

Preliminary Programme



Sixth European Aeronautics Days

Aerodays 2011

*Innovation for Sustainable Aviation in a
Global Environment*

Palacio Municipal de Congresos - Madrid / Spain
30th March - 1st April 2011



EUROPEAN COMMISSION
European Research Area



Centro para el Desarrollo
Tecnológico Industrial



09:00	Hall	Registration and Welcome Coffee							
10:00 - 12:00	Auditorium A	Opening Ceremony and Keynote Session:				<i>Innovation for Sustainable Aviation in a Global Environment</i>			
		Welcome Addresses:	Cristina Garmendia Siim Kallas Teresa Riera High Level Representative (tbd) Rudolf Strohmeier			Spanish Minister for Science and Innovation Vice-President of the European Commission and Commissioner for Transport Spanish Member of the European Parliament Regional Government Deputy DG of Research Programmes - DG Research and Innovation, European Commission Director Transport Research - DG Reseach and Innovation, European Commission			
		Chair:	András Siegler			President. International Airlines Group (IAG) and Iberia President and CEO. Airbus Chairman of the Executive Board. DLR			
		Keynote Addresses:	Antonio Vázquez Thomas Enders Johann-Dietrich Wörner						
12:15 - 13:30	Multipurpose room, 3 rd floor	Lunch							
13:30 - 14:30	Auditorium A	Plenary Session 1:				<i>Sustainable Air Transport</i>			
		Chair:	Carmen Librero			Director of Air Navigation. AENA			
		Speakers:	Wolfgang Mayrhuber Michael Kerkloh Patrick Goudou			Chairman & CEO (ret.). Lufthansa Chairman of Board. Airport Munich Executive Director. EASA <i>Airlines' Requirements and Needs for Greening the Air Transport</i> <i>Airports: the Gate to a Sustainable Air Transport</i> <i>Regulations and Certification in Environmental Protection</i>			
14:35 - 16:05	Parallel Sessions 1	Madrid room	Paris room	Bonn-Berlin room	Bruselas room	Amsterdam room	Londres room	Roma room	México-Buenos Aires room
		1A Protection of Aircraft and Passengers <i>Optimising the Airport of the Future - 1</i>	1B Ensuring Customer Satisfaction and Safety <i>Aviation Safety & Environmental Protection Research: the European Regulatory Perspective</i>	1C Greening the Air Transport System <i>Towards Clean Engine Combustors</i>	1D Improving Cost Efficiency <i>Novel Manufacturing Techniques</i>	1E Greening the Air Transport System <i>Advanced Methods in Computational Fluid Dynamics</i>	1F Greening the Air Transport System <i>Climate Aspects on a Sustainable Air Transport System</i>	1G European Research Area <i>Technologies in the European Research Area - Advanced Structures</i>	1H European Research Area <i>National RTD Support for European Aeronautics</i>
16:05 - 16:35	Hall, Exhibition area	Coffee Break							
16:35 - 18:05	Parallel Sessions 2	Madrid room	Paris room	Bonn-Berlin room	Bruselas room	Amsterdam room	Londres room	Roma room	México-Buenos Aires room
		2A Protection of Aircraft and Passengers <i>Securing the Air Transport System of the Future</i>	2B Ensuring Customer Satisfaction and Safety <i>Human Centered Avionics</i>	2C Greening the Air Transport System <i>Engine Technology: Towards Very High Temperature Turbines</i>	2D Improving Cost Efficiency <i>Innovative Manufacturing for Magnesium and Titanium Components</i>	2E Greening the Air Transport System <i>Towards a Higher Aerodynamic Performance</i>	2F Greening the Air Transport System <i>Disruptive Climate Events for Air Transport</i>	2G European Research Area <i>Technologies in the European Research Area - Pioneering Aeronautics</i>	2H European Research Area <i>European Networks and Support Initiatives</i>
20:00	Conference Dinner								

Caracas, Bogota, La Paz, Montevideo rooms Brokerage event

Hall, Exhibition area Exhibition

08:15 - 09:30 Auditorium A Plenary Session 2: How the Global Scene is Evolving

Chair: Arturo Azcorra, Director General, CDTI

Speakers: Michael Ryan, VicePresident & General Manager, Bombardier Aerospace; Alessandro Franzoni, CEO, Superjet International (inv); Zuoming Lin, President, AVIC; Jaiwon Shin, Ass. Adm. ARMD, NASA Aeronautics

The Superjet, an Example of European Collaboration Opportunities & RTD Strategies of Chinese Civil Aviation Ind. Future of Aviation: Research & Development Needs

09:35 - 11:05 Parallel Sessions 3

Madrid room	Paris room	Bonn-Berlin room	Bruselas room	Amsterdam room	Londres room	Roma room	México-Buenos Aires room
3A Ensuring Customer Satisfaction and Safety <i>Optimising the Airport of the Future - 2</i>	3B Ensuring Customer Satisfaction and Safety <i>Avionics - Aid to Piloting</i>	3C Greening the Air Transport System <i>Key Engine Technologies</i>	3D Improving Cost Efficiency <i>Numerical Simulation Tools for Aircraft Design and Manufacturing</i>	3E Greening the Air Transport System <i>Aerodynamics for Enhanced Aircraft Design</i>	3F CleanSky Forum (I) <i>CleanSky Contribution to the Future Air Transport System</i>	3G International Cooperation Forum (I) <i>Research Cooperation with Russia and Ukraine</i>	3H Research and Innovation Policy <i>A Visionary Research Policy for the European Aeronautics and Air Transport System</i>

