### Monday 14 September

**From 8:00**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1.1 Simulation and Flight Testing</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30</td>
<td>Session 2.1 Aerodynamic Optimisation, High Speed</td>
</tr>
<tr>
<td>10:45</td>
<td>Session 3.1 Advanced Experimental Techniques</td>
</tr>
<tr>
<td>11:00</td>
<td>Session 4.1 Structural Dynamic Testing</td>
</tr>
<tr>
<td>11:15</td>
<td>Session 5.1 Structural Monitoring and Fatigue Testing</td>
</tr>
<tr>
<td>11:30</td>
<td>Session 6.1 Cost Management</td>
</tr>
<tr>
<td>11:45</td>
<td>Session 7.1 Aircraft Operations (Student Session)</td>
</tr>
</tbody>
</table>

**LUNCH – Exhibition**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1.2 Supersonic and Hypersonic Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00</td>
<td>Session 2.2 Special Topics in CFD</td>
</tr>
<tr>
<td>14:15</td>
<td>Session 3.2 Vortex Flows</td>
</tr>
<tr>
<td>14:30</td>
<td>Session 4.2 Special Structural Design Probems</td>
</tr>
<tr>
<td>14:45</td>
<td>Session 5.2 Structural Integrity, Corrosion and Fatigue</td>
</tr>
<tr>
<td>15:00</td>
<td>Session 6.2 Flight Management ARC I</td>
</tr>
<tr>
<td>15:15</td>
<td>Session 7.2 Configuration and Design Integration (Student Session)</td>
</tr>
</tbody>
</table>

**BREAK – Poster Session and Technical Exhibition**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1.3 Hypersonic Flight</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:00</td>
<td>Session 3.3 Aerodynamic Optimisation, Transports</td>
</tr>
<tr>
<td>16:15</td>
<td>Session 3.4 Surface Measurement Techniques</td>
</tr>
<tr>
<td>16:30</td>
<td>Session 4.3 Structural Analysis and Numerical Simulation</td>
</tr>
<tr>
<td>16:45</td>
<td>Session 5.3 Structural Repair and Joints</td>
</tr>
<tr>
<td>17:00</td>
<td>Session 6.3 Flight Performance</td>
</tr>
<tr>
<td>17:15</td>
<td>Session 7.3 Aerodynamics I (Student Session)</td>
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</table>

**Tuesday 15 September**

**From 8:00**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1.4 Flight Dynamics I</th>
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</thead>
<tbody>
<tr>
<td>10:30</td>
<td>Session 2.4 Unsteady Aerodynamics</td>
</tr>
<tr>
<td>10:45</td>
<td>Session 3.4 Flow Control</td>
</tr>
<tr>
<td>10:55</td>
<td>Session 4.4 Composite Manufacturing, Repair and Testing</td>
</tr>
<tr>
<td>11:10</td>
<td>Session 5.4 Fatigue and Damage Tolerance</td>
</tr>
<tr>
<td>11:20</td>
<td>Session 6.4 Design Methods</td>
</tr>
<tr>
<td>11:30</td>
<td>Session 7.4 Aerodynamics II (Student Session)</td>
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**LUNCH – Exhibition**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1.5 Flight Control of Large Flexible Aircraft</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:00</td>
<td>Session 3.5 Rotorcraft Aerodynamics</td>
</tr>
<tr>
<td>14:10</td>
<td>Session 3.6 Jet Flows</td>
</tr>
<tr>
<td>14:20</td>
<td>Session 4.5 Full Scale Structural Testing</td>
</tr>
<tr>
<td>14:30</td>
<td>Session 5.5 Power Controls</td>
</tr>
<tr>
<td>14:40</td>
<td>Session 6.5 Flight Management ARC II</td>
</tr>
<tr>
<td>14:50</td>
<td>Session 7.5 Flight Dynamics and Design (Student Session)</td>
</tr>
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</table>

**BREAK – Poster Session and Technical Exhibition**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1.6 Robust Control Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>16:00</td>
<td>Session 2.6 Unsteady CFD</td>
</tr>
<tr>
<td>16:10</td>
<td>Session 3.6 High Speed Aerodynamic Configurations</td>
</tr>
<tr>
<td>16:20</td>
<td>Session 4.6 Aerodynamic Loads</td>
</tr>
<tr>
<td>16:30</td>
<td>Session 5.6 Propulsion Integration</td>
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<tr>
<td>16:40</td>
<td>Session 6.6 Reliability, Maintenance</td>
</tr>
<tr>
<td>16:50</td>
<td>Session 7.6 Aerodynamics III (Student Session)</td>
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### Wednesday 16 September

**From 8:00**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1.7 Flight Dynamics II</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Session 2.7 Three Dimensional CFD Approaches</td>
</tr>
<tr>
<td>10:45</td>
<td>Session 3.7 Uninhabited Air Vehicles</td>
</tr>
<tr>
<td>10:55</td>
<td>Session 4.7 Structural Design and Optimisation</td>
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<tr>
<td>11:10</td>
<td>Session 5.7 Fatigue and Damage Tolerance</td>
</tr>
<tr>
<td>11:20</td>
<td>Session 6.7 Flight Safety I</td>
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<tr>
<td>11:30</td>
<td>Session 7.7 Materials and Structures (Student Session)</td>
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**LUNCH – Exhibition**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1.8 Terrain Avoidance</th>
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<tbody>
<tr>
<td>14:00</td>
<td>Session 2.8 Boundary Layers</td>
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<tr>
<td>14:10</td>
<td>Session 3.8 Experimental Configuration Studies</td>
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<tr>
<td>14:20</td>
<td>Session 4.8 Composite Design and Analysis</td>
</tr>
<tr>
<td>14:30</td>
<td>Session 5.8 Combustion and Control</td>
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<td>14:40</td>
<td>Session 6.8 Engineering Design</td>
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**BREAK – Poster Session and Technical Exhibition**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1.9 Safety and Cockpit Design</th>
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<tbody>
<tr>
<td>16:00</td>
<td>Session 2.9 Aerodynamic Optimisation, Minimum Drag</td>
</tr>
<tr>
<td>16:10</td>
<td>Session 3.9 Dynamic Wind Tunnel Measurements</td>
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<tr>
<td>16:20</td>
<td>Session 4.9 Structural Modelling and Simulation</td>
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<tr>
<td>16:30</td>
<td>Session 5.9 Durability and Damage Tolerance of Composites</td>
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### Thursday 17 September

