helmut-Schmidt-University, DE	<b>CEAS-2007-471</b> <b>Influence of Noise and Vibration on the Perception of the Ambience Inside the Cabin</b> V. Mellert; I. Baumann; N. Freese; R. Weber; Oldenburg University, DE	<b>CEAS-2007-472</b> <b>Audio Interior for Light Aircraft</b> O. Pabst; F. Teuma Tsafak; T. Kleitschkowski; D. Sachau; Helmut-Schmidt-University/University of the Federal Armed Forces, DE
<b>New Technology for Earth Observation</b> Chair: K. Brieß, TU Berlin, DE <b>ECC Room 4</b>							
<b>CEAS-2007-473</b> <b>The Rubin Testbed for In-Orbit Verification of Micro- and Nanotechnologies</b> B. Ziegler <sup>1</sup> ; B. Penné <sup>1</sup> ; I. Kalnins, University of Applied Sciences Bremen, DE; F. Bruhn <sup>2</sup> ; P. Nilsson <sup>2</sup> ; <sup>1</sup> OHB Systems, DE; <sup>2</sup> Angstrom Aerospace Corporation, SE	<b>CEAS-2007-474</b> <b>Future Very High Resolution SAR &amp; Optical Earth Observation Missions</b> B. Penné; C. Tobehn; M. Kassebom; S. Mahal; R. Greinacher; O. Preradovic; OHB-System AG, DE	<b>CEAS-2007-475</b> <b>EnMAP Satellite Bus - A Cost Efficient Platform for Advanced Earth Observation Missions</b> M. Kassebom <sup>1</sup> ; B. Penné <sup>1</sup> ; S. Mahal <sup>2</sup> ; P. Fröhner, OHB-System AG, DE; R. Greinacher <sup>2</sup> ; S. Hofer <sup>3</sup> ; K.P. Förster <sup>3</sup> ; T. Stuffer <sup>3</sup> ; <sup>1</sup> OHB Systems, DE; <sup>2</sup> OHB-Systems, DE; <sup>3</sup> Kayser-Threde, DE	<b>CEAS-2007-476</b> <b>Security Systems for Future Satellite Operations</b> C. Tobehn <sup>1</sup> ; B. Penné <sup>1</sup> ; R. Rathje <sup>1</sup> ; A. Weigl <sup>1</sup> ; L. Hinsenkamp, DSI, DE; H. Michalik, IDA TU Braunschweig, DE; <sup>1</sup> OHB-System AG, DE				

Thursday, 13th September 2007

Plenary Session in ECC Hall C

14:00-15:00 **Towards the Green Aviation**  
*Requestet Speakers: A. Garcia, Airbus, FR; R. Parker, Rolls-Royce, GB; F. Beyer, Liebherr-Aerospace, DE*