11:05 - 11:35 Hall, Exhibition area Coffee Break

11:35 - 13:05 Parallel Sessions 4

Madrid room	Paris room	Bonn-Berlin room	Bruselas room	Amsterdam room	Londres room	Roma room	México-Buenos Aires room
4A Increasing Time Efficiency <i>Air Traffic Operations - 1</i>	4B Ensuring Customer Satisfaction and Safety <i>Avionics Architecture to Support Communication, Navigation and Surveillance</i>	4C Improving Cost Efficiency <i>Advanced Manufacturing Techniques for Engine Components</i>	4D Improving Cost Efficiency <i>Aircraft Structural Health Monitoring</i>	4E Greening the Air Transport System <i>Flow Control and Flow Prediction for Aeronautics</i>	4F CleanSky Forum (II) <i>Key Technologies for Future Aircraft</i>	4G International Cooperation Forum (II) <i>Research Cooperation with Asia and Africa</i>	4H Research and Innovation Policy <i>SMEs: Key Actors for Innovation</i>

13:05 - 14:20 Multipurpose room, 3rd floor Lunch

14:20 - 15:20 Auditorium A Plenary Session 3: Mastering the Future in Aeronautics

Chair: Joachim Szodruch, President of CEAS and Member of the Executive Board of DLR

Speakers: Charles Champion, Exec. VicePresident Engineering, Airbus; John J. Tracy, Chief Technology Officer, Boeing (inv); Eric Dautriat, Executing Director, JTI Clean Sky

The Future of Aeronautics: A European Perspective Future Aviation Developments: US Perspective Tackling the Environmental Challenges to Aeronautics

15:25 - 16:55 Parallel Sessions 5

Madrid room	Paris room	Bonn-Berlin room	Bruselas room	Amsterdam room	Londres room	Roma room	México-Buenos Aires room
5A Increasing Time Efficiency <i>Air Traffic Operations - 2</i>	5B Ensuring Customer Satisfaction and Safety <i>Systems for Safer Flight Guidance and Control</i>	5C Greening the Air Transport System <i>Innovative Engine Architectures</i>	5D Improving Cost Efficiency <i>Composite Aerostructures: New Design Principles</i>	5E Pioneering the Air Transport of the Future <i>Rotorcraft of the Future</i>	5F Improving Cost Efficiency <i>Unmanned Aircraft Systems in Future Aviation</i>	5G International Cooperation Forum (III) <i>Research Cooperation with America</i>	5H Research and Innovation Policy <i>Education and Dissemination of Knowledge: Key to Innovation in Aeronautics</i>

16:55 - 17:25 Hall, Exhibition area Coffee Break

17:25 - 18:55 Parallel Sessions 6

Madrid room	Paris room	Bonn-Berlin room	Bruselas room	Amsterdam room	Londres room	Roma room	México-Buenos Aires room
6A SESAR Forum (I) <i>SESAR - Technology</i>	6B Improving Cost Efficiency <i>Electro-mechanical Devices and Photonic Systems</i>	6C Greening the Air Transport System <i>Aerodynamics and Heat Transfer of Advanced Engine Components</i>	6D Improving Cost Efficiency <i>Composite Aerostructures: Innovative Maintenance and Repair</i>	6E Greening the Air Transport System <i>Reducing Cabin and Environmental Noise</i>	6F Ensuring Customer Satisfaction and Safety <i>Satellite Navigation: Benefits for Air Transport</i>	6G Pioneering the Air Transport of the Future <i>Pioneering: Innovative Air Transport Systems</i>	6H European Research Area <i>Aeronautics RTD Initiatives in the EU12</i>

Brokerage event

Exhibition

Caracas, Bogota, La Paz, Montevideo rooms

Hall, Exhibition area

Technical Visits

09:00 - 10:00	Auditorium A	Plenary Session 4:	<i>The Future of Air Traffic Management</i>
		Chair: Daniel Calleja	Director of Air Transport. European Commission
		Speakers: David McMillan Victoria Cox Javier Monzón Patrick Ky	Director General. Eurocontrol Sr, VP for NextGen & Ops Plan. FAA Chairman. Indra (inv) Executive Director. SESAR JU. <i>The Single European Sky in a Global Aviation Network</i> <i>NextGen – the ATM Effort of the US</i> <i>The Role of Industry in the New ATM System</i> <i>The Future of Air Traffic Management: SESAR</i>

10:00 - 10:30 Hall, Exhibition area **Coffee Break**

	Madrid room	Paris room	Bonn-Berlin room	Bruselas room	Amsterdam room	Londres room	Roma room	México-Buenos Aires room
10:30 - 11:30	7A SESAR Forum (II)	7B Ensuring Customer Satisfaction and Safety	7C Greening the Air Transport System	7D Improving Cost Efficiency	7E Students Competition	7F Improving Cost Efficiency	7G Pioneering the Air Transport of the Future	7H European Research Area
Parallel Sessions 7	<i>SESAR - Innovations</i>	<i>Towards More Electrical Aircraft and Personalised Cabin Environment</i>	<i>Alternative Fuels for Aviation</i>	<i>Composite Aerostructures: Enhanced Multifunctionality and Safety</i>	<i>Award Winners' Session</i>	<i>Technologies in the European Research Area - Advanced Aerodynamics</i>	<i>Pioneering: Innovative Aircraft Concepts</i>	<i>European Research Area - Aeronautics Scientific Networks</i>

11:35 - 12:35	Auditorium A	Closing Session:	<i>Preparing the Future of Aviation. A Joint Effort of Europe</i>
		Chair: Francois Quentin	Co-chairman. ACARE
		Closing Addresses: Máire Geoghegan-Quinn Juan Tomás Hernani Domingo Ureña Jean-Paul Herteman	European Commissioner for Research and Innovation Secretary General for Innovation. Spanish MInistry of Science and Innovation President. ASD AeroSpace & Defence Industries Association of Europe Chairman of the Board of Directors. SAFRAN