**From 8:00**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1.10 Flight Performance, Control and Identification</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Session 2.10 Offbody Flow Fields</td>
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<td>10:45</td>
<td>Session 3.10 Separated Flows</td>
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<tr>
<td>10:55</td>
<td>Session 4.10 Future Transport Aircraft</td>
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<tr>
<td>11:10</td>
<td>Session 5.10 Propeller Design and Interactions</td>
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<tr>
<td>11:20</td>
<td>Session 7.10 MILLENNIUM Award Selection (Student Session)</td>
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**LUNCH – Exhibition**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1.11 Flight Safety II</th>
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<tbody>
<tr>
<td>14:00</td>
<td>Session 2.11 Aircraft and Airship Performance</td>
</tr>
<tr>
<td>14:10</td>
<td>Session 3.11 Wind Tunnel Developments</td>
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<tr>
<td>14:20</td>
<td>Session 4.11 Smart Structures</td>
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<td>14:30</td>
<td>Session 5.11 Environmental Effects</td>
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**BREAK – Poster Session and Technical Exhibition**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 11.2 Von Karman Lecture: Development of the Global Express, A Success of International Partnership</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:30</td>
<td>VON KARMAN LECTURE: DEVELOPMENT OF THE GLOBAL EXPRESS, A SUCCESS OF INTERNATIONAL PARTNERSHIP</td>
</tr>
<tr>
<td>16:00</td>
<td>Opening Ceremony</td>
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<tr>
<td>17:00</td>
<td>Closing Ceremony</td>
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### Friday 18 September

**From 9:00**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1.12 Technical Tour</th>
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<tbody>
<tr>
<td>10:30</td>
<td>Session 2.13 Technical Tour</td>
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<td>10:55</td>
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<tr>
<td>11:10</td>
<td>Session 5.13 Technical Tour</td>
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<tr>
<td>11:20</td>
<td>Session 6.13 Technical Tour</td>
</tr>
<tr>
<td>11:30</td>
<td>Session 7.13 Technical Tour</td>
</tr>
</tbody>
</table>
Monday, 14 September

8:30 - 9:00
Opening Ceremony and Welcoming Addresses
Captain John Faulkner, President, Australian Division, RAeS
Representative of Government
John E. Green, President of ICAS
ICAS-99-6.1.4
Life Cycle Cost Estimation Tool for Conceptual Design
Chen S., Guanna G.
Tun University of Professional, Italy
ICAS-99-6.1.3
A Static Design Approach for Aircraft Affordability
Mara D.N., Delaltrins D.
Georgia Institute of Technology, U.S.A.
ICAS-99-6.1.4
Safety and Reliability Prediction Methods for Aircraft Preliminary Design
Felding L.P.
 Cranfield University, United Kingdom
ICAS-99-6.1.5
On the Adverse Consequences of Cost-Performance Metrics Ignoring the Role of Goals they were Supposed to Support
Shariff L.I.,
Douglas Product Division, Boeing, U.S.A.

9:00 - 10:00
ICAS Daniel and Florence Guggenheim Memorial Lecture
Chairman: John E. Green, President of ICAS
ICAS-99-6.1.6
Future Directions in Aeronautical Composites
Dr. G. Long, CRC-ACS, Australia

Monday 10:30 - 12:30
Session 1.1
Simulation and Flight Testing
Chairman: T. B. D.
ICAS-99-1.1.1
Performance Flight Testing of an F-111C Aircraft
Zetter P., Woodcraft D., Bradley K., Snowden A.
Aerodynamic and Maritime Research Lab, Australia
ICAS-99-1.2.1
A Distributed Approach to the Design of a Real-Time Flight Engineering Simulator
Martin D. J.
Cardiff University, United Kingdom
ICAS-99-1.2.2
Flight Testing of AIPEX Guidance, Navigation and Control System
Miyazawa Y., Nagao N.
National Aerospace Laboratory, Japan
ICAS-99-1.4.1
Development, Qualification and Flight Testing of a Wingtip on a Jet-Powered Tail No. 1
Ingo U.
Roffe Consulting, Switzerland

Session 2.1
Aerodynamic Optimisation, High Speed
Chairman: R. Bagnold
Boeing, USA
ICAS-99-2.1.1
Reduction of Wave and Life-Limiting Dependent for Supersonic Transport Aircraft
Lowell E. A.
 Defence Evaluation and Research Agency, United Kingdom
ICAS-99-2.3.4
Finite Element Modeling and Experimental Study of a Gas Turbine Engine Blade under Bison Loading
Xiu M., Boman M., Fry N.
Aerotech Systems Research Inc., U.S.A.
ICAS-99-2.3.5
Adaptive Structures for Bionics,
Lombard G., Tallon M.
University of Pierre, Italy
ICAS-99-2.3.6
AF Research Lab., U.S.A.
ICAS-99-2.3.7
A Static Design Approach for Aircraft Affordability
Mara D.N., Delaltrins D.
Georgia Institute of Technology, U.S.A.
ICAS-99-2.3.8
Safety and Reliability Prediction Methods for Aircraft Preliminary Design
Felding L.P.
 Cranfield University, United Kingdom
ICAS-99-2.3.9
On the Adverse Consequences of Cost-Performance Metrics Ignoring the Role of Goals they were Supposed to Support
Shariff L.I.,
Douglas Product Division, Boeing, U.S.A.

