

OUTLINE TECHNICAL PROGRAMME
22nd ICAS Congress, 28 August - 1st September, 2000, Harrogate, United Kingdom

MONDAY 28 AUGUST	From 8:00	REGISTRATION						
	8:30 - 9:00	OPENING CEREMONY						
	9:00 - 10:00	ICAS DANIEL AND FLORENCE GUGGENHEIM MEMORIAL LECTURE: PROGRESS AND PROBLEMS IN CFD APPLIED TO COMPLEX AERODYNAMIC TURBULENT FLOWS						
	10:00 - 10:30	BREAK – Poster Session and Technical Exhibition						
	10:30 - 12:30	Session 1.1 Subsonic and Supersonic Transport 1	Session 2.1 3-D Complex Configurations - Lower Order Methods	Session 3.1 Experimental Aerodynamics	Session 4.1 Composite Materials Design & Analysis	Session 5.1 Gas Turbine Systems	Session 6.1 Aircraft Systems	
	12:30 - 14:00	LUNCH						
	14:00 - 15:30	Session 1.2 Subsonic and Supersonic Transport 2	Session 2.2 High Angle of Attack Solutions	Session 3.2 Special Configurations	Session 4.2 Structural Analysis and Numerical Simulation	Session 5.2 Aeroengine Inlets and Ingestion	Session 6.2 Safety of Fault Tolerant Systems	Session 7.2 Flight Dynamics and Control 1 (Student Session)
	15:30 - 16:00	BREAK						
16:00 - 18:00	Session 1.3 Unmanned Vehicles I	Session 2.3 Design Processes Using CFD 1	Session 3.3 Data Acquisition	Session 4.3 Structure Design and Optimization	Session 5.3 Fans and Powerplant Installations	Session 6.3 Controls and Actuators	Session 7.3 Aerodynamics I (Student Session)	
TUESDAY 29 AUGUST	8:30 - 9:30	GENERAL LECTURE I : FUTURE CHALLENGES AND OPPORTUNITIES IN AERODYNAMICS						
	9:30 - 10:00	BREAK						
	10:00 - 12:30	Session 1.4 Multidisciplinary Optimization	Session 2.4 CFD Solvers	Session 3.4 Transition and Turbulence	Session 4.4 Structural Integrity, Durability and Damage Tolerance	Session 5.4 Guided Weapons	Session 6.4 Flight Deck and Avionics	Session 7.4 Aerospace Design (Student Session)
	12:30 - 14:00	LUNCH						
	14:00 - 15:30	Session 1.5 Military Aircraft 1	Session 2.5 Unsteady CFD	Session 3.5 High Speed Separated Flow	Session 4.5 Materials and Joints	Session 5.5 Combustion and Heat Transfer	Session 6.5 Safety and Atmospheric Conditions	Session 7.5 Flight Dynamics and Control 2 (Student Session)
	15:30 - 16:00	BREAK						
16:00 - 18:00	Session 1.6 Military Aircraft 2	Session 2.6 CFD for Complex Flows	Session 3.6 Unmanned Vehicles II	Session 4.6 Aeroelasticity 1	Session 5.6 Store Separation Topics	Session 6.6 Safety Related Displays and Modelling	Session 7.6 Aircraft Operations and Safety (Student Session)	

WEDNESDAY 30 AUGUST	8:30 - 9:30	GENERAL LECTURE II: CHALLENGES IN THE BETTER, FASTER, CHEAPER ERA OF AERONAUTICAL DESIGN, ENGINEERING AND MANUFACTURING						
	9:30 - 10:00	BREAK						
	10:00 - 12:30	Session 1.7 Design Education	Session 2.7 3-D Complex Configurations - High Order Methods	Session 3.7 Wind Tunnel Aerodynamics	Session 4.7 Aeroelasticity 2	Session 5.7 Integrated Product Development	Session 6.7 Human Factors Aspects of Aviation Safety	Session 7.7 Aerodynamics 2 (Student Session)
	12:30 - 14:00	LUNCH						
	14:00 - 15:30	Session 1.8 Rotorcraft	Session 2.8 Design Processes Using CFD 2	Session 3.8 Aircraft Emissions	Session 4.8 Aeroelasticity 3	Session 5.8 Deleted	Session 6.8 Propulsion System Safety	
	15:30 - 16:00	BREAK						
	16:00 - 18:00	Session 1.9 Air Traffic Management	Session 2.9 Flow Separation and Entrainment	Session 3.9 Aircraft Noise	Session 4.9 Smart Structures	Session 5.9 Advanced Production	Session 6.9 Handling Qualities and Piloting	
THURSDAY 31 AUGUST	8:30 - 9:30	GENERAL LECTURE III : 2020 VISION: PROSPECTS FOR LARGE CIVIL AIRCRAFT PROPULSION						
	9:30 - 10:00	BREAK						
	10:00 - 12:30	Session 1.10 Airport/Weather	Session 2.10 Flow Control	Session 3.10 Vortex Aerodynamics	Session 4.10 Flight Dynamics of Transport and Aerospace Vehicles	Session 5.10 Advanced Design and Development	Session 6.10 ICAS-ISOABE SESSION	Session 7.10 Student Finalists
	12:30 - 14:00	LUNCH						
	14:00 - 15:30	Session 1.11 Military Operations	Session 2.11 Wing Section Design	Session 3.11 Flight Dynamics of Highly Manoeuvrable and Combat Vehicles	Session 4.11 Structural Dynamics	Session 5.11 Systems Engineering	Session 6.11 Combat Aircraft Power Plant Integration	
	15:30 - 16:00	BREAK						
	16:00 - 17:00	VON KARMAN LECTURE: INTERNATIONAL COLLABORATION IN SUPER/HYPER SONIC PROPULSION SYSTEM RESEARCH PROJECT						
	17:00 - 17:30	CLOSING CEREMONY						
FRIDAY 1st SEPTEMBER	7:30 - 15:30	TECHNICAL VISITS						

Monday, 28 August

8:30 - 9:00

Opening Ceremony and Welcoming Addresses

Trevor TRUMAN - President of RAeS
Jean Pierre MAREC - President of ICAS

9:00 - 10:00

ICAS Daniel and Florence Guggenheim Memorial Lecture

Chairman: Jean Pierre MAREC - President of ICAS

ICAS 2000-0.1

CFD for Aerodynamic Turbulent Flows: Progress and Problems
Prof. B.E. LAUNDER - UMIST, UK

Monday 10:30 - 12:30

**Session 1.1
Subsonic and Supersonic Transport 1**

Chairmen:
H. MIZUNO - Japan Aircraft Developm. Corp., JA
M. THIBERT - Onera, FR

ICAS-2000-1.1.1 (I.L.) *
2020 Vision : Prospects for Large Civil Aircraft Propulsion
N. BIRCH - Rolls Royce plc, UK

ICAS-2000-1.1.2 (I.L.)
An Overview of NASA's High Speed Research Program (I.L.)
A. W. WILHITE
NASA Langley Research Center, US
R. J. SHAW
NASA John H. Glenn Research Center, US

ICAS-2000-1.1.3
Flying Wing Versus Conventional Transport Airplane: the 300 Seat Case
R. MARTINEZ-VAL - Univ. Polit. de Madrid, ES

ICAS-2000-1.1.4
College of Aeronautics Blended Wing Body Development Program
H. SMITH, - Cranfield Univ., UK

**Session 2.1
3D-Complex Configurations - Lower Order Methods**

Chairman:
P. SACHER
DaimlerChrysler Aerospace, DE

ICAS-2000-2.1.1
Numerical Analysis of the Aerodynamics of the Aurora Aircraft by an Inviscid / Viscous Interaction Method
J. SU - Institute for Aerospace Research, CA
J.T. CONWAY - Adger College, NO

ICAS-2000-2.1.2
Numerical Simulation of the Interaction of Side Flap Vortices and Engines Jets
M. MEINKE, E. FARES, W. SCHRODER
RWTH Aachen, DE

ICAS-2000-2.1.3
Supersonic Inverse Design of Wings for the Full Configuration of Japanese SST
K. MATSUSHIMA - Fujitsu Ltd., JP
T. IWAMIYA - NAL, JP
H. ISHIKAWA - Sanko Systems Lab., JP

ICAS-2000-2.1.4
The Aerodynamic and Dynamic Ventral Fins Effects on a Jet Trainer
S. BOGOS - D. TURCANU
INCAS, RO

**Session 3.1
Experimental Aerodynamics**

Chairmen:
F.K. OWEN - Comlere Inc., US
D. FAVIER - LABM-UMSR 2164, FR

ICAS-2000-3.1.1
Wind Tunnel Testing of Performance Degradation of Ice Contaminated Airfoils
M. HOLL - VUT Brno, CZ
Z. PATEK - VZLU Prague, CZ
L. SMRCEK - University of Glasgow, UK

ICAS-2000-3.1.2
Velocity Investigation by Embedded Laser Doppler Velocimetry on 3D Oscillating Wings
E. BERTON, C. ALLAIN, D. FAVIER, Ch. MARESCA
ASI/IRPHE, FR

ICAS-2000-3.1.3
Transonic Flow Experiments with a 2-D Rectangular Wing Section Oscillating in Pitch
C. HILLENHERMS, W. LIMBERG, W. SCHRÖDER,
Aerodynamisches Institut der RWTH Aachen, DE

ICAS-2000-3.1.4
An Experimental Investigation of a Rectangular Jet Impinging on a Flat Surface Obliquely
H. ACAR - Istanbul Technical University, TR
V. ATLI - Erciyes University, TR

**Session 4.1
Composite Materials, Design & Analysis**

Chairmen:
V. VENKAYYA - United State Air Force, US
O. RAND - Technion, IS

ICAS-2000-4.1.1
Optimization of Composite Aircraft Panels Using Evolutionary Computation Methods
P. KALETTA, K. WOLF,
Dresden University of Technology, DE

