

# ICAS 2010

27th Congress of the International Council  
of the Aeronautical Sciences

## PRELIMINARY PROGRAMME



Nice, France, 19-24 September 2010

hosted by





## **ICAS 2010 PRELIMINARY PROGRAMME**

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## **Message from the President of the International Council of the Aeronautical Sciences**

Civil aviation is a primary enabler for global wealth creation and it improves the quality of life for many millions of people. It broadens access to existing markets and creates new opportunities. It promotes international awareness, understanding and tolerance. Military aviation helps to maintain world peace, with uninhabited airborne systems playing an ever increasing role in the fight against international terrorism. However, aviation is also one of the sources of the pollution that is producing climate change and, because demand for air transport is growing, the contribution to global warming is growing. Therefore, in order to guarantee that the benefits of aviation can be fully exploited by society and that aviation can grow without limitation, timely, practical solutions are urgently needed to problems in many areas. Amongst these are improvements in aviation safety and security, reductions in noise and emissions and increases in airspace and airport capacity.

Today's challenging global economic situation combined with rapidly growing concerns over climate change is increasing the political awareness of aviation and driving the research agenda. It has never been more important for the aeronautics community to recognize the benefits of aviation and to communicate them to politicians, decision makers, leaders of industry and the general public. Moreover, 21<sup>st</sup> century aviation is a complex system with a worldwide network of stakeholders and, in an intensely competitive world, international collaboration becomes increasingly important and to secure its future the sector must continue to attract the most able engineers and scientists. These people must be educated, trained, motivated and they must be exposed to international issues and to the views and ideas of the wider aeronautics community.

The ICAS Congress provides a unique, global forum for scientists, engineers and students, from industry, government agencies and universities to meet, to learn, to debate and to share ideas and technical information. This helps to create a stronger international network, to develop a collective awareness of the most important issues and to build those relationships that are critically important to the success of our industry, the creation of new knowledge and the advancement of our profession.

The "Call for Papers" for ICAS 2010 produced a record response with over 700 submissions coming from around 40 countries. These were carefully reviewed by the ICAS Programme Committee and approximately 430 papers were selected for oral presentation in a conference with 11 parallel tracks. The programme has also been supplemented with a number of invited "General Lectures" on topics of special significance being delivered by internationally renowned experts. The calibre of the authors and the range and quality of work is outstanding; making ICAS 2010 a major event in the aeronautics calendar.

ICAS is delighted that the Association Aéronautique et Astronautique de France is hosting the 27<sup>th</sup> ICAS Congress in Nice. The city is an excellent venue and, on behalf of the Council, I thank the hosts for accepting this substantial organizational task. Finally, I extend my thanks to all the authors and session chairs, who are bringing their expertise and sharing their ideas.

I hope that you will find ICAS 2010 to be a stimulating, profitable and memorable event.

***Ian Poll, ICAS President***

## **Message from the President of the French Society of Aeronautics and Astronautics (3AF)**

I am very pleased to invite you to attend the 27<sup>th</sup> Congress of ICAS, to be held in France and hosted by the French Society of Aeronautics and Astronautics (3AF).

Celebrating the 27<sup>th</sup> Congress of ICAS, this prestigious event is gaining increasing recognition in the field of aeronautics. We are therefore proud to present a technical programme including around 650 high quality papers and a series of lectures held in 11 parallel session tracks.

The Congress will be held in the Acropolis Convention Centre of Nice. Located in Southern Europe at the south eastern extremity of France, Nice is a privileged crossroads between the Alps, Provence Corsica and Italy. The city occupies an exceptional natural site in the heart of the French Riviera.

I look forward to meeting you in September at the 27<sup>th</sup> ICAS Congress in Nice.

***Michel Scheller, 3AF President***



## THE INTERNATIONAL COUNCIL OF THE AERONAUTICAL SCIENCES

ICAS was founded by Theodore von Karman in 1957 as a non-government not-for-profit scientific organization to encourage the free international exchange of information on aeronautical research and technology.