12:30 - 14:00
Session 1.2
Superersonic and Hypersonic Vehicles
Chairman: L. I. Williams
NASA, U.S.A.
ICAS-99-2.1.1
The Sensitivity of S/C Details to Airfoil Noise Requirement on Investigation Using Multidisciplinary Optimisation
Makyo P.
British Aerospace Airbus, United Kingdom
ICAS-99-2.1.2
Design and Verification of High Performance Structures Under Combined Mean and Thermal Loading Series U, European Space Agency, The Netherlands
ICAS-99-2.1.3
Max-Flown Vehicle Aerodynamic Flight Measurements
Burchett R.C., Winst K.E., Moss J.N.
NASA Langley Research Center, U.S.A.
ICAS-99-2.2.1
Efficiency Improvement of CFD Codes Using Analytical Distribution Boundary Conditions
Dr. Verhoff A.
Boeing, U.S.A.
ICAS-99-2.2.2
Adaptive Mesh Refinement on the Solutions of Two-Dimensional Viscous Aeronauts Problems
Kozhov J., Mace P.G.
CFA/INAE, Brazil
ICAS-99-2.2.3
Aerodev J.L.
Aerodev J.L.
ICAS-99-2.2.4
Aerodynamic Design and Composite Structures
Angib J.,
Milan Politecnica, University, Italy
ICAS-99-2.2.5
The Evolution of Stress under the Supercapital/ Protective Coversing
Szatz A.
CRD, Italy
ICAS-99-2.3.1
Flow Physics Leading Edge Vortex Breakdown
Shore N., Hunt E.
National Research Council, Canada
ICAS-99-2.3.2
Variability Measurements in the Near-Field of a Wing Flap Vortex
Lombard G., Tallon M.
University of Pierre, Italy
ICAS-99-2.3.3
A Study of Vortex Breakdown on Pitching Delta Wings Using High Resolution Pressure Measurements
Jorg M.L., Catan J., Green R.B.
CFA/INAE, Brazil
ICAS-99-2.3.4
The Influence of Corrosion on Aircraft Structural Integrity
Sharp J., Clark G., Cole K.
Aeronautics and Maritime Research Lab., Australia
Monday 16:00 – 18:00

Session 3.3
Hyperbaric Flight
Chairman: D. Cumberbatch
NASA Langley, U.S.A.

ICAS-98.3.1.3
Optimal Three-Dimensional Range Cruise of a Dual-Fuel Hyperbaric Vehicle
Sofia G., Mahony H.Y.
Technical University of Munich, Germany

ICAS-98.3.1.2
Predicted Dead-Man Flight Characteristics of Two Hyperbaric Vehicles
Mendelssohn R., Hallager M.C.
Nielson Engineering and Research, U.S.A.

ICAS-98.3.1.1
Optimization of Space System Launching with Limitations on Full Zorras for Spent-Components
Rahlev A.S., Yarevitz D.V.
TsAGI, Russia

ICAS-98.3.1.4
Sokolova VA
Keldysh Institute, Russia

Session 3.3
Aerodynamic Optimization, Transports
Chairman: T. B. D.

ICAS-98.3.3.3
In-Flight Shock Detection Using Hot Film Sensors and Constant Voltage Anemometer System
Monger R.C.G., Samson G.K.
Sao System, USA, USA

ICAS-98.3.3.2
Capacitance Method for Determination of a Transonic Viscous-Dominant Wing
Vila A., Cardoso F.M.
University of Sao Paulo, Brazil

ICAS-98.3.3.1
A Simple Wing Optimization Code Including Propeller Effects
Villone L.M., Naiwea FM.
University of Technology, The Netherlands

Session 3.4
Structural Analysis and Numerical Simulation
Chairman: Prof. V. Giannetti
Milan Polytechnic University, Italy

ICAS-98.4.3.1
Numerical Simulation of Fluid-Structure Interaction in Aircraft Fuel Tanks Subjected to Hydrodynamic Load Penetration
Satin B., Rollman D., Marchetti M.
University of Rome “La Sapienza”, Italy

ICAS-98.4.3.2
Luminous Paint Temperature for Temperature Measurement in a Cryogenic Wind Tunnel
Avila A.
National Aerospace Laboratory, Japan

ICAS-98.4.3.4
Comprehensive Test Analysis in Aeronautical Simulations
Bos E.B., Hoogersem H.M.
N.A.L., The Netherlands

Session 4.3
Surface Measurement Techniques
Chairman: A. B. Hulsey
Airbus, United Kingdom

ICAS-98.4.3.1
Structural Damage Detection Using Best Achievable “Modul” Eigenvectors
Rizzi S.
Milan Polytechnical, USA

ICAS-98.4.3.2
Luminous Film Technique for Temperature and Pressure Measurements in a Cryogenic Wind Tunnel
Sokolova V.A.
Keldysh Institute, Russia

ICAS-98.4.3.3
Comprehensive Structural Analysis of Airframe
Verhees E.B., Hoogersem H.M.
N.A.L., The Netherlands

ICAS-98.4.3.4
Airframe Systems Technologies for the 21st Century
NASA Langley Research Center, U.S.A.

Tuesday, 15 September

Session 1.4
Flight Dynamics I
Chairman: B.B. Jarey
ITB, Indonesia

ICAS-98.1.4.3
Conventional Flight Analysis
Roths I.
Technical University of Budapest, Hungary

ICAS-98.1.4.2
Analysis of Transient Dynamic Behaviour of a Fire Fighting Aircraft after the Water Bomb Dropping
Geng Z., Jinwei S.
Institute of Aviation, Poland

ICAS-98.1.4.1
Structural and Propulsion System Dynamics on Helicopter Handling Qualities
Ogierier D., Quaerg R.B.
Toulouse Polytechnical University, France

ICAS-98.1.4.4
Numerical Simulation of the Unsteady Aerodynamic Response of a Complete Aircraft
Hejsenas M.W., Halbott S.J.
Twente University, The Netherlands

ICAS-98.2.4.2
Accuracy of Unsteady Transonic Flow Computation
Grämlund T.A., Illusso P., Nordström J.
The Aeronautical Research Institute, Sweden
ICAS-98-2.4.3 Self-Excited Oscillations of Supersonic Opposing Jet Flows
Fujita M. Mitsubishi Research Institute, Inc., Japan
Kasahara K. Nishinippon Institute of Technology, Japan

ICAS-98-2.4.4 An Unsteady Hybrid Hybrid Integral Equation - Finite Volume Scheme for Trajectory Simulation of Stores with Three-step Adaptation
Bhattacharya A.K., Mohan S.R. Aeronautical Development Agency, India
Kawut, National Aerospace Lab., India

ICAS-98-2.4.5 Aerodynamic Characteristics of Axisymmetric and Three-Dimensional Bodies at Transonic Speeds
Fonarey A.S., Novos M.A., Central Aerohydrodynamic Inst., Russia

Session 3.6
Flow Control
Chairman: B. Brunström
Defence Materiel Administration, Sweden