Chair: F. Abbink, NLR, NL

15:10 – 15:30		15:30 – 15:50		15:50 – 16:10		16:10 – 16:30		16:50 – 17:10		17:10 – 17:30		17:30 – 17:50		17:50 – 18:10	
<b>Structural Dynamics &amp; Microvibrations 2</b>				SSMMT		<b>Materials and Active Structures 2</b>				SSMMT		<b>Estrelsaal C1</b>			
Chair: A. Grillenbeck, IABG, DE				Chair: M. Klein, European Space Agency, ESA/ESTEC, NL											
<b>CEAS-2007-481</b> <b>The Integration of Modal Analysis in Vibration Qualification Testing</b> L. Britte <sup>1</sup> ; B. Peeters <sup>1</sup> ; H. v. d. Auweraer <sup>1</sup> ; J. Debille <sup>1</sup> ; M. O'Grady <sup>2</sup> ; R. Singhal <sup>2</sup> ; <sup>1</sup> LMS International nv., BE; <sup>2</sup> Canadian Space Agency, CA		<b>CEAS-2007-482</b> <b>Feasibility Study of Acceleration Limit Substitution of Force Limit Vibration Test</b> K. Nagahama; S. Shi; T. Iwasa; M. Saitoh; JAXA (Japan Aerospace Exploration Agency), JP		<b>CEAS-2007-483</b> <b>Non-Linear Dynamics on Space Structures at Low Frequencies</b> J.B. Bernaudin, Astrium Satellites, FR; R. Redondo, CNES, FR		<b>CEAS-2007-484</b> <b>Development of Failsafe and Vibration Damping Flexural Feet for Sensitive Space Instrument</b> E. Bigot; A. Di Carlo; Oerlikon Space AG, CH		<b>CEAS-2007-485</b> <b>Development of Electro Active Polymers Configurations to Monitor and Control Deployable Space Structures</b> S. Baldacci <sup>1</sup> ; L. Serafini <sup>1</sup> ; V.S. Zolesi <sup>1</sup> ; F. Thurecht <sup>2</sup> ; E.K. Pfeiffer <sup>2</sup> ; P. Sommer Larsen, TU Denmark, RISOE National Laboratory, DK; F. Carpi <sup>3</sup> ; D. De Rossi <sup>3</sup> ; L. Lampani <sup>3</sup> ; P. Gaudenzi <sup>3</sup> ; <sup>1</sup> Kayser Italia Srl, IT; <sup>2</sup> High Performance Space Structure Systems GmbH, DE; <sup>3</sup> Pisa Univ., Centro Piaggio, IT; <sup>4</sup> Univ. of Rome La Sapienza, DIAA, IT		<b>CEAS-2007-486</b> <b>Production of Gamma Tial Based Alloys by Combustion Synthesis+Compaction Route for Space Rocket Engine Complex Parts</b> J. Marcos <sup>1</sup> ; J. Coletto <sup>1</sup> ; I. Agote <sup>1</sup> ; M. Garcia de Cortazar <sup>1</sup> ; M. Lagos <sup>1</sup> ; L. Pambaguian, ESA-ESTEC, NL; A. Sargsyan <sup>1</sup> ; V.L. Kvanin <sup>2</sup> ; N.T. Balikhina <sup>2</sup> ; I.P. Borovinskaya <sup>2</sup> ; S.G. Vadchenko <sup>2</sup> ; A.E. Sytschev <sup>2</sup> ; <sup>1</sup> TECNALIA-AEROSPACE, ES; <sup>2</sup> Institute of Structural Macrokinetics and Materials Science Russian Academy of Sciences, RU		<b>CEAS-2007-487</b> <b>Phase Change Materials and Thermosensitive Painting: Application on Smart Thermal Protection Systems</b> J. Marcos <sup>1</sup> ; J. Coletto <sup>1</sup> ; J. Maudes <sup>1</sup> ; T. Salmon, EADS-ST, FR; L. Martinez, LISAP, FR; A. Passaro, ALTA SpA., IT; H. Ritter, ESA-ESTEC, NL; <sup>1</sup> TECNALIA-AEROSPACE, ES		<b>CEAS-2007-488</b> <b>Time Influence on Viscoelastic Materials: Experience Feedback on Applications in the Space Field</b> D. Givois <sup>1</sup> ; M. Lathuilière <sup>1</sup> ; D. Martin de Argenta <sup>1</sup> ; R. Redondo, CNES, FR; <sup>1</sup> 01dB-METRAVIB, FR	
<b>Mechanical Testing 2</b>				SSMMT		<b>Composite Structures 4</b>				SSMMT		<b>Estrelsaal C3</b>			
Chair: P. Mourey, CNES, FR				Chair: H. Bansemir, Eurocopter Deutschland, DE											
<b>CEAS-2007-489</b> <b>New Large Mass Property Measurement Facility: Experience with the First Three Test Specimens</b> W.H. Teichert; G. Slagter; European Test Services, NL		<b>CEAS-2007-490</b> <b>Mechanical Testing on Large Aircraft Structures: Possibilities - Limits - Examples</b> R. Baumgartl, IABG mbH, Department Mechanical Testing, DE		<b>CEAS-2007-491</b> <b>Qualification Tests of Eurostar 3000 XL Central Tube</b> P. Brotons; P. Luengo; P. Tejero; EADS CASA Espacio, ES		<b>CEAS-2007-493</b> <b>Alphabus Central Tube. Development and Manufacturing of the Bread Board Model</b> J. Trigo, EADS CASA Espacio, ES		<b>CEAS-2007-494</b> <b>Liquid Composite Moulding Technologies for Space Applications</b> H. Assing; M. Kleineberg; C. Sickinger; L. Herbeck; DLR, DE		<b>CEAS-2007-495</b> <b>Radiation Attenuation of CFRP Wolfram Laminate Structures</b> T. Brander, Helsinki University of Technology/Laboratory of Lightweight Structures, FI; F. Garcia, Helsinki Institute of Physics (HIP), FI		<b>CEAS-2007-496</b> <b>Passive Damping of Spacecraft Sandwich Panels</b> O. Romberg, DLR Bremen, DE; M. Tausche, OHB-System AG, DE; C. Pereira, RUAG Aerospace, CH; L. Panning, Institut für Dynamik & Schwingungen, DE			
<b>Short Course 11</b>				ECC Room 5		<b>Short Course 12</b>				ECC Room 5					
Chair: TBD				Chair: TBD											