12:35 - 14:00 Hall, Exhibition area **Cocktail**

Exhibition

Hall, Exhibition area

Parallel Session 1 14:35 - 16:05

1

1A - Madrid room

Protection Aircraft and Passengers
Optimising the Airport of the Future - 1

Chair

Improving Turnaround Predictability: TITAN
Laura Serrano - INECO

Innovative System for Airport Security
Roberta Cardinali - SESM

Behavioral Model of Security in Airports
Alan Kirschenbaum - Technion Israel

Civil Aircraft Security Against MANPAD
Jean-Pascal Martinenq - SAGEM Defense Securite

1B - Paris room

Ensuring Customer Satisfaction and Safety
Aviation Safety & Environmental Protection Research: the European Regulatory Perspective

Chair

Objectives and Scope of EARPG
Graham Greene - CAA, UK

EASA Research Activities
Emmanuel Isambert - EASA

Examples of EASA/NAA/ EUROCONTROL Projects
Simon Waite - EASA
Hok Goei - CAA, NL
Francisco Salabert - Eurocontrol

EARPG Research Programme
Werner Kleine-Beek - EASA

1C - Bonn-Berlin room

Greening the Air Transport System
Towards Clean Engine Combustors

Chair

Integrated Lean Low Emission Combustor Design Methodology
Ralf von der Bank - Rolls-Royce

Technologies Enhancement for Clean Combustion in Aero-Engines
Michel Cazalens - SNECMA

Knowledge for Ignition, Acoustics and Instabilities in Combustors
Sébastien Roux - SNECMA

Toward Innovative Methods for Combustion Prediction in Aero-Engines
Thomas Lederlin - Turbomeca

1D - Bruselas room

Improving Cost Efficiency
Novel Manufacturing Techniques

Chair

Adaptive Control of Manufacturing Processes for a New Generation of Jet Engine Components
Ignacio Fernández - ITP

The Potential for Aero Engine Component Manufacture using Additive Layer Manufacturing
Jeffrey Allen - Rolls-Royce

A Technique for the Rapid Production of Large Aerospace Components
Rosemary Gault - AMRC

1E - Amsterdam room

Greening the Air Transport System
Advanced Methods in Computational Fluid Dynamics

Chair

Adaptive Higher-Order CFD Methods for Aerospace Applications
Norbert Kroll - DLR

Advanced Turbulence Simulation for Aerodynamic Application Challenges - First Results from the Project
Dieter Schwamborn - DLR

Unsteady Effects of Shock Wave Induced Separation
Piotr Doerfler - IMP PAN

Non-deterministic Simulation for CFD-based Design Methodologies
Charles Hirsch - Numeca International

1F - Londres room

Greening the Air Transport System
Climate Aspects on a Sustainable Air Transport System

Chair

Current and Future Human Impact on Climate, with Contributions from Different Emission Sectors
Ivar Isaksen - University of Oslo

ECATS - Challenges of Sustainable Air Transport
Sigrun Matthes - DLR

ACARE - Environmental Challenges beyond 2020
Rainer Von Wrede - Airbus Operations

Aviation: Industry Roadmap to Sustainability
Thomas Roetger - IATA

1G - Roma room

European Research Area
Technologies in the European Research Area - Advanced Structures

Chair

The Structural Health Monitoring Systems of Airbus Military
Javier Gómez - Airbus Operations

The Greening of Aerostructures, Challenges Ahead
Miguel Angel Castillo - Aernnova

Innovative Principles of Design for Lightweight Composite Compounds in Aeronautical Structures
Rudolf Gradinger - Austrian Institute of Technology

Challenges in Production of Carbon-fibre Reinforced Aerostructures
Heinz Voggenreiter - DLR

1H - México-Buenos Aires room

European Research Area
National RTD Support for European Aeronautics

Chair

The French RTD Support Scheme for Aeronautics
Patrice Desvallées - DGAC

The German National Aeronautics RTD Programme LuFo
Franz-Josef Mathy - BMWi

Implementation of the UK National Aeronautics Strategy
Ray Kingcombe - BIS

RTD Support for Aeronautics in Spain
Juan Carlos Cortés - CDTI

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Parallel Session 2 16:35 - 18:05

2

2A - Madrid room

Protection of Aircraft and Passengers
Securing the Air Transport System of the Future

Chair

Blastworthy Textile-Based Luggage Containers
Donato Zangani - D'Appolonia SPA

CRISIS - Critical Incident Management Training System using an Interactive Simulation Environment
William Wong - Middlesex University

Comprehensive European Approach to the Protection of Civil Aviation (COPRA)
Tobias Leismann- Fraunhofer-Institut

Total Airport Security System (TASS)
Gideon Hazzani - Verint Systems LTD

2B - Paris room

Ensuring Customer Satisfaction and Safety
Human Centered Systems

Chair

A New Platform for Human Factors in the Lifecycle of Aviation Systems
Nicholas McDonald - Trinity College Dublin

Model-based Analysis of Human Errors during Aircraft Cockpit System Design (HUMAN Project)
Andreas Lüedike - OFFIS

Large Interactive Single Display for Avionics Applications
Loïc Becouarn - THALES

Simulation of Upset Recovery in Aviation (The SUPRA Project)
Eric Groen - TNO

2C - Bonn-Berlin room

Greening the Air Transport System
Engine Technology: Towards Very High Temperature Turbines

Chair

Accurate High Temperature Engine Aero-thermal Measurements for Gas-Turbine Life Optimization, Performance and Condition Monitoring
Patrick Flohr - Siemens

Silicide based Materials for High Performance Aero-Engines
Stefan Drawin - ONERA

Towards Design and Processing of Advanced, Competitive Thermal Barrier Coating Systems
Matthias Karger - Forschungszentrum Julich