ICAS-98-3.4.1 (invited paper)
The Airbus A320 Hybrid Laminar Flow Fin Programme
Harrke R. Daimler Benz Aerospace AG, Germany

ICAS-98-3.4.2 Experimental Investigation on the Application of Hybrid laminar Flow Control to Large-Scale Swept Wing Models of Subsonic Speeds
Buhler Y.D., Babine V.P., Kibler A.P., Miklodi V.G., Choprovsky G.K.
Central Aerohydrodynamic Institute, Russia

ICAS-98-3.4.3 The Mechanism of Active Boundary Layer Control using Vortex Generator Jets
Hoswagata H., Matsunaga K., Tanaka R. University of Tsukuba, Japan

ICAS-98-3.4.4 Oblique Grooves Ablating Laminar Flow Separation on Rods in Passive Pressure Gradients
La Roche U., Pally S., F.M. Lab HTI, Brugg/Windsch, Switzerland

ICAS-98-3.4.5 Considerations in Applying Military Aircraft Farfield Flow Control Methodology to Commercial Aircraft
Byne S. M. Institute for Aerospace Research, Canada
Etonson E., U.S.A.

Session 4.4
Composite Manufacturing, Repair and Testing
Chairman: W. Wallace, NIRC, Canada

ICAS-98-4.4.1 Buckling Tests of Carbon-Epoxy Laminated Cylindrical Shells under Axial Compression and Torsion
Bosang C. M. Illinois Institute of Technology, Japan

ICAS-98-4.4.2 Experimental Behaviour of Graphite-Epoxy Panels with Cut-Outs under Biaxial Tension, Compression and Shear Loads
Ramos G., Trilla G.
Technical University of Madrid, Spain

ICAS-98-4.4.3 The Effect of Matrix Microstructure Content on the Fatigue Life of Carbon Fibre Reinforced Epoxy
Bened D., Swans G.
AARAS, Australia
Bodner M., Smith P.
University of Surrey, United Kingdom

ICAS-98-4.4.4 Stress Intensification on Wood-Composite Structures for Very Light Aircraft (VLA)
Sharafutdinov B., Dörmund P., Dr. Radoszewski M., Szulb B.
Warsaw University of Technology, Poland

ICAS-98-4.4.5 Manufacturing and Testing of Graphite-Epoxy Wing Box and Fuselage Structures for a Solar-powered UAV-WAPT
Ramos G.
Technical University of Madrid, Spain

Session 5.4
Turbo Machinery Technology
Chairman: M.G. Philipp DERA, United Kingdom

ICAS-98-5.4.1 Heat Transfer Measurements in a Rotating Channel
Astalor T., Gordanov G., Carpenzo G.M.
University of Naples, Italy

ICAS-98-5.4.2 Development of an Endwall Flow and Tip-Clearance Vortex in an Axial Pump Stage
Holtz C.
NASA Lewis Research Center, U.S.A.
Lockheed J.
ICOMP/NASA Lewis Research Center, U.S.A.
Lee Y.
David Taylor Model Basin, U.S.A.

ICAS-98-5.4.3 On the Steady and Unsteady Effects of Blade Flow Separation in a Counter-Rotating Double Propeller
Wathall L.
DJI, Germany

ICAS-98-5.4.4 Turbomachinery Blade Design using the Navier-Stokes Equations
Syc S.
McGill East Technical University, Turkey
Lee K.D.
University of Illinois, U.S.A.

ICAS-98-5.4.5 Experimental Investigation of Axial Compressor Cascade Performance under the Influence of Low Intensity Turbulence
Mabarak J.K., Ahmed N.A.
University of New South Wales, Australia

Session 6.4
Design Methods
Chairman: R. Ukebeck Boeing, U.S.A.

ICAS-98-6.4.1 A Proposal in Design Education with a Potential in Commercial Vehicles in Small Aircraft Manufacture
Kenza K.K., Ryuganou S.
University of Belfast, United Kingdom

ICAS-98-6.4.2 Multidisciplinary Design and Optimization of a Large Scale Civil Aircraft Project
Prof. Muris A.J., Gorans X.
Cranfield University, United Kingdom

ICAS-98-6.4.3 Development of an Integrated Conceptual Aircraft Design and Aircraft Noise Model for Civil Transport Aircraft
Cores E., Rhodes D.P., Jenkins E.R.
UK Civil Aviation Authority, United Kingdom

ICAS-98-6.4.4 Flying Objects - An Object-Oriented Toolbox for Multidisciplinary Design and Evaluation of Aircraft
Schwagans A., Krony O.
FNCE GmbH, Berlin, Germany

ICAS-98-6.4.5 Computational Algorithms for the Configuration Design
Chopra S.C., Ministry of Defence, Bangalore, India

Session 7.4
Aerodynamics (Standby Session)
Chairman: H.F. Hoffmann RMS, Australia

ICAS-98-7.4.1 Improved Approximation Formulation for the Steady Subsonic and Transonic Flow Over an Aircraft Wing
Bye L.
Royal Melbourne Institute of Technology, Australia

ICAS-98-7.4.2 Conical Euler Equations: Solution Based on the Unstructured Grid and its Application to a Vertical Flow over a Highly Swept Delta Wing
Yao P.H., Musha L.
National Aeronautical University, Taiwan

ICAS-98-7.4.3 A New Procedure for Simulating Rotor/Satellite Interaction in Turbomachinery
Wu J.H., Chen M.Z.
Beijing University of Aeronautics, P.R. of China

ICAS-98-7.4.4 Nonlinear Boundary Conditions for Nonlinear Euler Calculations Using an Implicit Approach
Ostrovnova O.
Royal Institute of Technology, Sweden

ICAS-98-7.4.5 Three Dimensional Rotor Flow Calculation
Itoriga A., Iwane S.
University of Baltigara, P.R. of Yugoslavia

Session 8.4
Rotorcraft Aerodynamics
Chairman: R. Shwom US Army, U.S.A.