The mission of ICAS is to provide regularly scheduled events and publications that enable a better understanding of engineering science and practice and an improved level of cooperation among aeronautical engineering professionals from around the world. ICAS currently serves as the only international support organization to representative aeronautical engineering professional societies and their members in 30 countries.

ICAS functions under three primary bodies; Council (meets biennially), Executive Committee (meets at least twice each year) and Program Committee (meets annually). ICAS holds an International Congress in the fields of Aeronautical Sciences on a biennial basis. The venue is chosen by the Council and changes from Congress to Congress. Furthermore ICAS organises a thematic workshop in the year between the congresses in connection with the meeting of the Program Committee.

### ICAS COUNCIL

#### Representatives of Member Societies

*J. Azevedo*, Brazil  
*I. Becuwe*, Belgium  
*L. M. B. C. Campos*, Portugal  
*S. Chernyshev*, Russia  
*J. Cho*, Korea  
*H. Djodihardjo*, Indonesia  
*B. Fredriksson*, Sweden  
*Z. Goraj*, Poland  
*L. Manfriani*, Switzerland  
*A. Martin-Carillo*, Spain  
*C. Mari*, France  
*D. Mavis*, U.S.A.  
*J. Monk*, South Africa  
*R. Parker*, United Kingdom  
*F. Persiani*, Italy

*A. Pistek*, Czech Republic  
*O. Rand*, Israel  
*B. Rasuo*, Serbia  
*J. Rohacs*, Hungary  
*O. Saarela*, Finland  
*M. L. Scott*, Australia  
*J. Stankunas*, Lithuania  
*J. Szodruch*, Germany  
*T. Tsitinidis*, Greece  
*T. Ueda*, Japan  
*L. Veldhuis*, The Netherlands  
*N. Youssef*, Canada  
*F. Zaganescu*, Rumania  
*Y. Z. Zhang*, P.R. of China

### ICAS EXECUTIVE COMMITTEE

#### Officers

President: *I. Poll*, UK  
Executive Secretary: *A. Gustafsson*, Sweden  
Chairman Programme Committee:  
*D. Mueller-Wiesner*, Germany  
Treasurer: *B. Fredriksson*, Sweden  
Past President: *F. Abbink*, Netherlands

#### Members

*S. Baillie*, Canada  
*R. Bengelink*, U.S.A.  
*A. Filatyev*, Russia  
*J. N. Hefner*, U.S.A.  
*M. L. Scott*, Australia  
*S. Suzuki*, Japan  
*S. Ying*, U.S.A.  
*C. Mari*, France (ICAS 2010)

### ICAS SECRETARIAT

The ICAS Secretariat is since January 2003 hosted by the Swedish Society for Aeronautics and Astronautics (SSAA) and physically located at the Swedish Defence Research Agency (FOI) in Stockholm. Anders Gustafsson is the ICAS Executive Secretary assisted by Gunnel Backström as the ICAS Coordinator.

Address: ICAS Secretariat, c/o FOI, SE-16490 STOCKHOLM, Sweden  
Phone: +46-8.5550 3151, Fax: +46-8.5550 3397, E-mail: [secrexec@icas.org](mailto:secrexec@icas.org)



## ICAS PROGRAMME COMMITTEE

All members of ICAS Programme Committee are listed on the ICAS Web-Site.  
Below are listed those who took part in the preparation meeting for ICAS 2010.