Main Annulus Gas Path Interactions
Michael Klingspom - Rolls-Royce GmbH

2D - Bruselas room

Improving Cost Efficiency
Innovative Manufacturing for Magnesium and Titanium Components

Chair

Magnesium Suitable for Aeronautic Applications
Elke Hombergsmeier - EADS

Casting of Large Ti Structures
Xinhua Wu - University of Birmingham

Digitalized Multi-Point Forming Tooling Technologies
Su Shizhong - Cardiff University

Development of New Magnesium Forming Technologies for the Aeronautics Industry
Elke Hombergsmeier - EADS

2E - Amsterdam room

Greening the Air Transport System
Towards a Higher Aerodynamic Performance

Chair

Progress in Natural Laminar Flow Wing Design and Wind Tunnel Testing
David Sawyers - Airbus Operations

Design, Simulation and Flight Reynolds Number Testing for Advanced High-Lift Solutions
Jochen Wild - DLR

Morphing High-Lift Structures: Smart Leading Edge Device and Smart Single Slotted Flap
Hans Peter Monner - DLR

Flow Control by Plasma in PlasmAero project
Daniel Caruana - ONERA

2F - Londres room

Greening the Air Transport System
Disruptive Climate Events for Air Transport

Chair

Weather Hazards for Aeronautics - How to best respond to this challenge?
Fabien Dezitter - Airbus Operations

Scientific Aspects of Weather Hazards for Aviation
Andreas Petzold - DLR

A 2030 Technical Vision for Sustainable Commercial Air Transport
Alan Epstein - Pratt & Whitney

Motivation, Status and Perspectives of Innovative On-board Hydrogen Production from Kerosene
Erich Erdle - EFCECO

2G - Roma room

European Research Area
Technologies in the European Research Area - Pioneering Aeronautics

Chair

ENFICA-FC: Realization and Flight Test of All Electric 2-Seat Aircraft Powered By Fuel Cells fuelled by Hydrogen?
Giulio Romeo - Politecnico di Torino

Development of an Airborne Liquid Hydrogen Storage System for Supplying Fuel Cell
August Fenz - Magna Steyr Fahrzeugtechnik

Progress in Commercialising Sustainable Aviation Biofuels
Richard Mills - Boeing

Engineering Challenges of the Solar Impulse Project
Alfonso Martínez - Altran

2H - México-Buenos Aires room

European Research Area
European Networks and Support Initiatives

Chair

The Aeronautics ERA-Net AirTN-FP7
Friedrich König - DLR-PT LR

ACARE - Coordination of Aeronautics Interest in the Member States
Javier Romero - CDTI

TAKE-OFF - Austrian R&D - Strategy and Initiatives for the Aeronautics Sector
Elisabeth Huchler - BMVIT

The Aeronautics Innovation Approach of The Netherlands
Henk van Leeuwen - AgentschapNL

2

Parallel Session 3 09:35 - 11:05

3

3A - Madrid room

Ensuring Customer Satisfaction and Safety
Optimising the Airport of the Future - 2

Chair

First Conclusions of the Conference «Airports and their Challenges»
Marc Noyelle - Air & Space Academy

Integrated Airport Apron Safety Fleet Management – AAS
Valentin Konrad - TSB
Innovationsagentur Berlin GmbH

European Airport Movement Management by A-SMGCS - a Contribution to the vision 2020 and SESAR
Michael Röder - DLR

Crosswind Reduced Separations for Departure Operations
Lennaert Speijker - NLR

3B - Paris room

Ensuring Customer Satisfaction and Safety
Avionics - Aid to Piloting

Chair

Weather Uplink & Flight Safety, the FLYSAFE Project
Marc Fabregettes - THALES

All Condition Operations and Innovative Cockpit Infrastructure
Linda Napoletano - DeepBlue

Real Time 3D-Visualization for Safe Landing of Small-medium Aircrafts
Marc Bonazountas - EPSILON International

Feasibility of Vision Algorithms Applied on Aircraft Terminal Operation (PEGASE)
Bruno Patin - Dassault Aviation

3C - Bonn-Berlin room

Greening the Air Transport System
Key Engine Technologies

Chair

Flutter-free Turbomachinery Blades
Torsten Fransson - KTH Royal Institute of Technology

Predictive Methods for Combined Cycle Fatigue in Gas Turbine Blades. Advanced Experimental and Analytical Investigations
Marta Villasante - Rolls-Royce

Oil Systems for Next Generation Engines - ELUBSYS Project Mid Term Achievements
Nicolas Raimarckers - Techspace AERO

Automated Design and Simulation Process for Fuel Management Systems
Jörn Unteutsch - AUTOFLUG

3D - Bruselas room

Improving Cost Efficiency
Numerical Simulation Tools for Aircraft Design and Manufacturing

Chair

Developing the Behavioural Digital Aircraft
Peter Coleman - Airbus Operations

Optimal Structural Design by Free Material Optimization
Mathias Stolpe - Technical University of Denmark

Virtual HIRF for Design and Certification (HIRF SE)
Marco Bozzetti - Alenia Aeronautica

Advanced Interface Technologies in Aircraft-related Virtual Products: The VISION Project
Dimitris Mavrikios - University of Patras

3E - Amsterdam room

Greening the Air Transport System
Aerodynamics for Enhanced Aircraft Design

Chair

Aerodynamic Loads Estimation at Extremes of the Flight Envelope
Henri Moet - Airbus Operations

Future Fast Methods for Loads Calculations: The FFAST Project
Dorian Jones - University of Bristol

Rear Fuselage and Empennage Flow Investigation (REMFI)
Daniel Redondo-García - Airbus Operations

European Strategic Wind Tunnels Improved Research Potential
Guy Boyet - ONERA (invited)