ICAS-98-8.4.1 Simulation of Fluid-Structure Interaction at the Helicopter Rotor
Mehrota K.H., Wagner S.
University of Stuttgart, Germany

ICAS-98-8.4.2 Unsteady Parallel Airfoil Design for Rotary Wing Applications
De Castro Santos L.C., University of Sao Paolo, Brazil

ICAS-98-8.4.3 Optimal Main Helicopter Rotor Projector Model Obtained by Viscous Effects and Unsteady Lift Simulation
Miettinen C.
Faculty of Mechanical Engineering, Yugoslavia

Session 9.5
Jet Engines
Chairman: R. Enser, Boeing, U.S.A.

ICAS-98-9.5.1 Mixing Due to a Supersonic Main Stream and Counterflowing Supersonic Parallel Jet
Tarnopolsky A.Z., Gat S.I.
University of New South Wales, Australia

Nangis R.
Nangis Aerospace Associates, United Kingdom
Nangis R.
Nangis Aerospace Associates, United Kingdom
Robinson R., Jos L.A., Pad J.W.
DERA, United Kingdom

Session 10.5
Full Scale Testing
Chairman: P. Sinclair FTA, Sweden

ICAS-98-10.5.1 Dynamic Load Development and Results for Dynamic Excitation of a Full Scale 1/48 Fatigue Test Article
Corin D.P., Wallihan W.H., Smith J.G.
Aeronautical and Maritime Research Lab., Australia

ICAS-98-10.5.2 Brazilian Plans for External Stores Aerial Integration
Anna da Silva R.J.G., Bonea C.A., Alexo A.C., Luclh R.R., Brando M.P., de Faro Melo O.A.
CMA/MAE/MA, Brazil

ICAS-98-10.5.3 PR-250 Prototypes 1 Flight Flutter Testing
Risgaard Faidi A., Denmark
Nassauhia Aircraft Industries, Indonesia
Djidjillohali S., Agency for the Assessment and Application of Technology, Indonesia

Session 11.5
Power Controls
Chairman: T.B.D.

Technical University. Hamburg Harburg, Germany

ICAS-98-11.5.2 Mechanical Failures of High Speed Control Systems and Related Monitoring Techniques Bowley L., Silvono G.
Turin Polytechnic University, Italy

ICAS-98-11.5.3 Computer Visualization and Simulation of Fast Hydraulic Actuator Dynamics Jankovic J.
University of Belgrade, F.R. of Yugoslavia

Tuesday 14.00-15.30

ICAS-98-11.5.4 Flight Management ARC II
Chairman: A. Abikin NLR, The Netherlands

ICAS-98-11.5.5 Aircraft Vortex Wake, Flight Safety and Crisis of Airports Vyskonski V.V.
NAOS, Russia

ICAS-98-11.5.6 Towards Automated Aircraft's Taxiing Paths Sverdronsky J.
SUREC, France
Pellenize M.
Académie de l'Air et de l'Espace, France

ICAS-98-11.5.7 An Improved Technique for Flight Path and Groundspeed Analysis Using Recorded Radar Data Oldfield K.L., Bravo A.E.
Oldfield Consulting, U.S.A.

Session 12.5
Flight Dynamics and Design (Standby Session)
Chairman: F. Quaglioni Turin Polytechnic University, Italy

ICAS-98-12.5.1 Analysis of Aircraft Structural Motion after Impacting Bathy Z.
Technical University of Budapest, Hungary

ICAS-98-12.5.2 Civil Applications of Threat Vectoring - An Exploration van der Veen E.M.
Delf University of Technology, The Netherlands

ICAS-98-12.5.3 The Design of User-Oriented Flight Database Based on Cloud/Server Model Wang M., Tang X.Y., Yang T.
Northwestern Polytechnic Univ., PR of China

ICAS-98-12.5.4 The Design of User-Oriented Threat Database Based on Cloud/Server Model Wang M., Tang X.Y., Yang T.
Northwestern Polytechnic Univ., PR of China