ICAS-2000-4.1.2
Modelling of Damage in Fibre Reinforced Composite Laminates under Multiaxial In-plane Loading
C. SOUTIS, M. KASHTALYAN, G.A.O. DAVIES,
Imperial College of Science, UK

ICAS-2000-4.1.3
Optimisation of Cut-Outs in Fibre Composite Components Using Finite Element Methods
R. S. THOMSON,
Coop. Resea. Cire for Advanced Composite Str. Ltd., AU
M. L. SCOTT, S. RAJBHANDARI,
RMIT University, AU

ICAS-2000-4.1.4
Compression and Torsion Buckling Tests on Fiber Composite Cylinders
C. BISAGNI - Politecnico di Milano, IT

* Last Minute transfer to G.L..3

(I.L.) : Invited Lecture

<p>Session 5.1 Gas Turbine Systems</p> <p>Chairman: G. MEAUZE ONERA, FR</p> <p>ICAS-2000-5.1.1 Development of an Aeroengine Secondary Air System Employing Vortex Reducers M. PFITZNER - Rolls Royce, DE W. WASCHKA - BMW Rolls Royce, DE</p> <p>ICAS-2000-5.1.2 A 3D LDA Technique for the Measurement of Turbulent Quantities in Complex Turbomachinery Flows-Demonstration in an Axisymmetric Free Jet G. SIMEONIDES, V.ZAPHIRAKIS, K. MATHIOUDAKIS, National Technical University of Athens, GR</p>	<p>ICAS-2000-5.1.3 Inverse Design of Turbomachinery Airfoils Using the Navier Stokes Equations B. KAPLAN, S. EYI, Middle East Technical University,TR</p> <p>ICAS-2000-5.1.4 Advances in Turboengine Real-Time Simulation for Modern Control System Development A. KREINER, S. KOPP, A. PREISS, W. ERHARD, H. RICK, Technical University of Munich, DE</p> <hr/> <p>Session 6.1 Aircraft Systems</p> <p>Chairman: R. SMYTH DASA, DE</p>	<p>ICAS-2000-6.1.1 Test Practices for Next Generation Aircraft Cabin Systems H.J. TEVVS, DaimlerChrysler Aerospace AG, DE</p> <p>ICAS-2000-6.1.2 Insulation Concept & Material Optimisation in Business Aircraft C.M. BOURBAN, R.ARNNDT - Pilatus Aircraft Ltd., CH</p> <p>ICAS-2000-6.1.3 Complete Aircraft System Simulation for Aircraft Design - Paradigms for Modelling of Complex System P. KRUS, J. NYMAN, Linköping University, SE</p> <p>ICAS-2000-6.1.4 OBOGS Integration into a Turbo-Prop Trainer Aircraft D. RICHARDSON - Pilatus Aircraft Ltd., CH</p>
<p>Monday 14:00 - 15:30</p>		
<p>Session 1.2 Subsonic and Supersonic Transport 2</p> <p>Chairman: D. SCHMITT - Lehrstuhl für Luftfahrttechnik, DE R. WAGGONER - NASA Langley Res. Cent., US</p> <p>ICAS-2000-1.2.1 (I.L.) Paper A, Paper B 728: A New Family of Regional Transports R. BIRRENBACH - Dornier Luftfahrt GmbH, DE</p> <p>ICAS-2000-1.2.2 Development of a Cargo Aircraft, an Overview of the Preliminary Aerodynamic Design Phase S. TSACH, S. BAUMINGER, M. LEVIN, D.PENN, T.RUBIN Israel Aircraft Industries, IL</p> <p>ICAS-2000-1.2.3 Propeller Airframe Aerodynamic Interference on Twin Engine Aircraft S. G. DERISHEV, State Siberian Aeronautical Research Institute, RU</p>	<p>ICAS-2000-3.2.1 Prediction of Separation Induced Buffet over Novel Wing Configurations M. I. WOODS - University of Bath, UK N. J. WOOD - University of Manchester, UK</p> <p>ICAS-2000-3.2.2 Aerodynamic Design and Analysis of a Reusable Launch Vehicle M. R. MENDENHALL, H. S.Y. CHOU, J. F. LOVE, Nielsen Engineering & Research, US</p> <p>ICAS-2000-3.2.3 Review of X-33 Hypersonic Aerodynamic and Aerothermodynamic Development R.THOMPSON - NASA Langley Res. Center, US</p> <hr/> <p>Session 4.2 Structural Analysis & Numerical Simulation</p> <p>Chairman: P. BARTHOLOMEW - DERA, UK</p> <p>ICAS-2000-4.2.1 Optimum Design of a Stiffened Panel Using the Method of Mathematical Programming A. PISTEK, P. HOBZA, Brno University of Technology, CZ</p> <p>ICAS-2000-4.2.2 Stability of Built-up Cylindrical Structures with Consideration of Plastic and Postbuckling Behavior of Thin Walled Components G. N. ZAMULA - K.M. IERUSALIMSKY TsAGI, RU</p> <p>ICAS-2000-4.2.3 Local Postbuckling Analysis of Curved Aerospace Structures M. FISCHER, David KENNEDY, Cardiff University, UK</p>	<p>ICAS-2000-5.2.3 Particle Ingestion in Engines of Military Transport Aircraft T. BARDAGI - SNECMA,FR</p> <hr/> <p>Session 6.2 Safety of Fault Tolerant Systems</p> <p>Chairman: N. J. MILLS DERA, UK</p> <p>ICAS-2000-6.2.1 Maintenance Optimisation of a Digital Engine Control System with Limit Failure Rate Constraint M. BOUSSEMART, T. BICKARD, SNECMA, FR N. LIMNIOS - Université de Compiègne, FR</p> <p>ICAS-2000-6.2.2 Qualifications Chasing Avionics Technology? I. BRODIE - Holly House, UK</p> <p>ICAS-2000-6.2.3 Interrelation Reliability Analysis of Fault Tolerant Flight Control System W. SHAOPIING, Beijing Univ. of Aeronautics and Astronautics, CN</p>
<p>Session 2.2 High Angle of Attack Solutions</p> <p>Chairmen: J. SLOOFF - NLR, NL J.P. ROSEMBLUM - Dassault Aviation, FR</p> <p>ICAS-2000-2.2.1 Airload Predictions for Delta Wings at High Incidence X.Z. HUANG, H.Y. LOU, E.S. HANFF - IAR/NRC, CA</p> <p>ICAS-2000-2.2.2 An Engineering Approach to the Calculation of Two and Three Dimensional Flows with Extensive Separation T. CEBECI, F. JOHNSON, K.C. CHANG, H.H. CHEN, The Boeing Company, US</p> <p>ICAS-2000-2.2.3 The Characteristic Time Constant Approach for Mathematical Modelling of High Angle of Attack Aerodynamics D. GREENWELL - DERA, UK M.G. GOMAN, A.N. KHRABROV TsAGI, RU</p>	<p>Session 5.2 Aeroengine Inlets & Ingestion</p> <p>Chairman: T. SURPLY Aerospatiale Matra Airbus, FR</p> <p>ICAS-2000-5.2.1 Application of Negative Score to Inlet Design for Acoustic Reduction - Aerodynamic Assessment at Subsonic and Transonic Speeds R.K. NANGIA, M.E. PALMER, Nangia Aero Research Associates, UK</p> <p>ICAS-2000-5.2.2 Vortex System and the Interference Between an Air Inlet and the Ground A. KARLSSON, L. FUCHS - KTH, SE</p>	<p>Session 7.2 Flight Dynamics and Control 1 (Student Session)</p> <p>Chairman: P. THOMASSON - Cranfield College, UK</p> <p>ICAS-2000-7.2.1 Active Flutter Suppression for Nonlinear Aeroelastic Systems T. DEGAKI - University of Tokyo, JP</p> <p>ICAS-2000-7.2.2 The Design of a System by which some of the Air Parameters are Transmitted Between Air and the Ground Station using a Model Aircraft S. KARA, A. GÜVEN, Erciyes University, TR</p> <p>ICAS-2000-7.2.3 Target Tracking with the Use of Neural Networks I. TITI, A. KAPLAN, Erciyes University, TR</p>
<p>Session 3.2 Special Configurations</p> <p>Chairmen: S. NOMURA - NATIONAL AEROSPACE LAB., JP R. CULPEPPER - NASA, US</p>		

Monday 16:00 - 18:00

Session 1.3 Unmanned Vehicles I

Chairmen:
R. CHRISTIANSEN - NASA Headquarters, US
R.A. GALBRAITH - Univ. Glasgow, UK

ICAS-2000-1.3.1
Design and Development of a Low Altitude Unmanned Aerial Vehicle
A. F. ACCARDO, F. RICCI, P. BASSO,
University of Naples «Federico II» IT

ICAS-2000-1.3.2
Design of Optimum Payloads to Meet the Mission Requirements of UAV Systems
A. K. SINHA, C. BIL, M. L. SCOTT,
- RMIT Univ., AU
P. MOHANDAS - J. NEHRU Univ., IN

ICAS-2000-1.3.3
Configuration of an Unmanned Ground Effect Vehicle
M. MILLAR, L. SMRCEK,
University of Glasgow, UK

ICAS-2000-1.3.4
Aerodynamic Aspects of Flapping Wing Micro Air Vehicles
J. SZMELTER, R. ZBIKOWSKI,
Cranfield University, UK

Session 2.3 Design Processes using CFD 1

Chairman:
R. HENKE - DaimlerChrysler Aerospace, DE

ICAS-2000-2.3.1
Numerical Tool for Specific Flight Regimes
N. V. VOEVODENKO - TsAGI, RU
ICAS-2000-2.3.2
A Solution Adaptive Grid Method for Calculation of High Speed Flows around Blunt Body Configurations
A.R. JAHANGIRIAN - Amirkabir Univ. of Technol. IR