3F - Londres room

CleanSky Forum (I)
CleanSky Contribution to the Future Air Transport System

Chair

Clean Sky Role in Aeronautics
Eric Dautriat - CSJU

The Technology Evaluator
Alf Junior - DLR

Developments on More Electric Aircraft and Rotorcraft
Sebastien Dubois - CSJU

New Environmentally-friendly Flight Path for Future Aircraft
Ruud den Boer - CSJU

3G - Roma room

International Cooperation Forum (I)
Research Cooperation with Russia and Ukraine

Chair

Russian Aeronautics Research Programmes
Liudmila Rostovtseva - Ministry of Industry, Russia

Russian Aeronautics Industrial Programmes
Evgeniy Fedosov - Union of Aviation Industrialists (invited)

How to Participate in Russian Programmes
Svetlana Klessova - Inno TSD

Ukraine-EU: New Opportunities for Cooperation in Aeronautics
Igor Rybalchenko - National Aerospace University "KhAI"

3H - México-Buenos Aires room

Research and Innovation Policy
A Visionary Research Policy for the European Aeronautics and Air Transport System

Chair

Innovation Union
Tiit Jurimae - European Commission

Vision 2020, ACARE: What did we achieve?
Ray Kingcombe - UK Government

A New Vision for Aeronautics N.N.

A New Vision for Air Transport N.N.

3

Parallel Session 4 11:35 - 13:05

4

4A - Madrid room

A Increasing Time Efficiency
Air Traffic Operations - 1

Chair

Clearance of Flight Control Laws using Optimization
Anders Hansson - Linköping University

Safe Automatic Flight Back and Landing of Aircraft
Juan Alberto Herreria - ISDEFE

Climate-optimised Flight Planning
Sigrun Matthes - DLR

4 Dimension Contracts - Guidance and Control
Antoine Joulia - ONERA

4B - Paris room

Ensuring Customer Satisfaction and Safety
Avionics Architecture to Support Communication, Navigation and Surveillance

Chair

Towards the Next Generation of Integrated Modular Avionics
Didier Hainaut - THALES

Small Aircraft Future Avionics Architecture – How to Learn from Automotive Industry
Reimund Kueke - Rheinmetall Defence Electronics

Seamless Aeronautical Networks through Integration of Data Links, Radios and Antennas
Angeloluca Barba - SELEX

Evolution of B-VHF – L-band Digital Aeronautical Communication System
Michael Schnell - DLR

4C - Bonn-Berlin room

Improving Cost Efficiency
Advanced Manufacturing Techniques for Engine Components

Chair

Advanced Manufacturing Processes for Gas-Engine Turbine Components
Drazen Veselovac - WZL Aachen
Ignacio Fernández - ITP

Flexible and Near-net-shape Generative Manufacturing Chains and Repair Techniques for Complex Shaped Aeroengine Parts
Konrad Wissenbach - Fraunhofer-Institut für Lasertechnik

Flexible Automation for the Aeroengine Industry
Torbjörn Norlander - Volvo Aero Corporation

4D - Bruselas room

Improving Cost Efficiency
Aircraft Structural Health Monitoring

Chair

Project Overview AISHA II and Detection of Corrosive and Hydraulic Liquids by Gauges based on the Collapse of Percolation Conductivity
Helge Pfeiffer - MTM

PICASSO, a New and Original Concept of "Simulation Supported Probability of Detection (POD)"
Nancy Maléo - SNECMA

Development of Advanced Sensors and Novel Concepts for the Intelligent Processing in Bonded Repairs
George Maistros - INASCO

Advanced Technology Building Blocks for Embedded Structural Health Monitoring in Aeronautics
Vincent Rouet - EADS

4E - Amsterdam room

Greening the Air Transport System
Flow Control and Flow Prediction for Aeronautics

Chair

European Coordination Action for Aircraft Wake Turbulence
Andreas Reinke - Airbus Operations

Aerodynamic technologies for more effective, environmentally friendly air transport system: KATNet Strategy
Adel Abbas-Bayoumi - Airbus Operations

Boundary-layer Receptivity and its Importance for Transition Prediction
Ardeshir Hanifi - KTH Royal Institute of Technology

MARS - Manipulation of Reynolds Stress for Separation Control and Drag Reduction
Ning Qin - University of Sheffield

4F - Londres room

CleanSky Forum (II)
Key Technologies for Future Aircraft

Chair

New Wing Concepts
Jens Koenig - Airbus Operations

Life Cycle Assessment of Materials and Processes
Yvon Ollivier - Dassault Aviation

New Structures for New Generation Aircraft
Alessandro Amendola - Alenia

Engines of the Future
Michel Goulain - CSJU

4G - Roma room

International Cooperation Forum (II)
Research Cooperation with Asia and Africa

Chair

EU-China Cooperation: Innovative Control and Optimization Tools for Greener Multi Physics Design in Aeronautics
Gabriel Bugeda - CIMNE

Aeronautics Research and Technology Development in China
Xinguo Zhang - CAE

Technology Development Activities in the Japanese Aeronautics Industry
Hiroharu Itahara - SJAC

Promoting South African - European Research Cooperation in Aeronautics and Air Transport
Mmboneni Muofhe - DST

4H - México-Buenos Aires room

Research and Innovation Policy
SMEs: Key Actors for Innovation

Chair

SMEs in FP7: Who are They?
Remy Denos - European Commission

SMEs in Level 1 (CP-FP) Projects: Making the Best out of Framework Programme Research Projects
Jean-Louis Migeot - FFT

SMEs in Level 2 (CP-IP) Projects: Bringing Key Technologies
Eugene Kors - SNECMA

Poles of Competitiveness - Getting Together Research Labs, Large Industry and SMEs
Thilo Schoenfeld - Aerospace Valley

4

Parallel Session 5 15:25 - 16:55

5

5A - Madrid room

Increasing Time Efficiency *Air Traffic Operations - 2*

Chair

ERAT: New Concepts to Improve Planning and Environmental Performance in the TMA
Michael Portier - To70 B.V.