Session 3.6
Robust Control Design
Chairman: J. Lewand
DASA, Germany
ICAS-98-1.6.1
Robustness Analysis Applied to Autopilot Design, Part 1: p-Analysis of Design Entries to a Robust Flight Control Benchmark
Loureiro G., Gradel G., Varga A., Maurer D., DBR, Germany
Bannent S. Techn. Univ. Delft, The Netherlands
ICAS-98-1.6.2
Doll C., Mager J.J.; ONERA, France
Loureiro G. DBR, Germany
Bannent S. Faculty of Aerospace Engineering, The Netherlands
ICAS-98-1.6.3
Maurer D., Varga A., Lourey G., Gradel G. DBR, Germany
ICAS-98-1.6.4
Evaluation of Variable Structure Methods for Autonomous Flight of Agile Missiles
Innocenti M., Mainini M., Nasuti F. University of Pisa, Italy
Session 3.7
Unsteady CFD
Chairman: P. Perrier
Dassault Aviation, France
ICAS-98-2.6.1
EROS: A European Euler Code for Helicopter Rotor Flow Simulations
Renzoni P. and al., CRAL, France
ICAS-98-2.6.2
Propeller Slipstream Calculation Methods
Wang G.G., Lindfield I., Eriksson F., Meijer S. The Aeronautical Research Institute, Sweden
ICAS-98-2.6.3
Small Disturbance Euler Equations (SDE): An Efficient and Accurate Tool for Unsteady Load Predictions at all Mach Numbers
Kahnleiter E., Luciklo B. Technical University of Munich, Germany
ICAS-98-2.6.4
A Time-marching, Type-dependent, Finite Difference Algorithm for the Modified Transonic Small Disturbance Equation
Geer J.A., Jr. E., Phillips NE. RMU, USA
Session 3.8
High Speed Aerodynamic Configurations
Chairman: S. Nomura NASDA, Japan
ICAS-98-5.6.1
Experiments on Delta Wings with Rounded Leading Edge Vortex Flaps
Rinne R. Cranfield University, U.K.
ICAS-98-5.6.2
Effects of Using Bif-Flag System on the Improvement of Aerodynamics of a Swept-back Wing
Xiao D., Zhou Y. Center of Aerodynamics, P.R. of China U.T.R.
Chairman: Acad. of Sciences, P.R. of China
ICAS-98-5.6.3
Aerodynamic Characteristics of Missiles with Triangular Cross Sections
Yapale J., Honner O. The Aeronautical Research Institute, Sweden
Jonsson B. DEMA, Sweden
ICAS-98-5.6.4
Comparative Force and Moment Measurements on Full and Half Models in the Yogoslova T-38 Trisonic Tunnel
Zice R. University of Belgrade, F.R. Yugoslavia
Session 4.6
Aerodynamic Loads
Chairman: T.D.D.
ICAS-98-4.6.1
A Method for the Rapid Prediction of Unsteady Load on Wings of Transonic Speeds
Nixon D. NASA Langley, USA
ICAS-98-4.6.2
Wysong T., Larker W., Kadar M. Northrop Grumman Aerospace Industry, Bangladesh, Indonesia
ICAS-98-4.6.3
Computational Unsteady Aerodynamics in Aerodynamic Simulation
Prasetyo B.B. Delft University of Technology, The Netherlands
Nourai H.F., NST, The Netherlands
Homayoun H.W.M., Univ. of Twente, The Netherlands
ICAS-98-4.6.4
Control Surface Effectiveness in the Transonic Regime
Coffey P. University of Dayton, USA
Kolosny R., Anderson G., Benan P. Wright Patterson AFB, USA
Session 5.6
Propulsion Integration
Chairman: B. Chopra
Aerospatiale, France
ICAS-98-5.6.1
Engine Integration on Future Transport Aircraft - The European Research Programmes
DUPFR/ENAIR
Burgess-Roane
DeHavilland Aerospace Airbus A.G., Germany
Rolls C.
Aerospatiale, France
Rosewater C.
D.B. Brompton, Germany
ICAS-98-5.6.2
Engine Sub-Code Model
Colombes B., Canadelli A., Shuttet A., Pulido R. Alenia Aeronatica, Italy
ICAS-98-5.6.3
Common Code Development Approach for Allison TF41-AX/Allied of Turbohaft, Turboprop, and Turbofan Engines
Newell D.B. Allison Engine Company, Indiana U.S.A.
ICAS-98-5.6.4
Reliability, Maintainability
Chairman: O. Bensch TIB, Indonesia
ICAS-98-6.6.1
Life Management of Aircraft Engine Components Using Retaining for Cause Procedures
Wils E.J. Aeronautical and Maritime Research Laboratory, Australia
ICAS-98-6.6.2
Diagnostic from System Models. The Adam Expert System Approach
Goschell E., Doda F. Alenia Aeronatica, Italy
ICAS-98-6.6.3
Aircraft Operational Management Based on State Estimation
Pokorooki L., Szulcinski R. Miltis Zrinyi National Defense University, Hungary
ICAS-98-6.6.4
The Neural Diagnostic Method an Complex System of Diagnosing Aircraft and Powerplant
Borovkow H., Lelewocz A. Air Force Institute of Technology, Poland
Session 7.6
Aerodynamics III (Student Session)
Chairman: T.R. Swimmer RAM, Australia
ICAS-98-7.6.1
Aircraft Load Models for a Flapless PC-9 Based on Wind Tunnel Testing
Huang A.A. Wagga-Wagga Space Center RMIT, Australia
ICAS-98-7.6.2
Experimental Investigation of a Diffuser for Cooling and Air Conditioning System
Bayram V., Boyadz S., Yolkaan M.A., Emre M. Technical University of Istanbul, Turkey
ICAS-98-7.6.3
Design Methodology for Low Speed High Altitude Long Endurance Unmanned Aerial Vehicles
Ahmad A. Cranfield University, United Kingdom
ICAS-98-7.6.1
Three Dimensional CFD Approaches
Chairman: K. Fujii Institute of Space and Astronautical Sciences, Japan
Session 9.7
Simulating Three Dimensional Aeronautical Flows on Mixed Block - Structured/Semi structured / Unstructured Meshes
Shaw J.A., Pacez A.J. Aircraft Research Association, United Kingdom
ICAS-98-7.6.2
A Fast and Accurate Method for Solving the Non-Slender Equations
McCombs T.W., Stanford University, U.S.A.
ICAS-98-7.6.3
A Multigrid Algorithm for Inviscid Flow Computations on Unstructured Grids
Bergles L., Yezd L. The Aeronautical Research Institute, Sweden
Session 11.7
Flight Dynamics II
Chairman: S. Suzuki Tokyo University, Japan
ICAS-98-1.7.1
Difficulties in the Application of Stability Derivatives to the Manoeuvring Aerodynamics of Combat Aircraft
Gowen D.M., Mitchell F.R. Tans Politechnical University, Italy
ICAS-98-1.7.2
A Study of Self Induced Oscillatory Rolling Motion: Analytical and Experimental Results
Geoghegan G., Goughnough F.B. Cranfield University, United Kingdom
ICAS-98-1.7.3
A Sensitivity Analysis of Chaos at High Angle of Attack
Goray P. GE Lighting Turbogas, Hungary
Bolton Technical University of Budapest, Hungary
ICAS-98-1.7.4
High Angles of Attack Flight Dynamics of Contemporary and Prospective Fighters as a Function of their Configuration and Aerodynamics
Govorov V. Warsaw University of Technology, Poland
Session 3.7
Unmanned Air Vehicles
Chairman: J. Langford AURORA, U.S.A.
ICAS-98-3.7.1
Control of High Endurance Unmanned Air Vehicle
Whittington J., Herschberg J. Royal Melbourne Institute of Technology, Australia
ICAS-98-3.7.2
Integrated Flight/Powerload Control for Directional Feedback aircrafts
Schwing A., British Aerospace, Australia
Bil G., Bonnin S. RMAT, Australia
Wang K.C. University of Sydney, Australia
ICAS-98-3.7.3
A Toolkit for the Design of Autonomous UAVs
Valentine P., Behan W.A., Kraen J., Bil G. Royal Melbourne Institute of Technology, Australia
ICAS-98-3.7.4
Wind Tunnel Investigations on RVF Wing Curve Equations
Donald A., Smed E. University of Glasgow, Scotland / United Kingdom
ICAS-98-3.7.5
Unmanned Air Vehicles UAVs over Australia
Wong E., Bil G. Royal Melbourne Institute of Technology, Australia
Session 4.7
Structural Design and Optimization
Chairman: V. Verkasaya
United States Air Force, U.S.A.
ICAS-98-4.7.1
From Structural Optimization to Multidisciplinary and Multiconstrained Optimization
Patton C. Dassault Aviation, France
ICAS-98-4.7.2
Structural Design with Static Constraints Using Expandable Modal Basis
Gluse M. Technion - Israel Institute of Technology, Israel
ICAS-98-4.7.3
Evolution of Transport Aircraft Structural Design Criteria to Incorporate Advances in Technology
Bennet T.J., MA, Bentley, U.S.A.
ICAS-98-4.7.4
Study of Wing Structural Layout Decision Support System
Feng W., Z., Tsing University of Aeronautics, P.R. of China
ICAS-98-4.7.5
Investigation of Shape Optimization Techniques for Class of Plates with Cut-Outs
Thomas R.D. Cooperative Research Centre for Advanced Composite Structures Limited, Australia
Scott M.L. Royal Melbourne Institute of Technology, Australia
Swaid A., Flahill M. Royal Melbourne Institute of Technology, Australia
Session 6.7
Wednesday, 16 September
8:30 - 9:30
General Lecture II
Chairman: Shinya Kobayakawa
Corporate Adviser, Mitsubishi H.I., Ltd., Japan
ICAS-98-6.7.3
Status and Trends in Commercial Transport Aircraft Professor Volker von Ton
German Aerospace Center/DLR, Germany
Wednesday 10:00 - 12:30
Wednesday 14:00 - 16:30