ICAS-2000-2.3.3
Flow Simulation over a Complete Satellite Launcher with a Cluster Configuration
J. L.F. AZEVEDO - Instit. de Aeronautica e Espaço, BR

ICAS-2000-2.3.4
Three Dimensional Unstructured Grid Generation for Finite Volume Solution of Euler Equations
K. MAZAHARI, S. BODAGHABADI - Sharif Univ. of Technol., IR

Session 3.3 Data Acquisition

Chairmen:
S. FONOV - DLR Göttingen, DE
L. MCGILL - Raytheon Systems Co., US

ICAS-2000-3.3.1
360° Surface Pressure Surey of an Advanced Trainer Aircraft Model by PSP Technique in DNW High Speed Tunnel
D. MARCHETTI - AerMacchi, IT

ICAS-2000-3.3.2
New Generation Portable Data Acquisition System
I. JEBACEK, P. HOBZA
Brno University of Technology, CZ
L. PISTEK - MESIT Ltd., CZ

ICAS-2000-3.3.3
Pressure Sensitive Paint Application at Large Production Wind Tunnels
Y. SHIMBO, K. ASAI,
NAL, JP
N. KOMATSU - Mitsubishi Heavy Industries, JP

ICAS-2000-3.3.4
Pressure Sensitive Paint Technique: from Laboratory to Wind Tunnel
Y. MEBARKI - Institute for Aerospace Research, CA

Session 4.3 Structural Design & Optimization

Chairmen:
G.A.O. DAVIES - Imperial College of Science Tech & Med., IT
M. ANGHILERI - Politecnico di Milano, IT

ICAS-2000-4.3.1 (I.L.)
Structural Optimization Crashworthy Design
V. GIAVOTTO - Politecnico di Milano, IT

ICAS-2000-4.3.2
Airframe Structures Technology for Future Systems
J.M. MANTER - Air Force, US
D. B. PAUL - US Department of Defence, US

ICAS-2000-4.3.3
The FFA Operational Loads Monitoring Program - Achievements and Problems
T. J. BARNES - FFA Certification, US

ICAS-2000-4.3.4
Global Residual Damage Evaluation of Impacted Sandwich Panels at Low Energy
L. BATTILOMO, M. MARCHETTI,
University of Roma "La Sapienza", IT
R. SEVERONI - AGUSTA, IT

Session 5.3 Fans & Powerplant Installations

Chairman:
K. MUEHLENFELD
Rolls Royce Deutschland, DE

ICAS-2000-5.3.1
Fan Blade Odd-Design, Analysis and Testing of a New Aeroengine
G. SCHUHMACHER - Rolls Royce, DE

ICAS-2000-5.3.2
Aircraft Engine Response Due to Fan Unbalance and to the Presence of "Consumed" Gaps in the Engine during the Phase of Windmilling
B. BERNAY - Aerospatiale Matra Airbus, FR

ICAS-2000-5.3.3
In-Flight Thrust Determination by Load Measurement on the Engine Mounting System
H. MUHAMMAD, M. MUHARDI,
W. KUNTIJORO, B.E. SRITJAHJONO,
Bandung Institute of Technology, ID

ICAS-2000-5.3.4
Experimental Investigation of Static Internal Performance for an Axisymmetric Vectoring Thrust Nozzle (AVEN)
J. JIE - Chinese Gas Turbine Establishment, CN

Session 6.3 Controls and Actuators

Chairman:
G. F. MARSTERS - Aerovations Inc., UK

ICAS-2000-6.3.1
Model Based Fault Detection for an Aircraft Actuator
P.Y. CREPIN, R. KRESS,
Darmstadt University of Technology, DE

ICAS-2000-6.3.2
An Artificial Intelligence Based Synthesis of Electrohydraulic Servo
I. URSU, F. URSU,
INCAS, RO

ICAS-2000-6.3.3
Flow Control Electro-Hydraulic Servo Valve Assembly with in-Built Automatic Failure Detection and Compensation
J. J. ALVAREZ GARCIA - ITP, ES

ICAS-2000-6.3.4
LEQG/LTR Controller Design with Extended Kalman Filter for Sensorless Induction Motor Servo Drive System
J.-M. LIN - Chung Hua University, TW
H.-P. WANG, M.-C. LIN,
Chung-Cheng Institute of Technology, TW

Session 7.3 Aerodynamics I (Student Session)

Chairmen:
A.G.T. CROSS - BAE, UK
N.J. WOOD - Manchester University, UK

ICAS-2000-7.3.1
Quasi-Simultaneous Viscous Inviscid Interaction for Three Dimensional Turbulent Wing Flow
E. COENEN, A.E.P. VELDMAN - Univ. of Groningen, NL
G. PATRIANAKOS - Univ. of Bristol, UK

ICAS-2000-7.3.2
Effects of Treatment of the Source Terms in Turbulent Models on the Convergence Rate
J.B. ZHANG - University of Tokyo, JP

ICAS-2000-7.3.3
PIV Study of Longitudinal Vortices in a Turbulent Boundary Layer Flow
G.M. di CICCIA - Politecnico di Torino, IT

ICAS-2000-7.3.4
Wave Rotor Gasdynamics for an Aeropropulsion System
K. OKAMOTO - University of Tokyo, JP

Tuesday, 29 August

**8:30 - 9:30
General Lecture I**

Chairman: John E. GREEN
ICAS Past President, UK

**ICAS 2000-0.2
Future Challenges and Opportunities in Aerodynamics**

A. KUMAR - J. HEFNER
NASA Langley Research Center, US

Tuesday 10:00 - 12:30

**Session 1.4
Multidisciplinary Optimization**

Chairmen:
G. DIRKS - DaimlerChrysler Aerospace, DE
J. KRAMMER - DLR, DE

**ICAS-2000-1.4.1
Flexible Composite Wing with Internal Actuation for Roll Manoeuvr**

N.S.KHOT,J.V.ZWIEBER,D.E.VELEY - Air Force Research Lab., US
H.Oz - Ohio State Univ., F.E. EASTEP - Univ. Of Dayton, US

**ICAS-2000-1.4.2
Theoretical Methods for Design and Interaction of Active Elements in Aerospace Structures**

J. SIMPSON, J. SCHWEIGER,
DaimlerChrysler Aerospace AG, DE

**ICAS-2000-1.4.3
The Design and Fabrication of Top Secret - La Mouette's Rigid Hang Glider**

Z. ZAIDI BIN - Institut Teknologi MARA, MY

**ICAS-2000-1.4.4
Methodology for Examining the Simultaneous Impact of Requirements, Vehicle Characteristics, and Technologies on Military Aircraft Design**

D. MAVRIS, D. DeLAURENTIS,
Georgia Tech/ASDL, US

**ICAS-2000-1.4.5
Influence of Aeroelastic Effects on Preliminary Aircraft Design**

C.M. OESTERHELD, W. HEINZE, P. HORST,
Technical University of Braunschweig, DE

**Session 2.4
CFD Solvers**

Chairmen:
N. KROLL - Deutsches Zentrum für und Raumfahrt, GE
M. SALAS - NASA Langley Res. Center, US

**ICAS-2000-2.4.1 (I.L.)
The NASA Tetrahedral Unstructured Software System**

N. T. FRINK - NASA Langley Research Center, US
S. Z. PIRZADEH - NASA, US
P. C. PARIKH, M. J. PANDYA, M.K. BHAT,
Paragon Research Asso. Inc., US

**ICAS-2000-2.4.2
Towards an Efficient, Robust and Accurate Solver for Supersonic Viscous Flows**

T.J. BIRCH - DERA, UK
D. LUDLOW, N. QIN - Cranfield University, UK

**ICAS-2000-2.4.3
Phantom Vorticity in Euler Solutions on Highly Stretched Grids**

S.A. PRINCE, D. LUDLOW, N. QIN,
Cranfield University, UK

**ICAS-2000-2.4.4
A Solution Adaptive Technique Using Tetrahedral Unstructured Grids**

S. PIRZADEH - NASA Langley Rese. Center, US

**ICAS-2000-2.4.5
Accuracy of Gradient Computations for Aerodynamic Shape Optimisation Problems**

M. CHEVALIER, M. BERGGREN
FFA, SE

**Session 3.4
Transition & Turbulence**

Chairmen:
R. KIMMEL - Air Force Res. Lab, US
M. MALIK - High Tech Corp., US

**ICAS-2000-3.4.1 (I.L.)
Transition on Swept Wings**

E.WHITE, W. SARIC - Arizona State University, U.S

**ICAS-2000-3.4.2
Effect of Sound on Laminar Turbulent Transition on Swept Wings**

S. AUBRUN, A. SERAUDIE, D. BIRON, D. ARNAL,
ONERA, FR

**ICAS-2000-3.4.3
Downstream Evolution of a Laminar Spot**

A. MATSUMOTO - Nihon University, JP

**ICAS-2000-3.4.4
On the Effects of a Installed Propeller Slipstream on a Wing Boundary Layer**

F. M. CATALANO - EESC-USP, Aircraft Lab., BR

**ICAS-2000-3.4.5
Transition Onset Predictions for High-Lift Configurations**

R. M. CZERWIEC, J.R. EDWARDS, H.A. HASSAN,
N.C. State Univ., US

**Session 4.4
Structural Integrity, Durability & Damage Tolerance**

Chairmen:
B. WALLACE - National Research Council, CA
C. BISAGNI - Politecnico di Milano, IT