F. Abbink, Netherlands	M. Harigae, Japan	S. Ricci, Italy
G. A. Amiryants, Russia	H. Helm, UK	J. Rohács, Hungary
J. Azevedo, Brazil	R. Henke, Germany	M. L. Scott, Australia
J. Bayandor, Australia	J. Hefner, U.S.A.	L. Smrcek, UK
E. Belo, Brazil	G. Holmberg, Sweden	B. Stoufflet, France
R. Bengelink, U.S.A	R. Kingcombe, UK	A. Stratton, U.S.A.
C. Bil, Australia	J. Klement, Czech Rep.	S. Suzuki, Japan
A de Boer, Netherlands	P. Krus, Sweden	J. Szodrich, Germany
C. Breitsamter, Germany	L. Manfredi, Switzerland	S. Takagi, Japan
G. M. Carlomagno, Italy	C. Mari, France	T. Ueda, Japan
E. Carrera, Italy	F. Mastroddi, Italy	N. Voevodenko, Russia
R. Cosner, U.S.A.	D. Mavris, U.S.A.	T. Wan, Taiwan, China
H. Djodjodhardjo, Indonesia	C. Michaut, France	S. Ying, U.S.A.
M. Eder, U.S.A.	J. Monk, South Africa	N. Youssef, Canada
R. Edwards, UK	M. Mulero, Spain	
A. Filatyev, Russia	D. Mueller-Wiesner, Germany	<u>From ICAS Associates:</u>
B. Fredriksson, Sweden	M. Neamtu, Romania	R. Heinrich, DLR
Y. Fu, China	F. Persiani, Italy	P. Monclar, SAFRAN
Z. Gao, China	M. Peters, Netherlands	A. Mirzoyan, CIAM
Z. Goraj, Poland	I. Poll, UK	K. Rein-Weston, Boeing
J. Green, UK	O. Rand, Israel	

## ICAS 2010 LOCAL ORGANIZING COMMITTEE

### **Chairman**

Christian Mari  
Messier-Bugatti/SAFRAN

### **CEO and Finance**

Patrick Monclar  
SAFRAN R&T Directorate

### **Operations and Logistics**

Lisa Gabaldi  
3AF Events Manager

### **Committee Members**

Anne Bondiou-Clergerie (GIFAS)  
Giovanni M. Carlomagno (University of Naples)  
Loïc Chanvillard (PEGASE cluster)  
Jean-Jacques Dechezelles (3AF)  
Christian Delaveau (THALES)  
Henri Hurlin (Air France)  
Christiane Michaut (ONERA)  
Detlef Mueller-Wiesner (EADS)  
Bruno Stoufflet (Dassault Aviation)  
Christian Tafani (Nice Region)  
Jean Tensi (ENSMA Poitiers)  
Didier Tourrade (Airbus)



## ICAS MEMBER SOCIETIES

### Australia

The Royal Aeronautical Society  
Australian Division  
PO Box 573  
Mascot, NSW 2020

### Belgium

Royal Flemish Association of  
Engineers  
c/o Technological Institute,  
Aeronautical Section  
Desguinlei 214  
BE-2018 Antwerpen

### Brazil

ABCM - Associao Brasileira de  
Ciencias Mecanicas  
Av. Rio Branco, 124/14º  
andar - Centro  
20040-001 - Rio de Janeiro

### Canada

CASI - Canadian Aeronautics and  
Space Institute  
350 Terry Fox Drive, Suite 104  
Kanata, Ontario K2K 2W5

### People's Republic of China

CSAA - Chinese Society of  
Aeronautics and Astronautics  
No.2 Beiyuan, Andingmenwai  
Chaoyang District,  
Post Box 761-2  
Beijing 100012

### Czech Republic

Czech Society for Mechanics  
c/o Brno University of Technology  
Institute for Aerospace Engineering  
Engineering Technicka 2  
616 69 Brno

### Finland

The Finnish Association of  
Graduate Engineers TEK  
Ratavartijankatu 2  
00520 Helsinki

### France

3AF - Association Aéronautique et  
Astronautique de France  
6, rue Galilée  
75782 Paris Cedex 16

### Germany

DGLR - Deutsche Gesellschaft für  
Luft und Raumfahrt  
Godesberger Allee 70  
53175 Bonn

### Greece

HAES - Hellenic Aeronautical  
Engineers Society  
3, Karitsi Street  
10561 Athens

### Hungary

Scientific Society of Mechanical  
Engineers  
PO Box 433  
1371 Budapest

### India

AeSI - Aeronautical Society of India  
13-B, Indrapasthra Estate  
New Dehli - 110002