Development of an Operationally Driven Airspace Traffic Structure for High-Density High-Complexity Areas
Pablo Sánchez-Escalonilla - ISDEFE

Contract-based Air Transportation System (CATS) - A New Way of Managing 4D Trajectories
Christoph Rihacek - Frequentis

Setting the Baseline for SWIM (SWIM-SUIT)
D'Auria Giuliano - SELEX

5B - Paris room

Ensuring Customer Satisfaction and Safety *Systems for Safer Flight Guidance and Control*

Chair

In-flight Demonstration of a LIDAR based Air Data System
Xavier Lacondemine - THALES

In-flight Investigation of LIDAR based Clear Air Turbulence Detection
Hervé Barny - THALES

High Stability Vertical Separation Altimeter Instruments
Ole Henrik Gusland - Memscap AS

Advanced Fault Diagnosis for Safer Flight Guidance and Control
Andrés Marcos - Deimos Space

5C - Bonn-Berlin room

Greening the Air Transport System *Innovative Engine Architectures*

Chair

Final Results of VITAL Project (Environmentally Friendly Aero Engine)
Marius Goutines - SNECMA

New Aero Engine Core Concepts for an Environmentally Friendly Air Traffic of the Future (NEWAC)
Stephan Servaty - MTU

Validation of Radical Engine Architecture Systems (DREAM)
David Bone - Rolls-Royce

Development of a European Research and Technology Strategy for Future Lean Low
Ralf von der Bank - Rolls-Royce

5D - Bruselas room

Improving Cost Efficiency *Composite Aerostructures: New Design Principles*

Chair

Key Capabilities to Develop Faster and Better Aircraft Composite Structures (MAAXIMUS)
Jocelyn Gaudin - Airbus Operations

Improved Material Exploitation of Composite Airframe Structures by Accurate Simulation of Collapse - The COCOMAT Project
Richard Degenhardt - DLR

Dynamics in Aircraft Engineering Design and Analysis for Light Optimized Structures (DAEDALOS)
Chiara Bisagni - Politecnico di Milano

Composite Fuselage Section Wafer Design Approach for Safety Increasing in Worst Case Situations and Joints Minimizing
Blanca Araujo - CIDAUT

5E - Amsterdam room

Pioneering the Air Transport of the Future *Rotorcraft of the Future*

Chair

Generation of an Advanced Helicopter Experimental Aerodynamic Database for CFD Code Validation
Thorsten Schwarz - DLR

The European Tilt Rotor - Status of ERICA Design and Test Activities
Alessandro Stabellini - AgustaWestland

Aircraft and Rotorcraft Pilot Couplings - Tools and Techniques for Alleviation and Detection (ARISTOTEL)
Marlena Pavel - Delft University

Enabling Technologies for Personal Aerial Vehicles (myCopter)
Heinrich Bülthoff - Max Planck Institute, Tuebingen

5F - Londres room

Improving Cost Efficiency *Unmanned Aircraft Systems in Future Aviation*

Chair

Innovative Operational UAS Integration
Achim Baumann - DFS Deutsche Flugsicherung GmbH (invited)

Opening the Airspace for UAS - ASTRAEA Progress Report
Nigel Mills - QinetiQ

SMAT - An Italian Research Program for Developing and Advanced Monitoring System
Bruno Tranchero - Alenia Aeronautica

Opening the European Sky to UAS; from Military to Civil Applications
Pablo González - Indra

5G - Roma room

International Cooperation Forum (III) *Research Cooperation with Americas*

Chair

US Aeronautics Research Programmes
N.N.

Canada's Aeronautics Research
Jerzy Komorowski - NRC

Latin America - EU Cooperation in Aeronautics and Air Transport Research
Joao Taborda - EMBRAER

Exploring Opportunities and Stimulating Research Cooperation with the United States of America
Alain Garcia - ACARE

5H - México-Buenos Aires room

Research and Innovation Policy *Education & Dissemination of Knowledge: Key to Innovation in Aeronautics*

Chair

Research and Innovation Challenges and Dissemination Mechanisms for Aeronautics
Joachim Szodrach - DLR

Trends in Educational Activities and Tools for Aeronautics
Herman Deconinck - UPC

Raising European Student Awareness in Aeronautical Research through School-Labs
Patricia Corieri - von Karman Institute

Which Background for Tomorrow's Engineers in the Aeronautical Sector?
Yves Favennec - Eurocopter

5

Parallel Session 6 17:25 - 18:55

6

6A - Madrid room

SESAR Forum (I) *SESAR: Technology*

Chair

The 4D Trajectory Paradigm
Patrick Lelievre - Airbus Operations

SWIM: The ATM Interoperability Infrastructure
Richard Houdebert - Thales

The Human in the Loop
Theodor Zeh - Frequentis

Optimisation of Communication Technologies
Angelo Luca Barba - SELEX

6B - Paris room

Improving Cost Efficiency *Electro-mechanical Devices and Photonic Systems*

Chair

Distributed and Redundant Electro-mechanical Nose Wheel Actuator
Sébastien Grac - Messier Bugati

Compact and Reliable Electronics Integrated in Actuators and Motors
Paul Vassy - SAGEM
Conor Slater - EPFL

Ice Detection and Monitoring System (ON-Wing)
Max Brown - GKN

Developing Aircraft Photonic Networks (DAPHNE)
Andrew Lee - AVOptics Ltd

6C - Bonn-Berlin room

Greening the Air Transport System *Aerodynamics and Heat Transfer of Advanced Engine Components*

Chair

Aerothermal Research for Turbine Components - An Overview of the Project AITEB-2
Erik Janke - Rolls-Royce