**ICAS-2000-4.4.1
Problems of Ensuring Service Life of the Second Generation Supersonic Transport**

K. SHCHERBAN, A. DEMENTYEV, S. OLKIN,
T. RODCHENKO, Y. TRUNIN,
TsAGI, RU

**ICAS-2000-4.4.2
Effect of Aircraft Failures on USAF Structural Requirements**

J. W. LINCOLN - ASC/EN, US

**ICAS-2000-4.4.3
Durability Damage Tolerance and Environmentally Assisted Crack Propagation Characteristics of a Tig Welded Titanium Alloy**

A. LANCIOTTI, L. LAZZERI,
Universita di Pisa, IT
S. OTTAVIANO - Alenia Aerospazio, IT

**ICAS-2000-4.4.4
The Significance of Laminar Corrosion Defects in Aircraft**

G. CLARK - Aeronaut. & Maritime Res. Lab., AU

**ICAS-2000-4.4.5
Calendar Fatigue Life of Airframe Materials**

W. BINTUAN, F. JIANHUA, S. QIN,
Y. QUINGXIONG,
Northwestern Polytechnical University, CN

**Session 5.4
Guided Weapons**

Chairmen:
R. BLOCKLEY - BAE Systems, UK
B. PETIT - ONERA, FR

**ICAS-2000-5.4.1 (I.L.)
Multidisciplinary Design of Fire Control and Missile Systems using a Knowledge Engineering Architecture**

P. R. ZARDA, C. G. RUIZ
Lockheed Martin Missiles & Fire Control, US

**ICAS-2000-5.4.2 (I.L.)
Hypersonic Missiles - Some Aerothermodynamic Problem Area**

J.A. EDWARDS - DERA, UK
R.A. EAST - University of Southampton, UK

**ICAS-2000-5.4.3 (I.L.)
Design, Fabrication and Mechanical Issues Relating to the Use of Microengineered Devices in Future Guided Weapons**

I.M. STURLAND - British Aerospace Ltd, UK

**ICAS-2000-5.4.4 (I.L.)
A Cost-based Analysis of UK Guided Bomb Solutions and Issues Associated With the Integration of COTS Components**

D. BRUNDLE - Hunting Engineering Ltd, UK

**ICAS-2000-5.4.5 (I.L.)
Hovering Off-Board Decoy Development Programme and Technologies**

M. CROZIER - British Aerospace Australia Ltd, AU

**Session 6.4
Flight Deck & Avionics**

Chairmen:
P.G.A.M. JORNA - NLR, NL
P. HAMEL

**ICAS-2000-6.4.1 (I.L.)
Human Centered Design Flight Deck Design and
Utility System Integration**
F. BLOBNER- Dornier Luftfahrt GmbH, DE

**ICAS-2000-6.4.2
Electronic Flight Display Development Supported
by Commercial off the Shelf Tools**
C. MORAVSZKI, J. ROHACS - Technical Univ. of Budapest, HU

**ICAS-2000-6.4.3
The Development of a Civilian Fly by Wire Flight
Control System**
E. KLEEMANN, D. DEY, M. RECKSIEK
DaimlerChrysler Aerospace, DE

**ICAS-2000-6.4.4
Cosmic Radiation Effects in Avionics - An
Increasing Hazard in the New Millenium?**
C. DYER, P. TRUSCOTT, C. SANDERSON,
B. COLWELL - DERA, UK
A. CHUGG, R. JONES - MATRA BAE Dynamics, UK
I. MacDIARMID - BAE Military Aircraft, UK
K. JOHANSSON - Ericsson SAAB Avionics, UK

**ICAS-2000-6.4.5
Model Based Software Development and Code
Generation for Avionic Systems**
I. FEY, M. HOFFMANN, D. REINERS - DaimlerChrysler, DE

**Session 7.4
Aerospace Design (Student Session)**

Chairmen:
L. SMRCEK - Glasgow University, UK
J.P. FIELDING - Cranfield University, UK

**ICAS-2000-7.4.1
An Integrated Optimization for Conceptual
Designs of Spaceplane**

T. TSUCHIYA - University of Tokyo, JP
**ICAS-2000-7.4.2
Aerodynamic Configuration Design of Aircraft
Using Multi-objective Genetic Algorithm**
W. XIAO-PENG, G. ZHENG-HONG,
Northwestern Polytechnical University, CN

**ICAS-2000-7.4.3
Conceptual Design and Optimization of a High
Aspect Ratio UAV Wing Made of Composite
Material**
K. VIDMAIER, F. M. CATALANO,
EESC-USP, BR

**ICAS-2000-7.4.4
Multi-Disciplinary Design of a High Aspect Ratio
Gravity Control Hang Glider with Aeroelastically
Enhanced Manoeuvrability**
G.M. MASSARO - Delft Univ. of Technology, NL

**ICAS-2000-7.4.5
Digital Mock-up : A Useful Tool in Aircraft Design**
D. CAMATTI, S. CORPINO, M. PASQUINO,
Politecnico di Torino, IT

Tuesday 14:00 - 15:30

**Session 1.5
Military Aircraft 1**

Chairmen:
B. BERRIER - NASA Langley Res. Center, US
G. BRIDEL - DaimlerChrysler Aerospace, DE

**ICAS-2000-1.5.1
High Altitude Long Endurance Aircraft**
P. KAEMPF, DaimlerChrysler Aerospace, DE

**ICAS-2000-1.5.2
Research on the Synthesis of Aircraft Configuration
Parameters and Combat Effectiveness**
H. WANG, L.LI - Northwestern Polytechn. Univ., CN

**ICAS-2000-1.5.3
Some Thoughts about Change of Fighters at Air
Force of the East European Countries**
J. ROHACS - Technical Univ. of Budapest, HU
G. OVARI - Zrinyi Miklos Nat. Def. Univ., HU

**Session 2.5
Unsteady CFD**

Chairmen:
B.R. WILLIAMS, - DERA, UK
N.G. VEERHAAGEN - Technolog. Univ., NL

**ICAS-2000-2.5.1 (I.L.)
Unsteady CFD for Aircraft Design**
J.P. ROSEMBLUM, Ph. ROSTAND,
DASSAULT AVIATION, FR

**ICAS-2000-2.5.2
Numerical Analysis of the Unsteady Flow Above a
Slender Delta Wing at Large Angles of Attack**
J. MUELLER, D. HUMMEL,
Technical University of Braunschweig, DE

**ICAS-2000-2.5.3
Prediction of Aerodynamic - Lift Redistribution on
Flexible Wing Structure Using Transonic Unsteady
Aerodynamic Code - Ntrans**
I. W. TJATRA - Bandung Institute of Techn., ID
M. KADAR, D. RAHMAWATI,
Nusantara Aircraft Industry Ltd., ID

**Session 3.5
High Speed Separated Flow**

Chairmen:
J. DELERY - ONERA, FR
J.L. STOLLERY - Cranfield Univ., UK

**ICAS-2000-3.5.1
Shock Wave/Boundary Layer Interaction**
J. MUELLER, R. MUEMLER, W. STAUDACHER,
University of the Federal Armed Forces, DE

**ICAS-2000-3.5.2
Computation of a Dynamically Deployed Flap
Employing Adaptive Body Recovery**
J.J. ROPER - DERA Fort Halstead, UK
J.A. EDWARDS - DERA, UK

**ICAS-2000-3.5.3
Experimental Study on Self Induced Excitation
Phenomena of Opposing Jet in Supersonic Flow**
K. KARASHIMA - Nishinippon Inst. of Technol. JP
S. ASO, G. TAKAMI - Kyushu University, JP
K. SATO - Inst. of Space & Astron. Sciences, JP

**Session 4.5
Materials & Joints**

Chairman:
C. VOTO
ALENIA, IT

**ICAS-2000-4.5.1
Mixed Mode Fracture Characterization of
Adhesive Joints**
U. WEERTS, H. KOSSIRA,
Technical University of Braunschweig, DE

**ICAS-2000-4.5.2
Non Destructive Assessment of the Radial
Clearance of the Bolted Joints in Aircraft Structures**
T. B. RYZHOVA - TsAGI, RU

**ICAS-2000-4.5.3
Deformation Inhomogeneity in a Single Crystal
Nickel Base Superalloy**
J. H. ZHANG - Chinese Academy of Scie., CN
J.L. LIU, T. JIN, Y.B. XU, Z.Q. HU,
Institute of Metal Research, CN

**Session 5.5
Combustion & Heat Transfer**

Chairmen:
T. NAGASHIMA - Tokyo University, JP
M. GOUTINES - SNECMA, FR

**ICAS-2000-5.5.1
Temperature and Convective Heat Transfer Coefficient
Profiles Downstream of a Multiperforated Plate -
Application to Combustion Chamber Cooling**
B. PETRE, E. DORIGNAC, J.-J. VULLIERME,
ENSMA, FR

**ICAS-2000-5.5.2
Computer Program for Simplified Evaluation of
Gas Radiation in Turbine Engine Enclosures**
L. M. RODRIGUEZ, T. RODRIGUEZ,
ITP, ES

**ICAS-2000-5.5.3
Heat Transfer in a 180 Deg Turn Ribbed Channel**
G. CARDONE, T. ASTARITA, G.M. CARLOMAGNO
University of Naples - DETEC, IT

**Session 6.5
Safety in Adverse Atmospheric Conditions**

Chairmen:
J. LOWE - British Airways, UK
H.T. HUYNH - ONERA, FR

**ICAS-2000-6.5.1 (I.L.)
Reducing Aviation Weather Related Accidents
Through High Fidelity Weather Information
Distribution and Presentation**
H. P. STOUGH, P. R. SCHAFFNER, D. B. SHAFER,
NASA Langley Research Center, US
G. S. MARTZAKLIS,
NASA Glenn Research Center, US

**ICAS-2000-6.5.2
Probabilistic Wake Vortex Safety Assessment to
Evaluate Separation Distances for ATM Operations**
L. J.P. SPEIJKER, J. KOS, H. A.P. BLOM,
G.B. van BAREN - NLR, NL