### Indonesia

IAAI  
Institut Teknologi Bandung  
Jalan Ganेशha 10  
40132 Bandung

### Israel

Israel Society of Aeronautics and  
Astronautics  
PO Box 2956  
Tel-Aviv 61028

### Italy

AIDAA – Associazione Italiana di  
Aeronautica e Astronautica  
Casella Postale 227  
cap 00187 Rome

### Japan

JSASS - Japan Society for  
Aeronautics and Space Sciences  
Meikou Bldg. Bekkan,  
1-18-2 Shinbashi, Minato-ku  
Tokyo 105

### Korea

KSASS - Korean Society for  
Aeronautical and Space Sciences  
#635-4, Yeogsam-dong,  
Kangnam-ku, Seoul 135-703

### Lithuania

Aviation Engineers Association  
Rodunes kelias 30  
LT-02187 Vilnius

### The Netherlands

NVvL - Netherlands Association of  
Aeronautical Engineers  
Anthony Fokkerweg 2,  
1059 CM, Amsterdam

### Poland

Polish Society of Aerospace  
Sciences  
c/o Warsaw University of Techn  
ul. Nowowiejska 24  
00-665 Warsaw

### Portugal

CCTAE - Centro de Ciencias e  
Tecnologias Aeronauticas e  
Espaciais  
c/o Instituto Superior Técnico  
Av. Rovisco Pais  
1096 Lisboa Cedex

### Republic of Serbia

Serbian Aerospace Society  
c/o Faculty of Mech. Engineering,  
University of Belgrade,  
Kraljice Marije 16,  
11120 Belgrade 35

### Republic of South Africa

AeSSA - Aeronautical Society of  
South Africa  
P.O. Box 14717  
Sinoville 0129

### Romania

Commission d'Astronautique de  
l'Académie de Roumanie  
125 Calea Victoriei S.1  
71102 Bucuresti

### Russian Federation

TsAGI - Central Aerohydrodynamics  
Institute  
1, Zhukovski Street  
Zhukovski  
Moscow Region 140160

### Spain

AIAE – Asociación de Ingenieros  
Aeronauticos de Espana  
Francisco Silvela, 71, Entreplanta  
28028 Madrid

### Sweden

SSAA - Swedish Society for  
Aeronautics and Astronautics  
PO Box 4207  
17154 Solna

### Switzerland

SvFW - Schweizerische  
Vereinigung für Flugwissenschaften  
c/o RUAG Aerospace  
CH-6032 Emmen

### United Kingdom

RAeS - Royal Aeronautical Society  
4 Hamilton Place  
London W1V 0BQ

### U.S.A.

AIAA - American Institute of  
Aeronautics and Astronautics  
1801 Alexander Bell Drive  
Suite 500  
Reston, VA, 22091



## ICAS ASSOCIATES

### Australia

**CRC-ACS / Cooperative Research Centre for Advanced Composite Structures Ltd**  
506 Lorimer Street, Fishermans Bend,  
Victoria 3207