Advanced Engine Noise Control Based on Plasma Actuators (ORINOCO)
Franck Cléro - ONERA

World Class Turbine Cooling Technology (ERICKA)
Peter Ireland - Rolls-Royce

Turbulence and Transition Modelling for Special Turbomachinery Applications
Andreas Fiala - MTU

6D - Bruselas room

Improving Cost Efficiency *Composite Aerostructures: Innovative Maintenance and Repair*

Chair

Development and Optimization of THZ NDT on Aeronautics Composite Multi-layered Structure
Marijke Vandewal - Royal Military Academy

Full-field Advanced Non Destructive Technique for On-line Thermo-mechanical Measurements on Aeronautical Structures
Marc Georges - Université de Liège

Innovative Repair of Aerospace Structures with Curing Optimization and Life Cycle Monitoring Abilities
Begona Canflanca - INASMET-TECNALIA

Modular Joints for Aircraft Composite Structures
Llorenç Llopert - Premium AEROTEC

6E - Amsterdam room

Greening the Air Transport System *Reducing Cabin and Environmental Noise*

Chair

European Aviation Noise Research Network
Dominique Collin - SNECMA

Improving the Accuracy of Airframe Noise Simulation Techniques within VALJANT
Christophe Schram - von Karman Institute

OPENAIR, New Aircraft Noise Technologies in Preparation
Eugene Kors - SNECMA

COSMA - Progress in Community Oriented Solutions to Minimise Aircraft Annoyance
Michael Bauer - EADS

6F - Londres room

Ensuring Customer Satisfaction and Safety *Satellite Navigation: Benefits for Air Transport*

Chair

How does SatNav fit into the Evolution of Aviation? What does Eurocontrol do for Adoption?
Francisco Salabert - Eurocontrol

Status of European SatNav Programmes; Objectives of ACCEPTA
Hans de With - European GNSS Supervisory Agency

Regional and Business Aviation Benefiting from EGNOS
Luis Chocano - Ineco

SatNav for Helicopters - Specific Applications
Nick McFarlane - Helios

6G - Roma room

Pioneering the Air Transport of the Future *Pioneering: Innovative Air Transport Systems*

Chair

CREATE - A European Initiative for Incubation of Upstream Research Projects
Romain Muller - ASD

Personal Plane: Assessment and Validation of Pioneering Concepts for Personal Air Transport Systems
Antoine Joulia - ONERA

European Personal Air Transportation System - Status
Krzysztof Piwek - Institute of Aviation, Warsaw

First Results of "Future Seaplane Traffic" Study
Joachim Schömann - Technische Universität München

6H - México-Buenos Aires room

European Research Area *Aeronautics RTD Initiatives in the EU12*

Chair

CEARES - The Support Action for Central-Europe
Roland Guruly - Slot Consulting

Strategic Initiatives in Aeronautics in Poland
N.N.

The National Aeronautics RTD Approach of the Czech Republic
Jiri Kovar - UNIS

New Concepts in Romanian Aeronautics Activities
Catalin Nae - INCAS

6

Parallel Session 7 10:30 - 11:30

7A - Madrid room

7

SESAR Forum (II)
SESAR: Innovations

Chair

From Research to Implementation: SESAR Validation Activities
Cristiano Baldoni - ENAV

New Airport Paradigms
Alejandro Egido - AENA

Managing Complexity
David Pérez - ComplexWorld (Innaxis)

New Network Solutions
Francisco Sánchez - Indra

7B - Paris room

7

Ensuring Customer Satisfaction and Safety
Towards More Electrical Aircraft and Personalised Cabin Environment

Chair

A Step toward Electrical Aircraft (MOET)
Etienne Foch - Airbus Operations

Transmissions in Aircraft on Unique Path Wires
Sébastien Kim - Safran

Smart Technologies for Stress Free Air Travel
Mohammad Hossien Aliabadi - Imperial College London

Innovative Systems for Personalised Aircraft Cabin Environment
Andreas Hagen Holm - Fraunhofer-Institut für Bauphysik

7C - Bonn-Berlin room

7

Greening the Air Transport System
Alternative Fuels for Aviation

Chair

A Sustainable Way for Alternative Fuels and Energy for Aviation (SWAFEA)
Philippe Novelli - ONERA

The Commercial Aviation Alternative Fuels Initiative (CAAFI) - Progress Status and Outlook
Richard Altman - CAAFI

Selection of Alternative Fuels for Aviation and their Impact on Aircraft Systems
Nicolas Jeuland - IFP

JEC Analysis of Scenarios for Transport Fuels
Laura Lonza - JRC

7D - Bruselas room

7

Improving Cost Efficiency
Composite Aerostructures: Enhanced Multifunctionality and Safety

Chair

Multifunctional Layers for Safer Aircraft Composite Structures
Cristina Elizetxea - INASMET-TECNALIA

Novel Aeronautical Multifunctional Composite Structures with Bulk Electrical Conductivity and Self-sensing Capabilities
Nerea Markaide - INASMET-TECNALIA

Prediction of Aircraft Structural Response during Ditching, an Overview of the SMAES Project
James Campbell - Cranfield University

Vulnerability Analysis for Near Future Composite/Hybrid Air Structures - Hardening via New Materials and Design
Dimitri Karagiannis - INASCO

7E - Amsterdam room

7

Young Scientists Competition
Award Winners' Session

7F - Londres room

7

European Research Area
Technologies in the European Research Area: Advanced Aerodynamics

Chair

Highlift Inflight Validation
Ralf Rudnik - DLR

Collaborative INTA Activity in the Field of Aerodynamic Design
Fernando Monge - INTA

Development of Market-driven, Modern and Highly Efficient Travel and Business Aircraft in the General Aviation Class
Martin Volck - Diamond Aircraft Industries GmbH