**ICAS-2000-6.5.3
Wake Vortex Simulations using a Parallel High-Order
Accurate Navier-Stokes Solver**
R. STEJL, H.W.M. HOEIJMAKERS,
University Twente, NL

**Session 7.5
Flight Dynamics and Control 2 (Student Session)**

Chairman:
M. THOMANSSON
Cranfield University, UK

**ICAS-2000-7.5.1
Modelling of the Control of a Thrust Vectedored
Aircraft**
G. VINELLI - Politecnico di Torino, IT

**ICAS-2000-7.5.2
Mathematical Modelling of a Low Power
Gasturbine Engine and Its Control System**
P. AILER - Technical Univ. of Budapest, HU

**ICAS-2000-7.5.3
The Influence of Stealth Technology on Flight
Performance and Manoeuvring Characteristics of
Fighter Aircraft**
I. IKRYANOV - TsAGI, RU

Tuesday 16:00 - 18:00

**Session 1.6
Military Aircraft 2**

Chairmen:
P. KAEMPF - DASA, DE
H. ROSS - DaimlerChrysler Aerospace, DE

ICAS-2000-1.6.1
Wing Design of an Oblique Wing Combat Aircraft
R.K. NANGIA,
Nangia Aero Research Associates, UK
D. GREENWELL - DERA, UK

ICAS-2000-1.6.2
Design Synthesis and Optimisation of an Advanced Short Take-off and Vertical Landing (ASTOVL) Combat Aircraft
J.P. FIELDING - Cranfield University, UK
N. KEHAYAS - Consultant, GR

ICAS-2000-1.6.3
Predicting the Effects of New Technologies on Aircraft Structural Mass: UCAV Case Study
P. EUSTACE - RED Scientific Ltd., UK
L. JENKINSON - Loughborough University, UK

ICAS-2000-1.6.4
Lift at High Angle of Attack of a Fuselage Delta Wing Configuration with Canard Lateral Jets
M. NEAMTU - INCAS «Elie Carafoli», RO

**Session 2.6
CFD for Complex Flows**

Chairmen:
K. FUJII - Instit. of Space & Aeronaut. Scien., JP
O. A. KANDIL - Old Dominion Univ., US

ICAS-2000-2.6.1
Navier-Stokes Calculations at Aerospatiale Matra Airbus for Aircraft Design
C. GACHERIEU, R. COLLERCANDY, P. LARRIEU,
S. SOUMILLON, L. TOURRETTE, S. VIALA,
Aerospatiale Matra Airbus, FR

ICAS-2000-2.6.2
Numerical Investigation of Three-dimensional Transonic Flow with Large Separation
M.A. LESCHZINER - Univ. of London, UK
H. LOYAU - Aircelle, Harfleur, FR

ICAS-2000-2.6.3
Overset Unstructured Grid Method for Flow Simulations of Complex and Multiple Body Problems
K. NAKAHASHI, F. TOGASHI
Tohoku University, JP

ICAS-2000-2.6.4
A Propeller Integration Study Comparing Experimental Data with Numerical Flow Solutions Based on the Navier-Stokes Equations
L.L.M. VELDHUIS - Delft Univ. of Technol., NL
S. NEBILOLO - Polytechnico di Torino, IT

**Session 3.6
Unmanned Vehicles II**

Chairmen:
P. HAMEL - DLR, DE
R. BLOCKLEY - Cranfield University, UK

ICAS-2000-3.6.1 (I.L.)
Modelling Simulation and Flight Test Experience in the Development of Unstable Robotic Aircraft (I.L.)
P.G. THOMASSON - Cranfield Univ., UK

ICAS-2000-3.6.2
Dynamics of High Altitude Long Endurance UAV
Z. GORAJ - Warsaw Univ. of Technology, PL

ICAS-2000-3.6.3
Unmanned Air Vehicles
S. ANDERSON - SAAB, SW

ICAS-2000-3.6.4
Dynamic Control Aspects of the Shipboard Launch of Unmanned Air Vehicles
M. R. CRUMP, P. RISEBOROUGH, C. BIL, R. HILL,
RMIT University, AU

**Session 4.6
Aeroelasticity 1**

Chairman:
H. HOENLINGER
DLR, DE

ICAS-2000-4.6.1 (I.L.)
Perspectives of NLR Aeroelastic Methods to Predict Wing/Store Flutter and Dynamic Loads of Fighter Type Aircraft
J. J. MEIJER - NLR, NL

ICAS-2000-4.6.2
Design and Qualification Concepts for Flexible Windtunnel Wing Models
M. KÄMPCHEN, W. JUUNG, A. DAFNIS,
H.G. REIMERDES,
RWTH Aachen, DE

ICAS-2000-4.6.3
Static Aeroelasticity Analysis in Transonic Flow
F.Z. ISHMURATOV, S.I. KUZMINA, V.A. MOUZUNOV,
TsAGI, RU

ICAS-2000-4.6.4
Prediction of Non-Linear Aeroelastic Instabilities
A. SEDAGHAT, J.E. COOPER, J.R. WRIGHT, A.Y.T. LEUNG,
Manchester University, UK

**Session 5.6
Stores Separation Topics**

Chairmen:
R. DESLANDES - DaimlerChrysler Aerospace, DE
D.M. EVANS - Boeing Military Aircraft & Missiles, US

ICAS-2000-5.6.1 (I.L.)
ACFD Applications to Store Separation - Status Report
A. CENKO - NAVAIR, US
M. LUTTON - Eglin Air Force Base, US

ICAS-2000-5.6.2
Mathematical Modelling for Studying the Conditions of Air Ammunition Warfare
L. TURCHAK, A. BELOTSEKOVSKI, M. KANEVSKI, N. BARANOV
Centre for Aerospace Technology, RU

ICAS-2000-5.6.3
New Methodologies in the Integrated Approach to External Store Separation Problem Optimisation of Camera Positioning for Flight Test
S. BARBERO, R. GEMMA, D. GIRODO,
Alenia Aerospazio, IT

**Session 6.6
Safety Related Displays and Modelling**

Chairmen:
R. ABLETT - CAA, UK
M. PIERS - NLR, NE

ICAS-2000-6.6.1
Rapid on Board Prototyping of Near Optimal Spatial Trajectories for Pilot's Associate
O. YAKIMENKO - Naval Postgraduate School, US

ICAS-2000-6.6.2
Scattering Analysis for Wreckage of In-Flight Breakup
T. UEDA, A. KANDA - NAL, JP
A. WATAKI - Ministry of Transportation, JP

ICAS-2000-6.6.3
Precipitation Drag of Snow and Standing Water
M. GIESBERTS, J. GOODEN,
NLR, NL

ICAS-2000-6.6.4
System Safety of the Ordinary and Emergency Flight Data Display on the Gripen Color Displays
J. PALMQVIST, R. SANTESSON,
SAAB Aerospace, SE

**Session 7.6
Aircraft Operations & Safety (Student Session)**

Chairmen:
H. MUIR - Cranfield University, UK
J. SCHUHMACHER - Daimler Benz Aerospace, DE

ICAS-2000-7.6.1
Use of Navigation Satellite Systems for Aircraft Operations : Sensitivity to Errors
J.-P. CHAUVEAU, B. CHRISTOPHE,
ONERA, FR
J. LACROIX - University Paris VI, FR

ICAS-2000-7.6.2
Model of Degradation of Metal Polymeric Composite Joints in Aspect of Reliability and Safety
K. KUSTRON - Warsaw Univ. of Technology, PL

ICAS-2000-7.6.3
The Development of a Low Cost Navigation System Using GPS/RDS Technology
Y. R. LIN, W. C. LU, M. H. YANG, F. B. HSIAO,
National Cheng Kung University, TW

Wednesday, 30 August

**8:30 - 9:30
General Lecture II**

Chairman:
Prof. B. FREDRIKSSON - SAAB AB, SW

ICAS 2000-0.3
Challenges in the Better, Faster, Cheaper Era of Aeronautical Design Engineering and Manufacturing
Professor Earl MURMAN
Mass. Institute of Technology, US

Wednesday 10:00 - 12:30

**Session 1.7
Design Education**

Chairman:
M. THORBECK
Tech. University of Berlin, DE

ICAS-2000-1.7.1
Changing Education Requirements for Design Engineers
D. COLDBECK, L. SMRCEK,
University of Glasgow, UK

ICAS-2000-1.7.2
Integration of Subscale Flight Testing in Design Education
C. MUNRO, P. BERRY, P. KRUS,
Linköping University, SE

ICAS-2000-1.7.3
Computer Based Training in Aircraft Design Education
D. SCHOLZ - Univ. of Applied Scienc. Hamburg, DE
J. THORBECK - Tech. Univ. Berlin, DE

ICAS-2000-1.7.4
An Academic Experience on Aircraft Design : Affordable Advanced Jet Trainer
S. CHIESA, L. BORELLO, P. MAGGIORE
Politecnico di Torino, IT

ICAS-2000-1.7.5
University Development of a Derivative Aircraft Based on a Kit-Glider
G.E. DORRINGTON - University of London, UK

**Session 2.7
3-D Configurations - High Order Methods**

Chairmen:
A. JAMESON - Stanford University, US
B.E. RICHARDS - Glasgow University, UK

ICAS-2000-2.7.1
The Application of a Time Accurate Unstructured Euler Solver Coupled with a Boundary Layer Solver for the Solution of Transonic Aeroelastic Problems on Complex Configurations
S.A. GALPIN - British Aerospace Airbus Ltd., UK

ICAS-2000-2.7.2
Aerodynamic Design Using the Euler Adjoint Approach
M.R. CROSS - British Aerospace Airbus Ltd., UK

ICAS-2000-2.7.3
Nonlinear k-ε Turbulence Modeling for Industrial Applications
M. AMATO, P. CATALANO, CIRA, IT