**Short Course Aircraft Design**  
 Details are be published on [www.ceas2007.org](http://www.ceas2007.org)



<b>Poster Session 1</b> Chair: K. Burkhardt, Diehl Aerospace, DE	<b>ECC Hall C</b>
<p><b>CEAS-2007-700</b> <b>Identification System of Aircraft Gas Turbine Engine's Temperature Condition</b> A.M. Pashayev; D.D. Askerov; R.A. Sadiqov; P.S. Abdullayev; Azerbaijan National Academy of Aviation, AZ</p> <p><b>CEAS-2007-701</b> <b>Experimental Investigation of Frontal Device for Perspective Combustors</b> V. Rutovskiy; I. Kravchenko; D. Tkachenko; M. Boulaeva; Moscow Aviation Institute (State Technical University), RU</p> <p><b>CEAS-2007-702</b> <b>Terrain Following Minimum Time Trajectory Design for UAV Swarms Using Mixed Integer Programming</b> J.W. Vervoort; T. Kopfstedt; Diehl BGT Defence GmbH &amp; Co. KG, DE</p> <p><b>CEAS-2007-703</b> <b>Cabin Electrical Installation for BWB Aircraft</b> W. Granzeier; O. Zysk; T. Liesk; QualityPark AviationCenter GmbH, DE</p>	

<b>Poster Session 2</b> Chair: D. Scholz, HAW Hamburg, DE	<b>ECC Hall D</b>
<p><b>CEAS-2007-704</b> <b>Improving runway safety through airborne traffic conflict detection and alerting</b> D. Zammit-Mangion, Cranfield University, GB; A. Sammut<sup>1</sup>; B. Zammit<sup>1</sup>; <sup>1</sup>University of Malta, MT</p> <p><b>CEAS-2007-705</b> <b>Enhancing the Dynamic System Simulation of an Aircraft Cabin Climate for Comfort-Improved Climate Control using 1D/3D Coupling</b> H. Knigge; A. Joos; G. Schmitz; Hamburg University of Technology, DE</p> <p><b>CEAS-2007-706</b> <b>Efficient Double Root Optimal Path Determination</b> P.H. Richter, O &amp; S Consultancy, DE</p> <p><b>CEAS-2007-707</b> <b>Optimal Path Determination Observing Turn Restrictions</b> P.H. Richter, O &amp; S Consultancy, DE</p>	

<b>Poster Session 3</b> Chair: K.U. Hahn, DLR Braunschweig, DE	<b>Estrelsaal B</b>
<p><b>CEAS-2007-708</b> <b>Attitude and Heading Reference System for an Integrated Stand-by Display Incorporating Solid State Sensors</b> M. Carminati<sup>1</sup>; G. Ferrari<sup>1</sup>; M. Sampietro<sup>1</sup>; R. Grasseti, Logic S.p.A., IT; <sup>1</sup>Politecnico di Milano, Dipartimento di Elettronica e Informazione, IT</p> <p><b>CEAS-2007-709</b> <b>How to Avoid Contrail Cirrus</b> H. Mannstein<sup>1</sup>; K. Gierens<sup>1</sup>; P. Spichtinger, ETH Zurich, CH; <sup>1</sup>DLR, DE</p> <p><b>CEAS-2007-710</b> <b>Aerodynamically Induced Formation of Contrails</b> H. Mannstein; K. Gierens; B. Kärcher; B. Mayer; DLR, DE</p> <p><b>CEAS-2007-711</b> <b>Messung der Erreichbarkeiten im Luftverkehr - Ansätze zur Beurteilung der Anbindungsqualitäten europäischer Flughäfen</b> S. Medenbach, AT</p>	