### Belgium

**VKI - Von Kármán Institute for Fluid Dynamics**  
Chaussée de Waterloo 72  
1640 Rhode – St. Genese

### Canada

**Institute for Aerospace Research (IAR/NRC)**  
Montreal Road  
Ottawa, Ontario, K1A 0R6

### Czech Republic

**VZLU - Aeronautical Research and Test Institute**  
Beranovych 130  
199 05 Praha - Letnany

### France

**ONERA - French Aeronautics and Space Research Center**  
BP 72  
92322 Chatillon Cedex

### **SAFRAN**

2 bd du Général Martial Valin  
75724 PARIS CEDEX 15

### Germany

**DLR - German Aerospace Center**  
Linder Höhe  
51147 KÖLN

### Italy

**CIRA – Italian Aerospace Research Center**  
Via Maiorise  
81043 Capua (Caserta)

### **University of Naples “Federico II”**

Department of Aerospace Engineering  
Via Claudio, 21  
80125 Napoli

### Japan

**JAXA - Institute of Aerospace Technology (IAT)**  
7-44-1, Jindaiji Higashi-machi, chofu-shi  
Tokyo

### The Netherlands

### **EADS N.V.**

**European Aeronautic Defence and Space Company**  
Le Carré, Beechavenue 130-132  
1119 PR Schiphol Rijk

### **NLR - National Aerospace Laboratory**

PO Box 90502  
1006 BM Amsterdam

### Poland

**ILOT – Institute of Aviation**  
Al. Krakowska 110/114  
02-256 Warsaw

### Republic of South Africa

**CSIR - DPSS**  
PO Box 395  
Pretoria 0001

### Russia

**ALAC – Air Launch Aerospace Corporation**  
9 Druzhinnikovskaya Street  
123242 Moscow

### **CIAM - Central Institute of Aviation Motors**

2, Aviamotornaya St.  
111116 Moscow

### **MAI - Moscow Aviation Institute**

4 Volokolamskoye shosse  
125993 Moscow

### **Russian Academy of Engineering**

**Aerospace Section**  
Novoposelkovaya street 6  
125459 Moscow

### Spain

**INTA - National Institute for Aerospace Technology**  
Carretera de Ajalvir Km.4  
28850 Torrejon de Ardoz

### Sweden

### **SAAB AB**

SE-58188 Linköping

### **Volvo Aero Corporation**

SE-46181 Trollhättan

### **FOI - Swedish Defence Research Agency**

SE-16490 Stockholm

### **Swedish Aeronautical Forum (NFF)**

c/o KTH Aeronautics Dept  
SE-10044 Stockholm

### Taiwan, China

### **AASRC**

Room R3-211, No.300, Jhongda Rd.,  
Jhongli City, Taoyuan County 320, Taiwan, China