ICAS-2000-2.7.4
Short Turn Around Parallel CFD to Predict Three Dimensional High Lift Flows Around a Transport Aircraft Powered by Ultra High by Pass Ratio Turbofan Engines
J.E.J. MASELAND - NLR, NL

ICAS-2000-2.7.5
Prediction of Aeroelastic Effects of Aircraft Configurations Including High Lift Systems
K.C. CHANG, H.H. CHEN, T. TZONG,
T. CEBECI,
The Boeing Company, US

**Session 3.7
Wind Tunnel Aerodynamics**

Chairman:
J. TEMPLIN - National Research Council, CA

ICAS-2000-3.7.1
Numerical Analysis of Blockage Effects in Slotted Wind Tunnel
G. LOMBARDI, M. V. SALVETTI
University of Pisa, IT
M. MORELLI - CSIR, ZA

ICAS-2000-3.7.2
Overcoming the Challenges of Designing Manufacturing and Testing of Cryogenic Wind Tunnel Models
P. J. WHITE - British Aerospace Airbus Ltd., UK
I. A. PRICE - Europ. Trans. Wind Tunnel, DE
M. J. SIMMONS - DERA, UK
R. SALE - Aircraft Research Association, UK

ICAS-2000-3.7.3
Ground Effect Testing Capabilities in the Filton 12' x 10' Low Speed Wind Tunnel
M.C.W. EVANS - British Aerosp. Airbus Ltd., UK

ICAS-2000-3.7.4
Development of a Half Model Testing Capability at ETW
M. C.N. WRIGHT - Europ. Trans. Wind Tunnel, UK

ICAS-2000-3.7.5
Drag, Lift and Pitching Moment Increments due to Wind Tunnel Wall Constraint: Extension to Three Dimensions
J.E. HACKETT, M.L. PERRY - Lockheed Martin Aeron. Syst. Co, US
K.R. COOPER - National Research Council, CA

**Session 4.7
Aeroelasticity 2**

Chairmen:
J. BECKER - DaimlerChrysler Aerospace, DE
J. NAKAMACHI - National Aerospace Lab., JP

ICAS-2000-4.7.1 (I.L.)
Progress in the Prediction of Aeroelastostatic Instabilities on Large Civil Transport Aircraft
M. LACABANNE - Aerospatiale Matra Airbus, FR

ICAS-2000-4.7.2
Optimization of Tapered Wing Structure with Aeroelastic Constraint
H. DJOJODIHARDJO, I.W. TJATRA, I. HARYANTO
- Institute of Technol. Bandung, ID

ICAS-2000-4.7.3
Flutter Analysis of Composite Wings Using Symbolic Computation
J.R. BANERJEE - City University, UK
R. BUTLER - University of Bath, UK

ICAS-2000-4.7.4
A Carbon Composite Diverging Vertical Tail for Commercial Airplanes
V. VENKAYYA, V. TISCHLER,
Air Force Research Laboratory, US
O. SENSBURG, T. SCHWEIGER,
DaimlerChrysler Aerospace, DE

ICAS-2000-4.7.5
Shock Stall Flutter of a Two-Dimensional Airfoil
M. YAMASAKI, T. UCHIDA, - I. YUKIMURA,
K. ISOGAI - Kyushi University, JP

**Session 5.7
Integrated Product Development**

Chairman:
E. MURMANN - MIT, US

ICAS-2000-5.7.1
Product Design Requirement Definition for Civil Transport Aircraft
G. DIRKS, R. GERHARDS, F. MELLER
DaimlerChrysler Aerospace Airbus, DE

ICAS-2000-5.7.2
Integrated Product Development - a Key to Affordability
G. HOLMBERG - SAAB Aerospace, SE

ICAS-2000-5.7.3
A Distributed Design Scenario for Aerospace
K.H. PAYNE, P.J. DEASLEY, H. SYAMSUDIN, et al
Cranfield University, UK

ICAS-2000-5.7.4
Optimisation of the Aircraft Development Process in Small Aircraft Companies
O. MASEFIELD, A. CERVIA - Pilatus Aircraft Ltd., CH

ICAS-2000-5.7.5
Product Maturity Through Partnership
S.SHARMA A.MUSSAD, S.MCCLERRY - British Aerosp. Airbus Ltd., UK

<p>Session 6.7 Human Factors Aspects of Aviation Safety</p> <p>Chairmen: F. REUZEAU - Aerospatiale Matra Airbus, FR H. MUIR - Cranfield University, UK</p> <p>ICAS-2000-6.7.1 Human Factors in Military Aircraft Accidents J. HOLROYD, Adjutant Gen. Human Scie. (Army), UK</p> <p>ICAS-2000-6.7.2 REX: a Human Factor Flight Safety Research Program N. MAILLE, L. CHAUDRON, P. LE BLAYE, ONERA, FR J.-Y. GRAU, IMASSA-CERMA, FR</p> <p>ICAS-2000-6.7.3 Workload Measurements for Operations under Simulated Single Pilot Instrument Flight Rules K. RINOIE, K. HONDA University of Tokyo, JP</p>	<p>ICAS-2000-6.7.4 On the Correlation between Cultural Background and the Commercial Aircraft Accidents H.-S. JING, S.-J. PENG, National Cheng Kung University, TW</p> <hr/> <p>Session 7.7 Aerodynamics 2 (Student Session)</p> <p>Chairman: M. CLARKSON BAE Systems, UK</p> <p>ICAS-2000-7.7.1 An Experimental Study on Wingtip Devices for Agricultural Aircraft R. F. de Faria COIMBRA, F. M. CATALANO, EESC-USP, BR</p> <p>ICAS-2000-7.7.2 Transonic Unsteady Separated Flow over Profile V. PAFNUTIEV, Moscow Institute of Physics and Technology, RU</p>	<p>ICAS-2000-7.7.3 Numerical Simulation of a Pitching NACA 0012 Airfoil A. PECHLOFF - Technical University of Munich, DE</p> <p>ICAS-2000-7.7.4 On the Calibration of 30x60 mm Trisonic Wind Tunnel at the Istanbul Technical University S. VURAL, E. SEVINC, M.Z. ERIM, Istanbul Technical University, TR</p> <p>ICAS-2000-7.7.5 Simplified Method on Mathematical Model of Transonic Axial Compressors A. VERESS - Technical Univ. of Budapest, HU</p>
<p>Wednesday 14:00 - 15:30</p>		
<p>Session 1.8 Rotorcraft</p> <p>Chairmen: Th. Van HOLTEN - Delft Univ. of Techno, NL Al HAGGERTY - The Boeing Company, US</p> <p>ICAS-2000-1.8.1 Experimental Study of No Tail Rotor (NOTAR) Helicopter L. XIAOPING - 1st Aeron. College of Air Force, CN Z. CHENLIN, W. HUAMING Nanjing Univ. of Aeronautics & Astronautics, CN</p> <p>ICAS-2000-1.8.2 Aerodynamical and Dynamical Investigation of Helicopter Rotors T. GAUSZ - Technical University of Budapest, HU</p> <p>ICAS-2000-1.8.3 Nonlinear Dynamic Model for Flexural Vibrations Analysis of a Supercritical Helicopter's Tail Rotor Drive Shaft Z. DZYGADLO, W. PERKOWSKI, Institute of Aviation, P</p>	<p>ICAS-2000-2.8.3 Recent Progress on Powerplant / Airframe Integration at Aerospatiale Matra Airbus A. HUREZ - Aerospatiale Matra Airbus, FR</p> <hr/> <p>Session 3.8 Aircraft Emissions</p> <p>Chairmen: H. WESOKY - FAA, US</p> <p>ICAS-2000-3.8.1 (I.L.) Propulsion Emissions Research at NASA C. RUSSO - NASA Glenn Research Cen, U.S.A.</p> <p>ICAS-2000-3.8.2 Sustainable Aviation - The Way Ahead J. J. LEE - Rolls Royce plc, UK</p> <p>ICAS-2000-3.8.3 The European Initiative Towards Ultra Low Emission Engines K. BROICHHAUSEN - MTU, DE</p>	<p>ICAS-2000-4.8.3 Navier-Stokes Based Direct Numerical Aeroelastic Simulation G. BRITTEN, J. BALLMANN - RWTH Aachen, DE</p> <hr/> <p>Session 5.8</p> <p>Deleted</p> <hr/> <p>Session 6.8 Propulsion System Safety</p> <p>Chairmen: T. NAGASHIMA - Tokyo University, JP N. PEACOCK - Rolls Royce plc, UK</p> <p>ICAS-2000-6.8.1 The Numerical Simulation and Experimental Validation of Ventilation Flow and Fire Events in a Trent Nacelle Fire Zone A.J. MULLENDER, M. H. CONEY, Rolls Royce plc, UK D. M. HORROCKS, J. J. MCGUIRK, Loughborough University, UK J. B. MOSS, P. A. RUBINI, D. BINKS, Cranfield University, UK</p> <p>ICAS-2000-6.8.2 Development of the Low Temperature Fire Event Modelling Technique A.J. NEELY, A.R.ABUTALIB, P.T. IRELAND - Univ. Oxford, UK A. J. MULLENDER - Rolls Royce plc, UK</p> <p>ICAS-2000-6.8.3 A Stochastic Model of Friction Effected Degradation of Airborne Tribological Systems, as Used to Solve Diagnostic Problems K. BIENCZAK - Air Force Instit. of Technology, PL</p>
<p>Session 2.8 Design Processes Using CFD 2</p> <p>Chairman: R. KELLEY-WICKMEYER, Boing Commercial Airplane Group, US</p> <p>ICAS-2000-2.8.1 AeroStation - A COBRA Component Approach to Aerodynamic Design Framework C. CASTIES, A. SOULARD, E. CHAPUT, L. BARRERA J. HUCHARD - Aerospatiale Matra Airbus, FR</p> <p>ICAS-2000-2.8.2 Study of Methods and Philosophies for Designing Hybrid Laminar Flow Wings P.C.W. WONG, M. MAINA, Aircraft Research Association, UK</p>	<p>Session 4.8 Aeroelasticity 3</p> <p>Chairman: T. WELLER - TECHNION, IL</p> <p>ICAS-2000-4.8.1 Computational Aeroelasticity in High Performance Aircraft Flight Loads M. LOVE, T. de la GARZA, E. CHARLTON, D. EGGLE, Lockheed Martin, US</p> <p>ICAS-2000-4.8.2 Coupled Steady and Unsteady Aeroelastic Simulations in the Transonic Flight Regime M. STETTNER, W. HAASE, A. EBERLE, J. GRASHOF, M. SCHNEIDER, DaimlerChrysler Aerospace AG, DE</p>	