Session 4.7

Aerodynamic Design and Analysis
Chairman:
G. P. Stevens
University of Sydney, Australia

ICAS-99-4.7.1

Aerodynamic Design and Analysis
Chairman:
A. A. Baker
RSTO, Australia

ICAS-99-4.8.1

Strength Prediction of 2-D Braided Carbon/Epoxy Compounds
Fulop P. J.
Comp. Research Cent. for Advanced Composite Structures Limited, Melbourne, Australia

ICAS-99-4.8.2

Effects of Fluttering-Bending Couplings on the Buckling and Thermal Buckling Behavior of Unsymmetric Laminates
Chang G.M.
Princeton Research Institute, Beijing, P.R. of China

ICAS-99-4.8.3

Development of an Analytical Expression and a Finite Element Procedure to Determine the Residual Stresses in Bonded Repairs
Collinson R.J., Sanderson S., Trim-Cong T.
Wales

ICAS-99-4.8.4

Experimental Investigation of Working Process of the Front Devices with Opposite Flow Twisting, which are Used in the Combustion Chambers with Reduced Ecological Performances
Kowalski V.K., Kocharovskii I.V., Smirkhii I.I.
Moscow State Aviation Institute, Russia

Session 4.8

Composite Design and Analysis
Chairman:
G. Kappler
MWK Rolls Royce, Germany

ICAS-99-5.8.1

Characteristics of Momentum-Dominated Hydrocarbon Turbulent Diffusion Flames
Regulski U., Yuan J.G.
Polish National Science Research Institute, Stettin, Poland

ICAS-99-5.8.2

Aeroacoustic Control for Supersonic Propulsion Systems
Schade K.C., Hart P.T., Ye K.H.
Naval Air Warfare Center, CA, USA

ICAS-99-5.8.3

Experimental Investigation of Working Process of the Front Devices with Opposite Flow Twisting, which are Used in the Combustion Chambers with Reduced Ecological Performances
Kowalski V.K., Kocharovskii I.V., Smirkhii I.I.
Moscow State Aviation Institute, Russia

Session 5.8

Composite and Control
Chairman:
G. Kappler
MWK Rolls Royce, Germany

ICAS-99-5.8.4

Aerodynamic Design and Analysis
Chairman:
A. A. Baker
RSTO, Australia

ICAS-99-6.8.1

Maximizing the Efficiency of the Structural Qualification Process
Aquasante T.
British Aerospace, United Kingdom

ICAS-99-6.8.2

From a Non-Disciplinary to a Multi-Disciplinary Approach in Aerospace: As Seen from an Information and Communication Technology Perspective
Weglarz M.A., Awerbuch P., Van Engen J.E., Kolb E., Juber M., Pysz G.
National Aerospace Laboratory NLR, The Netherlands

ICAS-99-6.8.3

Adaptive Selectively-Deformable Structures: New Concept in Engineering
Antonsen O.A.
NTNU, Norway

Wednesday 16:00 - 18:00

Session 1.9

Safety and Cockpit Design
Chairman:
R. Howard
Australia

ICAS-99-1.9.1

A Systematic Investigation into Australian Aviation Safety
Braithwaite O.R., Fawcett J.P.
University of New South Wales, Australia

ICAS-99-1.9.2

Allocation of Fault Handling Techniques in Multimoving Avionics Architectures
Marchetto A.
Alenia, Italy

ICAS-99-1.9.3

Future Flight Ducks
NASA Langley Research Center, U.S.A.

ICAS-99-1.9.4

Human Factors Models and Classification Schemes for Improving Occurent Data Reporting Systems
Cosentino O.P., Post W.
European Commission, Joint Research Center, Italy

ICAS-99-1.9.5

Numerical Shape Optimization of Natural Laminar Flow Bodies
Zeit L., Wagner S.
Inst. of Aerodynamics and Gasdynamics Stuttgart, Germany

Session 2.9

Aerodynamic Optimisation, Minimum Drag
Chairman:
A. S. Michael
Bovisa, U.S.A.

ICAS-99-2.9.1

Mult-Objective Strategies for Complex Optimization Problems in Aerodynamics Using Genetic Algorithms. Related Applications in Fluid Dynamics and Electromagnetics
Papadakis S., Sifoniou M., Montal B.
Dassault Aviation, France

ICAS-99-2.9.2

Aerodynamic Design of High-Performance Sulphuric Wing-Fuselage Combinations
Boomers L.M.
Delft Univ. of Technology, The Netherlands

ICAS-99-2.9.3

An Improved MODEL for the Design and Calculations of Aerodynamic Characteristics of Airfoil with the Dominant Turbulent Boundary Layer at Subsonic and Low Transonic Speeds
Koreeda K.
Faculty of Mechanical Engineering, Belgrade

ICAS-99-2.9.4

Numerical Shape Optimization of Natural Laminar Flow Bodies
Zeit L., Wagner S.
Inst. of Aerodynamics and Gasdynamics Stuttgart, Germany