Aerodynamics Research Activities at CIRA: Towards and ever Greater Multidisciplinary Approach
Piergiorgio Renzoni - CIRA

7G - Roma room

7

Pioneering the Air Transport of the Future
Pioneering: Innovative Aircraft Concepts

Chair

New Aircraft Concepts Research
João Frota - Airbus Operations

Active Control for Blended Wing Body Aircraft
Rudolf Maier - EADS

The Challenges of an Environmentally Compliant Supersonic Transport Aircraft
Philippe De Saint Martin - Dassault Aviation

Future High-Altitude High-Speed Transport Concepts
Johan Steelant - ESA

7H - México-Buenos Aires room

7

European Research Area
European Research Area: Aeronautics Scientific Networks

Chair

GARTEUR – Collaboration in Aeronautics Research and Technologies in Europe
Gunnar Hult - FMV

European Aeronautics Science Network – Linking Europe's Universities in Aeronautics
Spiros Pantelakis - Univ. Patras

IFAR - The International Forum for Aviation Research
Joachim Szodrich - CEAS

New European Aviation Research Strategy
Martin Spieck - DLR

The European Transport NCP Alliance ETNA - A Support for Actors in Aeronautics RTD
Eric Van de Burgwal - TÜV Rheinland Consulting (invited)

Acronyms of the European Projects

Acronym	Session	Acronym	Session	Acronym	Session
4DCo-GC	4A4	DRESS	6B1	NODESIM-CFD	1E4
AAS	3A2	E-CAERO	5H1	ODICIS	2B3
ACCENT	1D1	E-CAERO (2)	5H2	ON-WINGS	6B3
ACCEPTA	6F2	ECATS	1F2	OPENAIR	4H3, 6E3
ACCESSRU	3G3	ELECT-AE	5C4	ORINOCO	6C2
ACFA2020	7G2	ELECTRICAL	7D2	PEGASE	3B4
ADDSAFE	5B4	ELUBSYS	3C3	PICASSO	4D2
ADIGMA	1E1	EMMA2	3A3	PLASMAERO	2E4
ADMAP-GAS	4C1.1, 4C1.2	ENFICA-FC	2G1	PLATO-N	3D2
AEROAFRICA-EU	4G4	EPATS	6G3	PPLANE	6G2
AEROMAG	2D1	ERAT	5A1	PREMECCY	3C2
AEROPORTAL	4H1	ERICKA	6C3	RAPOLAC	1D3
AERO-UKRAINE	3G4	ESWIRP	3E4	REACT4C	4A3
AirTN - FP7	2H1	FANTASIA	4C2	RECEPT	4E3
AISHA II	4D1	FANTOM	6D2	REMI	3E3
AITEB-2	6C1	FFAST	3E2	RESTARTS	5H3
ALEF	3E1	FLEXA	4C3	SADE	2E3
ALFA-BIRD	7C3	FLY-BAG	2A1	SAFAR	4B2
ALICIA	3B2	FLYSAFE	3B1	SANDRA	4B3
ARISTOTEL	5E3	FSA	7F3	SCARLETT	4B1
ATAAC	1E2	FUSETRA	6G4	SEAT	7B3
ATLLAS/II-FAST20XX	7G4	FUTURE	3C1	SENARIO	4D3
-LAPCAT/II-FLACON		GIANT-2	6F3	SESTAR	6A1, 6A2, 6A3, 6A4, 7A1, 7A2, 7A3, 7A4
ATOM	1A2	GOAHEAD	5E1	SMAES	7D3
BEMOSA	1A3	GRAIN	4G1	SmartfuelADSP	3C4
B-VHF	4B4	HEATTOP	2C1	SOFIA	4A2
CAAFI	7C2	HEDGE	6F4	SUPERHIGHWAY	5A2
CASAM	1A4	HILAS	2B1	SUPRA	2B4
CATS	5A3	HIRF-SE	3D3	SWAFEA	7C1
CEARES-NET	6H1	HISAC	7G3	SWIMSUIT	5A4
CleanSky	3F1, 3F2, 3F3, 3F4, 4F1, 4F2, 4F3, 4F4	HISVESTA	5B3	TASS	2A4
COCOMAT	5D2	HUMAN	2B2	TATMO	6C4
COFCLUO	4A1	IAPETUS	6D3	TAUPE	7B2
COLTS	2D2	ICOA.10.09	3A1	TECC-AE	1C2
COOPAIR-LA-Brazil	5G4	INTELLECT D.M.	1C1	TELFONA	2E2
COOPERATE-US	5G2	iSPACE	7B4	TIMCOP-AE	1C4
COPRA	2A3	JEC	7C4	TITAN	1A1
COSMA	6E4	KATNET	4E2	TOPPCOAT	2C3
CREAM	6B2.1, 6B2.2	KIAI	1C3	TRIADE	4D4
CREATE	6G1	LANDING	3B3	UFAST	1E3
CREDOS	3A4	LAYSA	7D1	ULMAT	2C2
CRESCENDO	3D1	MAAXIMUS	5D1	VALIANT	6E2
CRISIS	2A2	MAGFORMING	2D4	VISION	3D4
DAEDALOS	5D3	MAGPI	2C4	VITAL	5C1
DANIELA	5B1	MARS	4E4	VULCAN	7D4
DAPHNE	6B4	MERLIN	1D2	WAKENET3-EUROPE	4E1
DATAFORM	2D3	MOET	7B1	WASIS	5D4
DELICAT	5B2	MOJO	6D4	X-NOISE-EV	6E1
DESIREH	2E1	MyCopter	5E4		
DOTNAC	6D1	NACRE	7G1		
DREAM	5C3	NEARS	7H4		
		NEWAC	5C2		
		Nice-Trip	5E2		



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