<b>Poster Session 4</b> Chair: K. Lesch, EADS, DE	<b>ECC Room 2</b>
<p><b>CEAS-2007-712</b> <b>Trailing Edge Treatment to Enhance High Lift System Performance</b> F. Catalano; R. Lemes; G. Brand; Aerodynamic Laboratory / University of Sao Paulo / EESC-USP, BR</p> <p><b>CEAS-2007-713</b> <b>FDMP - Concept of an Improved Flight Data Analysis Methodology</b> H. Führ<sup>1</sup>; S. Sporer<sup>1</sup>; G. Knoll<sup>1</sup>; M. Haider<sup>1</sup>; D. Reisinger, Austrian Airlines, AT; <sup>1</sup>FH JOANNEUM Graz, AT</p> <p><b>CEAS-2007-714</b> <b>Impact Damage and Repair of Composite Structures (Garteur Action Group - 28)</b> B.G. Falzon, Imperial College London, GB</p>	

<b>Poster Session 5</b> Chair: K. Brieß, TU Berlin, DE	<b>ECC Room 3</b>
<p><b>CEAS-2007-715</b>  <b>Stochastic Approach for the Sizing of Space Launchers Components</b>  E. Gery, CNES, FR; G. Defaux, PHIMECA Engineering, FR; L. Escudero López, EADS Casa Espacio, ES</p> <p><b>CEAS-2007-716</b>  <b>Optimization of Bolted Joints Connecting Honeycomb Panels</b>  G. Bianchi<sup>1</sup>; G.S. Aglietti<sup>1</sup>; G. Richardson, Surrey Satellites Technologies Ltd. (SSTL), GB;  <sup>1</sup>University of Southampton, GB</p> <p><b>CEAS-2007-717</b>  <b>An e-Learning System for Polish Aviation Training Center</b>  P. Michalowski; P. Madrzycki; D. Karczmarz; Air Force Institute of Technology, PL</p>	

<b>Poster Session 6</b> Chair: O. Brieger, DLR, DE	<b>ECC Room 1</b>
<p><b>CEAS-2007-718</b>  <b>Study of Flowfield around Truncated Square Protuberance in Hypersonic Flow</b>  A. Ahmed; A. Baig; S. Bilal; S. Zahir; NESCOM, PK</p> <p><b>CEAS-2007-719</b>  <b>Design of Stable Fuzzy Control for a Flight Based on Popov-Lyapunov's Method</b>  Z. Li; Y. Zhang; College of Aeronautics, Northwestern Polytechnical University, CN</p> <p><b>CEAS-2007-720</b>  <b>Effects of Angle of Attack on a Swept-Back Wing</b>  S.C. Yen, National Taiwan Ocean University, TW; C.M. Hsu, National Taiwan University of Science and Technology, TW</p>	

<b>Poster Session 7</b> Chair: J. van Toor, EADS, DE	<b>Room Paris</b>
<p><b>CEAS-2007-721</b>  <b>Maintenance Credits, from the Monitoring of Helicopter Mechanical Parts to a Dynamic Maintenance Planning</b>  P.-I. Maisonneuve<sup>1</sup>; M. Glade<sup>1</sup>; J.-P. Derain<sup>1</sup>; S. Ghelam<sup>1</sup>; P. Lyonnet, LTDS - ENISE, FR;  <sup>1</sup>Eurocopter, FR</p> <p><b>CEAS-2007-722</b>  <b>The GA Optimization of Straight and Curved Laminated Composite Panels in Presence of a Cutout</b>  A. Gorjiipoor; B. Dehghanmanshadi; A. Abedian; Sharif University of Technology, Aerospace Engineering Dept., IR</p> <p><b>CEAS-2007-723</b>  <b>A Deployable SAR Membrane Antenna Mechanical Prototype</b>  M.-J. Potvin<sup>1</sup>; S. Montminy<sup>1</sup>; S. Brunel<sup>1</sup>; Y. Shen<sup>1</sup>; V. Tokateloff<sup>2</sup>; G. Akhras<sup>2</sup>;  <sup>1</sup>Canadian Space Agency, CA; <sup>2</sup>Royal Military College of Canada, CA</p> <p><b>CEAS-2007-724</b>  <b>SAND-MESH<sup>PLUS</sup> – A Parameter Controlled Finite Element Pre-processor for Composite Sandwich Structures</b>  M. Streubig; K. Wolf; TU Dresden, Institute of Aerospace Engineering, DE</p>	