Wednesday 16:00 - 18:00

Session 1.9
Air Traffic Management

Chairmen:

J.M. GAROT - EUROCONTROL, FR
H. MENSEN - DASA, DE

ICAS-2000-1.9.1

ASAS - Investigations Into Airborne Separation Assurance in a Distributed Simulation Environment
E. BRAMER, O. LEHMANN, H. FRICKE, G. HUETTIG, Berlin University of Technology, DE

ICAS-2000-1.9.2

Delegation of Separation Assurance to Aircraft: Towards a Framework for Analysing the Different Concepts and Underlying Principles
K. ZEGHAL, E. HOFFMAN, EUROCONTROL, FR

ICAS-2000-1.9.3

Trajectory Generation and Display for Free Flight
M. SHAHZAD, F. MORA-CAMINO, K. ACHAIBOU, CNRS/LAAS, FR
J. G. SLAMA - COPPE/UFGR, BR

ICAS-2000-1.9.4

The Cockpit View of Air Traffic Management
U. TEENGEN - DLR, DE

Session 2.9
Flow Separation & Entrainment

Chairman:

P. HARTWITCH - Boeing Company, US

ICAS-2000-2.9.1

Comparison of Jet Induced Lift Loss for Single and Co-annular Jets
A.J. SADDINGTON, K. KNOWLES, Cranfield University, UK

ICAS-2000-2.9.2

Phenomena of Dynamic Stall on Swept Wings
J. HENKNER - Technical Univ. of Munich, DE

ICAS-2000-2.9.3

Experimental Investigation of Three Dimensional Separated Flow over a Body of Revolution at High Angles of Attack
T. ISHIDE - Kisarazu Nat. College of Technol., JP
N. NISHIKAWA, F. MIKAMI, Chiba University, JP

ICAS-2000-2.9.4

Slender Forebody Aerodynamics at High Alpha
K. PETERSON, D.I.A. POLL, Cranfield University, UK

Session 3.9
Aircraft Noise

Chairmen:

D. K. McLAUGHLIN - Penn State University, US
H. HELLER - DLR, DE

ICAS-2000-3.9.1 (I.L.)

NASA Subsonic Jet Transport Noise Reduction Research
C. A. POWELL, J. S. PREISSER, NASA Langley Research, US

ICAS-2000-3.9.2

Airport Noise / Annoyance Analysis
M. BOYER, L. CHAUDRON, ONERA, FR

ICAS-2000-3.9.3

The Influence of Modelling A-symmetric Lateral Track Dispersion on Aircraft Noise Level Predictions
F.J.M. WUBBEN, M.E.S. VOGELS, T. HAVE NLR, NL

ICAS-2000-3.9.4

Influence of Arbitrary Vortical Wake Evolution on Flowfield and Noise Generation of Helicopter Rotors
A. J. SPYROPOULOS, A. P. FRAGIAS, D. G. PAPANIKAS, D. P. MARGARIS, University of Patras, GR

Session 4.9
Smart Structures

Chairmen:

E. BREITBACH - DLR, DE
O. SENSBURG - DASA, DE

ICAS-2000-4.9.1

Theoretical and Experimental Study on Shape Memory Alloy Torsion Actuator
K. XIONG, T. BAOQI, J. JIANG, Nanjing Univ. of Aeronautics & Astronautics, CN

ICAS-2000-4.9.2

Comprehensive Modelling of Smart Structures for Aeroelastic Applications
J. NARKIEWICZ, Warsaw University of Technology, PL

ICAS-2000-4.9.3

Active Control of Flexible Structures Based on Fuzzy Logic
K. COHEN, T. WELLER, J. BEN-ASHER, TECHNION, IL

ICAS-2000-4.9.4

Actuator Technology Based on Smart Materials for Adaptive Systems in Aerospace
P. JÄNKER, F. HERMLE, T. LORKOWSKI, S. STORM, M. WETTEMANN, M. GERLE, DaimlerChrysler AG, DE

Session 5.9
Advanced Production

Chairman:

P. T. CURTIS - DERA, UK

ICAS-2000-5.9.1 (I.L.)

Agile Manufacturing Processes
S. TIMMS, T. OGLE, M. JACKSON, C. COOPER British Aerospace Ltd, UK

ICAS-2000-5.9.2

Error Budgeting and the Design of Large Aerostructures
R. A. ODI, G. BURLEY, S. NAING, A. WILLIAMSON, J. CORBETT, Cranfield University, UK

ICAS-2000-5.9.3

Information Systems in Civil Aircraft Industry AIDA - An Airbus On-line System
M.B. WOTTON - British Aerospace Airbus Ltd., UK

ICAS-2000-5.9.4

Mathematical Model Based Methods to Investigate Manufacturing Anomalies
L. POKORADI, R. SZABOLCSI, J. BERA - Dept. of Military Technology, HU

Session 6.9
Handling Qualities and Piloting

Chairmen:

E. FARMER - DERA, UK
L.H.D. BAKKER - Past President IFALPA, NL

ICAS-2000-6.9.1 (I.L.)

Recent experience in Flight Testing for Pilot Induced Oscillations (PIO) on Transport Aircraft
B. P. LEE, Boeing Commercial Airplane Group, US

ICAS-2000-6.9.2

An Investigation of Handley Page Jetstream Handling During Landing - Non Linear Aspects
G.J. MULLEN, F. MARODON Cranfield University, UK

ICAS-2000-6.9.3

Predictive Flightpath Displays for Improved Manual Control Performance
E. THEUNISSEN - Delft Univ. of Technology, NL
U. SENNES, G. SACHS, Munich University of Technology, DE

ICAS-2000-6.9.4

Neal-Smith Criteria-Based H[∞] Approach to Predicting Aircraft Handling Qualities
N. GOTO, T. HOSHIZAKI, Kyushu University, JP

Thursday, 31 August

**8:30 - 9:30
General Lecture III**

Chairman:
Dr I.R. ROOS - NIVR, NL

**ICAS 2000-0.4
2020 Vision : Prospects for Large Civil Aircraft Propulsion**
N. BIRCH - Rolls Royce plc, UK

Thursday 10:00 - 12:30

**Session 1.10
Airport / Weather**

Chairmen:
P. LAROCHE - ONERA, FR
N. LAWSON - MITRE/CAASD, US

**ICAS-2000-1.10.1
An Information System for the Airport**
M. LEMOINE - ONERA, FR

**ICAS-2000-1.10.2
On the Wake Vortex Hazard and Aircraft Safe Separation**
L.M.B.C. CAMPOS - Instituto Superior Tecnico, PT

**ICAS-2000-1.10.3
Airborne Observations of Ice Accretion and Aircraft Performance in Artificial - and Natural Supercooled Ice Clouds on Dornier 228 - and 328 Aircraft**
D. WELTE - Dornier Luftfahrt GmbH, DE
F. SCHRODER - DLR, DE
T. HAUF - DE

**ICAS-2000-1.10.4
Design and Validation Using Flight Data of a Method for Predicting the Ground Run Required for Take-off**
D. ZAMMIT-MANGION, M. ESHELBY, Cranfield University, UK

**ICAS-2000-1.10.5
Intensity and Time Considerations in Microburst Penetration**
J.-S. CHERN
Chung Shan Instit. of Scie. and Technol., R.O.C.
D.-L. SHEU - National Cheng Kung Univ., TW

**Session 2.10
Flow Control**

Chairman:
E. CHAPUT - Aerospatiale Matra Airbus, FR

**ICAS-2000-2.10.1 (I.L.)
Micro Adaptive Flow Control**
R. WLEZIEN - MAFC Program Manager, US

**ICAS-2000-2.10.2
Flow Control Downstream of a Backward Facing Step**
P.G. SPAZZINI, G. IUSO, N. ZURLO, G.M. DICICCA, M. ONORATO
Politecnico di Torino, IT

**ICAS-2000-2.10.3
A parametric Study of a Synthetic Jet in a Cross Flow**
A. CROOK, W.J. CROWTHER, N. J. WOOD, Manchester University, UK

**ICAS-2000-2.10.4
Active Flow Control over a Circular Cylinder**
C. NAE - INCAS, RO

**ICAS-2000-2.10.5
CFD Study of Shock Control at Cranfield**
N. QIN, Y. ZHU, P. ASHILL, Cranfield University, UK

**Session 3.10
Vortex Aerodynamics**

Chairmen:
D. LOVELL - DERA, UK
J.P. FLODROPS - ONERA, FR

**ICAS-2000-3.10.1
Application of Dynamic Manipulation on the Forebody Vortices of a Schematic Aircraft Model**
R. LEE, R.J. KIND
Carleton University, CA
E.S. HANFF - Institute for Aerospace Research, CA

**ICAS-2000-3.10.2
Fin Buffet Load Alleviation Using an Actively Controlled Auxiliary Rudder at Sideslip**
C. BREITSAMTER, B. LASCHKA, Technical University of Munchen, DE