Session 3.9

Dynamic Wind Tunnel Measurements
Chairman:
H.U. Meier
DNW, The Netherlands

ICAS-99-3.9.1

Study of Environment Effects by Means of Scale Models Flight Tests in a Laboratory
Cotan P.
ONERA, France

ICAS-99-3.9.2

Wind Tunnel Simulation of Combat Aircraft Maneuvers
Greene W.D.
DERA, United Kingdom

ICAS-99-3.9.3

Low Speed Wind Tunnel Experiments on a Delta Wing Oscillating in Pitch
Hummel D., Lauer R.
Technical University of Braunschweig, Germany

ICAS-99-3.9.4

Implications of Aerodynamic Efficiency of a Wing by Acoustic Excitation
Ahmed N.A., Archer R.D., Haywood M.
University of New South Wales, Australia
Thursday, 17 September
3:00 - 3:30
General Lecture III
Chairman: Prof. Dr. Ing. Boris Laschka
Munich Technical University, Germany

ICAS-98-0.4
Eurofighter Technology for the 21st Century
E. Obremeri
Daimler-Benz Aerospace AG, Germany

Thursday 10:00 - 12:30

Session 3.10
Separated Flows
Chairman:
B. R. Williams
DERA, UK

ICAS-98-3.10.1
Application of an Improved K-E Model to Separation Flows
Chen S., Ito J.C.S., Milhorcew J., Madoff N.
University of New South Wales, Australia

ICAS-98-3.10.2
Behaviours of Separated and Reattaching Flow Formed over Backward Facing Step
Rihana K., Sharma Y., Saito Y., Somando Y.
University of Tokyo, Japan

ICAS-98-3.10.3
Skin Friction Measurements Downstream of a Backward-Facing Step
Spazio P.G., Igeo G., Oronti M.
Turin Politecnico University, Italy

ICAS-98-3.10.4
PDF Imaging of the Separated Region Behind a Cone in a Hypersonic Flow
O’Byrne S., Donnelly P.M., Gai S.L.,
Madoff N.R., Ransing A.P.
Australan National University, Australia

ICAS-98-3.10.5
Boundary Layer Effects on the Base Pressure Behind a Blunt Trailing Edge Aerosail
Vasilopoulos K., Gus S.L.
University of New South Wales, Australia

Session 4.10
Future Transport Aircraft
Chairman:
M. Mizuno
Japan Aircraft Development Corp., Japan

ICAS-98-4.10.1
The EagleFly: A New Concept for a Dedicated Advanced Cargo Transport
Schmit D.
Technical University of Munich, Germany

ICAS-98-4.10.2
Recent Investigations of the Very Large Passenger Blended-Wing-Body Aircraft
Densine Y.E., Bolatinsky A.L., Buzanov N.P., Gnevich B.I.
Central Aeronautical Institute, Russia

ICAS-98-4.10.3
The Environmental Challenge as Chance for the Next Century Aircraft Design
Schoedrich J., Oelbauer W., Schmied J.
Daimler-Benz Aerospace Airbus GmbH, Germany

ICAS-98-4.10.4
N219C: A New Regional Airliner for the 21st Century
Hakimi I.A., Dr. Wulora A.R.
IITN, Indonesia

ICAS-98-4.10.5
The Blended-Wing-Body Configuration as an Alternative to Conventional Subsonic Civil Transport Aircraft Design
Kotekas N.
Consultant, Greece

POSTER SESSIONS

For the first time at an ICAS Congress, poster sessions will take place twice daily with no parallel sessions scheduled during those times. Posters featuring enlarged text, equations, tables and figures will be for general exhibition throughout the Congress. Poster presenters will be scheduled specific times at which they will stand by their posters for discussions with Congress delegates.

Please find on page 29 the list of posters as of June 30, 1998.
Thursday 14:00 - 15:30

ICAS-98-5.1.1.3 Effect of Local Factors on Turn Maneuver of Agricultural Aircraft
Russo S.
University of Belgrade, F.R. of Yugoslavia

Session 3.11 Wind Tunnel Developments
Chairman: N. Wlod
University of Manchester, United Kingdom

ICAS-5.3.3.1.1.1 Computation of Wind Tunnel Flows in Transonic Slotted Wall Test Sections
Sadik Y.
Sarah Ald, Sweden
Agraf N.
IFA, Sweden

ICAS-98-5.1.1.2 Numerical, Wind-Tunnel and Flight Tests for PP11 and PP6 Light Aircraft
Casio D.P., Manola F., Nicolosi F., Ricker F.
Dipartimento di Progettazione Aeronautica, Napoli, Italy

ICAS-98-5.1.1.3 Commemorating Ten Years Operation of the Indonesian Low Speed Windtunnel
Sabyo A.E., Wiradajadi J., Abdullah A.
UTEU/DIG, BPTP, Technology, Indonesia

Session 4.11 Smart Structures
Chairman:
E. Braubach
DLR, Germany

ICAS-98-5.1.1.1 Research of Active Vibration Control Technologies for Composite Shell
Chen Y., Tu X.B.Q., Liu G., Wan J.G., Jin J.
Nanjing University of Aeronautics and Astronautics, F.R. of China

ICAS-98-5.1.1.2 Optimal Placement of Piezoelectric Sensors and Actuators Using Combinatorial Optimisation
Candela L., Saez G., Arosti M.
Turn Polytechnica University, Italy

ICAS-98-5.1.1.3 A Lightweight Concept for Aerodynamics Surfaces with Variable Comber Composite L.F. Hamelink H.
DLR, Germany

Session 5.3.1 Environmental Effects
Chairman:
B. Borka
Australia

ICAS-98-5.1.1.1 Estimation of Civil Aircraft Performance and Operating Practices from Radar Data
Caves B.E., Jenkins L.K.
(Loughborough University, United Kingdom
Browne D.P., Ollerhead J.
National Air Traffic Services Ltd, United Kingdom

ICAS-98-5.1.1.2 A New Numerical Tool for the Evaluation of Noise Impact Generated by Helicopters
Mugia I.
CRA, Italy

ICAS-98-5.1.1.3 Design and Analysis of Propellers for General Aviation Aircraft Noise Reduction
Dzoek L.E., Wood L.A.
Royal Melbourne Institute of Techn., Australia