<b>Poster Session 8</b> Chair: C. Sickinger, DLR, DE	<b>SSMMT</b>	<b>Estreisaal A</b>
<p><b>CEAS-2007-725</b>  <b>Comparison of Tensile Properties of Two NiCoCrAl / YSZ Microlaminates Produced by EB-PVD</b>  J. Liang; G.D. Shi; G.Q. Chen; S.Y. Du; Center for Composite Materials, Harbin Institute of Technology, CN</p> <p><b>CEAS-2007-726</b>  <b>Shock and Elastic Waves in Space Structures: Simulation, Attenuation and Usage for Monitoring</b>  C. Zauner<sup>1</sup>; H. Baier<sup>1</sup>; M. Reindl, KRP Mechatec, DE;  <sup>1</sup>TU Muenchen, Lehrstuhl für Leichtbau, DE</p> <p><b>CEAS-2007-727</b>  <b>Simulation of Pyroshocks</b>  N. Juengel<sup>1</sup>; U. von Wagner<sup>1</sup>; A. Baeger<sup>2</sup>; S. Ritzmann<sup>2</sup>;  <sup>1</sup>TU Berlin, Institute of Mechanics, DE; <sup>2</sup>Astro- und Feinwerktechnik Adlershof GmbH, DE</p>		

**Poster Session 9**

Chair: J. Block, DLR Braunschweig, DE

SSMMT

Estreisaal C1

**CEAS-2007-728****System-Level Mass Savings from a Multifunctional Powerstructure**

S. Roberts; G. Aglietti; University of Southampton, School of Engineering Sciences, GB

**CEAS-2007-729****The Effects of Microstructure on Cavity Nucleation and Propagation for UHTCs Used in HCV**

J. Liang; C. Wang; Harbin Institute of Technology, CN

**CEAS-2007-730****Development of a Class of Shell Finite Elements for Nonlinear Applications**

R. Winkler, University of Innsbruck, Unit for Engineering Mathematics, AT

**CEAS-2007-731****FLVT - New Force Measurement Method for Instrument and Equipment Testing**S. Ritzmann<sup>1</sup>; M. Rose<sup>1</sup>; M. Stock, Kistler Instrumente Deutschland, DE;<sup>1</sup>Astro- und Feinwerktechnik Adlershof GmbH, DE**Poster Session 10**

Chair: M. Gädke, DLR Braunschweig, DE

SSMMT

Estreisaal C3

**CEAS-2007-732****Prediction of the Pointing Stability from Ground Test and Its Initial In-orbit Evaluation of the Solar Observation Satellite SOLAR-B**O. Takahara<sup>1</sup>; K. Ichimoto, National Astronomical Observatory of Japan, JP; T. Shimizu, Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency, JP; Y. Sakamoto, University of Tokyo, JP; S. Nagata, Kyoto University, JP; S. Shimada<sup>1</sup>; N. Yoshida<sup>1</sup>; <sup>1</sup>Mitsubishi Electric Corp., JP**CEAS-2007-733****Robustness of Numerical Predictions of Clamp Band (C/B) Release Shocks**

J. Kasper, EADS Astrium GmbH, DE

**CEAS-2007-734****USV1 In-Flight Loads Evaluation by Means of Strain Gauge Instrumentation Part I**

L. Di Palma; M. Belardo; N. Paletta; M. Pecora; CIRA, Italian Centre for Aerospace Research, IT

**CEAS-2007-735****Conception and Validation of a Two High Level Axes Set-up for Pyroshock Qualification of Space Electronic Equipments**C. De Fruytier<sup>1</sup>; F. Dell'Orco<sup>1</sup>; D. Wattiaux, Faculté Polytechnique de Mons, BE;<sup>1</sup>Thales Alenia Space ETCA, BE