**ICAS-2000-3.10.3
Requirements for Subscale Simulation of Delta-Wing Vortex Characteristics**
L. E. ERICSSON - Engineering Consultant, US
M. E. BEYERS - National Research Council, US

**ICAS-2000-3.10.4
Studies on the Optimum Performance of Tapered Vortex Flaps**
K. RINOIE - University of Tokyo, JP

**ICAS-2000-3.10.5
A Numerical Method to Simulate the Onset of Breakdown of an Unconfined Isolated Vortex Core**
H.W.M. HOEIJMAKERS - Univ. of Twente, NL

**Session 4.10
Flight Dynamics of Transport & Aerospace Vehicles**

Chairmen:
J.P. JUNG - ONERA, FR
S. SUZUKI - Tokyo University, JP

**ICAS-2000-4.10.1 (I.L.)
Longitudinal Active Stability: Key Issues for Future Large Transport Aircraft**
F. SAUVINET
Aerospatiale Matra Airbus, FR

**ICAS-2000-4.10.2
Identification of the Aeroelastic Model of a Large Transport Aircraft for Control Law Design and Validation**
C. LE GARREC, M. HUMBERT, M. LACABANNE, Aerospatiale Matra Airbus, FR

**ICAS-2000-4.10.3
Minimal Emission Trajectories for a Supersonic Vehicle Ascent Patch**
M. HUMAN - North Carolin. A & T State Univ., US

**ICAS-2000-4.10.4
Path-Attitude Inconsonance in High Speed Flight and Related Path Control Issues**
R. STICH, G. SACHS, Technical University of Munich, DE
T.H. COX - NASA Dryden Flight Rese. Cen, US

**ICAS-2000-4.10.5
New Solutions of the Optimal Injection Problem Based on Complex Investigation of Dynamics and Aerodynamics**
A.S. FILATYEV, Y.N. YERMAK, A.A. GOLIKOV, S.M. ZADONSKY - TsAGI, RU

**Session 5.10
Advanced Design and Development**

Chairman:
L.R. BALTHAZOR - Univ. of Portsmouth, UK

**ICAS-2000-5.10.1 (I.L.)
Global Integration and Management of 21st Century Fighters**
C. K. WISE, Lockheed Martin Tactical Aircraft Systems, US

**ICAS-2000-5.10.2
Scenario Based Aircraft Design Evaluation**
A. STROHMAYER, Dr SCHMITT, Technical University of Munich, DE

**ICAS-2000-5.10.3
Scenario Based Aircraft Design Using Knowledge Based Software Methods**
G. DIRKS - DaimlerChrysler Airbus, DE
A. SCHNEEGANS, SPACE Aerospace Engin. & Infor.Technol. GmbH, DE

**ICAS-2000-5.10.4
The Latest Developments in Design Data Exchange: Towards Fully Integrated Aerospace Design Environments**
J. JOHNSON, BAE Military Aircraft & Aerostructures, UK

**ICAS-2000-5.10.5
The Boeing Technical Research Center in Moscow - An Example of International Technology Development**
S. KRAVCHENKO, Boeing Commercial Airplane Group, US

<p>Session 6.10 ICAS-ISOABE Session</p> <p>Chairman: S.N.B. MURTHY Purdue University, US</p> <p>ICAS-2000-6.10.1 (I.L.) Multi-disciplinary Optimization Approaches to Propulsion System Design and Integration Prof. Dr. P. STOW - Rolls Royce, plc, UK</p>	<p>ICAS-2000-6.10.2 (I.L.) NASA's Ultra-efficient Engine Technology (UEET) Program/ Aero-propulsion Technology Leadership for the 21st Century Dr J. SHAW - NASA Glenn-Lewis, US</p> <p>ICAS-2000-6.10.3 (I.L.) Propulsion - Airframe Integration Design, Analysis and Challenges Going into the 21st Century K. EARLY - GE Aircraft Engines, US</p>	<p>ICAS-2000-6.10.4 (I.L.) Turbomachinery Design Used Intensive CFD M. JOUBERT, H. QUINION - SNECMA, FR</p>
<p>Thursday 14:00 - 15:30</p>		
<p>Session 1.11 Military Operations</p> <p>Chairmen: M. KRAUS - DaimlerChrysler Aerospace, DE J. D. LATHAM - Lockheed Martin, US</p> <p>ICAS-2000-1.11.1 NINS/NILS - A New Navigation and Landing System for JAS39 Gripen J. PALMQVIST, P. PUCAR, P. BERGLJUNG SAAB Aerospace, SE</p> <p>ICAS-2000-1.11.2 Training of Military Pilots H. EISENLOHR - DaimlerChrysler, DE</p> <p>ICAS-2000-1.11.3 In-Air Route Planning for Military Aircraft R. MEE, British Aerospace Systems & Equipment, UK</p>	<p>Session 3.11 Flight Dynamics of Highly Manoeuvre and Combat Vehicles</p> <p>Chairmen: M. CHATRENET - Aerospatiale Matra Airbus, FR E. KULLBERG - SAAB AB, SE</p> <p>ICAS-2000-3.11.1 Stability and Control of STOVL Aircraft: The Design of Longitudinal Flight Control Laws C. FIELDING, M. LODGE - British Aerospace Airbus Ltd., UK</p> <p>ICAS-2000-3.11.2 An Agile Aircraft Non-Linear Dynamics by Continuation Methods and Bifurcation Theory K. SIBILSKI - Military Univ. of Technology, PL</p> <p>ICAS-2000-3.11.3 The Use of Desktop Simulations in the Carefree Manoeuvring Flight Test Program of JAS39 Gripen M. TORMALM, M. BERGSTROM, SAAB Aerospace, SE</p>	<p>Session 5.11 Systems Engineering</p> <p>Chairman: K. HAMBLETON - Univ. College London, UK</p> <p>ICAS-2000-5.11.1 Systems Engineering in Marketing & Economics of Aero Engines R. DIXON, L. DOUKAS RMIT University, AU</p> <p>ICAS-2000-5.11.2 Customer Driven Development of Aircraft Cabin and Subsystem Concept H. LOBENTANZER - DaimlerChrysler Aerospace, DE</p> <p>ICAS-2000-5.11.3 Shaping the Successful Implementation of Human Factors Integration S. HARMER, L. EVANS, - BAE Sowerby Research Centre, UK P.R. WILKINSON, BAE, UK</p>
<p>Session 2.11 Wing Section Design</p> <p>Chairmen: J. ALONSO - Stanford University, US J. SLOOFF - NLR, NL</p> <p>ICAS-2000-2.11.1 Numerical Optimization of Adaptive Transonic Airfoils with Variable Camber A. SOMMERER, T. LUTZ, S. WAGNER, Stuttgart University, DE</p> <p>ICAS-2000-2.11.2 Airfoil Design Optimisation using Navier-Stokes Equations and Simulated Annealing S.L. LEE, M. DAMODARAN, Nanyang Technological University, SG</p> <p>ICAS-2000-2.11.3 Prediction of Lift Losses due to Surface Roughness by Means of a 2D Navier-Stokes Solver P. WEINERFELT - SAAB Aerospace, SE</p>	<p>Session 4.11 Structural Dynamics</p> <p>Chairman: V. GIAVOTTO - Politecnico di Milano, IT</p> <p>ICAS-2000-4.11.1 Experimental Study of Nonlinear Vibrations of Thin-Walled Cylindrical Shells L.GUNAWAN, R.ZWAAN, A.KLOMPE - Bandung Institute of Technol., ID</p> <p>ICAS-2000-4.11.2 A Parametric Study of Aircraft Landing-Impact with Emphasis on Nose-Gear Landing Design Conditions Da. H. CHESTER - Israel Aircraft Industries, IL</p> <p>ICAS-2000-4.11.3 Improvement of Crash Models of Large Aeronautical Structures B. MALHERBE, B. LANGRAND, J. CHARLES, J. SOBRY - ONERA, FR</p>	<p>Session 6.11 Combat Aircraft Powerplant Integration</p> <p>Chairman: O. HERRMANN, Daimler Chrysler Aerospace, DE</p> <p>ICAS-2000-6.11.1 (I.L.) Future Challenges for Powerplant Aerodynamic Integration in Combat Aircraft M. PHILPOT DERA, UK</p> <p>ICAS-2000-6.11.2 (I.L.) Active Inlet Flow Control Technology Demonstration J.W. HAMSTRA, D.N. MILLER, P.P. TRUJAX Lockheed Martin Tactical Aircraft Systems, US B. ANDERSON, B.J. WENDT NASA Glenn Research Center, US</p> <p>ICAS-2000-6.11.3 (I.L.) F/A - 18 E/F - F414-GE-400 Propulsion System Integration C. HALL - BOEING, US</p>

Thursday, 31 August

16:00 - 17:00

ICAS Von Karman Lecture
Chairman: Wolfgang SCHMIDT
Chairman of the Programme Committee

ICAS 2000-0.5
International Collaboration in Super/Hyper-Sonic Propulsion System Research Project (HYPR)
Mototsugu ITO - Director, ESPR, JP

Cooperating Societies

- NEDO New Energy and Industrial Technology Development Organization
- HYPR Engineering Research Association for Super/Hyper-sonic Transport Propulsion System
- IHI Ishikawajima-Harima Heavy Industries Co., Ltd
- KHI Kawasaki Heavy Industries, Ltd
- MHI Mitsubishi Heavy Industries, Ltd
- GE General Electric Company
- UTC UTC/Pratt & Whitney
- RR Rolls-Royce plc
- SNECMA Société Nationale d'Etudes et de Construction de Moteurs d'Aviation

17:00 - 17:30
Closing Ceremony

IMPORTANT WARNING

While ICAS will endeavour to deliver the present Final Programme, due to decisions that may be taken by the other parties to the Congress, ICAS do not guarantee that the Programme at the Congress will be exactly the same in content or schedule.