### U.S.A.

### **The Boeing Company**

WHQ, Technical Relations  
100 North Riverside, MC 5003-5495  
Chicago, IL 60606

### **Lockheed Martin Aeronautics**

Forth Worth  
Texas 76101

### **Honda R&D Americas, Inc.**

6423 B Bryan Blvd.,  
Greensboro, NC 27409

### **NIA - National Institute of Aerospace**

100 Exploration Way  
Hampton, Virginia 23666

### **Cal Poly College of Engineering**

California Polytechnic State University  
San Luis Obispo, CA 93407-035

## OUTLINE TECHNICAL PROGRAMME

27th ICAS Congress, 19-24 September 2010, Nice, France

REGISTRATION												
OPENING SESSION												
ICAS DANIEL & FLORENCE GUGGENHEIM MEMORIAL LECTURE: Chairman: I Polli, ICAS President, UK M Laroche, Safran, FR: IMPROVING ENGINE DEVELOPMENT THROUGH GLOBAL MODELING (ICAS-2010-0.1)												
BREAK												
Monday Sept. 20	From 8:00											
	09:00-10:00											
	10:00-11:00											
	11:00-11:30											
	11:30-13:00	1.1	2.1	3.1	4.1	5.1	6.1	7.1	8.1	9.1	10.1	11.1
		Future Aircraft Concepts I	CFD for Unsteady Flow	Micro UAV testing	Fans, Compressors & Turbines I	Operations and Noise	UAV Rotorcraft	Navigation Systems	Nano Composites	Dynamic Loading/ Impact I	Fault Tolerant Control	Airport Modelling
	13:00-14:00	LUNCH										
	14:00-16:00	1.2	2.2	3.2	4.2	5.2	6.2	7.2	8.2	9.2	10.2	11.2
		Future Aircraft Concepts II	CFD Algorithms	Low speed aerodynamics testing	Fans, Compressors & Turbines II	Environmental Noise	UAV Control I	Safety of Systems	Impact Damage Assessment	Structural Analysis & Design I	Airworthiness & Risk Analysis	ATM I
	16:00-16:30	BREAK										
	16:30-18:30	1.3	2.3	3.3	4.3	5.3	6.3	7.3	8.3	9.3	10.3	11.3
		Supersonic Aircraft Concepts	CFD Low Speed Applications	Aero Testing Techniques I	Combustion	Handling Quality & Stability	UAV Control II	Methodology for Systems Design	Damage Tolerance	Dynamic Loading/ Impact II	Wake Vortex Problems	ATM II
8:00-9:15	GENERAL LECTURE I - Chairman: D. Mueller-Wiesner, Chairman ICAS Programme Committee, Germany J. Botti, EADS, DE; M. Ganz, The Boeing Company, US: AVIATION AND ENVIRONMENT (ICAS-2010-0.2 and ICAS-2010-0.3)											
9:15-9:30	BREAK											
Tuesday Sept. 21	9:30-11:30	1.4	2.4	3.4	4.4	5.4	6.4	7.4	8.4	9.4	10.4	11.4
		Aircraft Design Methods I	Advanced CFD Applications	Aero Testing Techniques II	Noise, Vibrations & Acoustics I	Flight Control I	UAV Formation Flying	More Electrical Systems I	Advances in Aerospace Materials	Structural Analysis & Design II	ATM & Human Factors	Trajectories
	11:30-12:00	POSTER PROMOTIONS AT THE END OF THE RESPECTIVE SESSIONS ABOVE										
	12:00-13:30	LUNCH										
	13:30-14:15	GENERAL LECTURE II - Chairman: R. Bengelink, USA S. Chernychev, TsAGI, Russia : PROGRESS IN RUSSIAN AVIATION - PROBLEMS AND SOLUTIONS (ICAS-2010-0.4)										
	14:30-16:00	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5
		Aircraft Design Methods II	Turbulence Modelling	Aerothermodynamics	Noise, Vibrations & Acoustics II	Flight Optimization I	Sense and Avoid	More Electrical systems II	Crack Propagation	Structural Modeling & Simulation	Safety Tools I	Arrivals sequencing
	16:00-16:30	BREAK										
	16:30-18:30	1.6	2.6	3.6	4.6	5.6	6.6	7.6	8.6	9.6	10.6	11.6
		Aircraft Design and Flight Testing I	CFD for Design and Optimisation	Flow Control I	Engine Performance & Numerical Simulations I	Climate Impact and Metrics	UAV Mission Planning	Physics phenomena and Systems	Materials & Composites I	Aeroelasticity I	Structural Monitoring and Sensors	Airport I
	ROOMS											

## OUTLINE TECHNICAL PROGRAMME

27th ICAS Congress, 19-24 September 2010, Nice, France

GENERAL LECTURE III - Chairman: S. Ying, USA G.Wu, COMAC, China: THE ARJ21 REGIONAL JET PROGRAMME (ICAS-2010-0.5)											
8:00-9:00	BREAK										
9:00-9:30	1.7	2.7	3.7	4.7	5.7	6.7	7.7	8.7	9.7	10.7	11.7
9:30-12:00	UAS Concepts	Aerodynamic Optimization	Flow Control II	Operations and Climate	Parameter Identification	Human/Machine Modeling	Through Life Support	Fatigue	Aeroelasticity II	Safety & Systems	Separation Management
LUNCH											
ICAS HENRI FABRE LECTURE FOR INNOVATION IN AERONAUTICS: Chairman: M. Scott, Australia Innovation Award Recipient: J-C Hironde, Dassault, FR: INNOVATIVE SHAPE AND CONTROL CONFIGURATIONS (ICAS-2010-0.6)											
13:30-14:15											
14:30-16:00	1.8	2.8	3.8	4.8	5.8	6.8	7.8	8.8	9.8	10.8	11.8
14:30-16:00	Air Launched Space Systems	Supersonic Aerodynamics	Fluid Dynamics	Supersonic/Hypersonics Technologies I	Emissions	Flight Modeling	Systems Analysis	Smart Structures	Experimental Investigations	Safety Tools II	Delays
BREAK											
16:00-16:30											
16:30-18:30	1.9	2.9	3.9	4.9	5.9	6.9	7.9	8.9	9.9	10.9	11.9
16:30-18:30	Laminar Flow Applications	Flapping Wing Aerodynamics	Aeroacoustics	Supersonic/Hypersonics Technologies II	ISABE Session	Flight Testing	Systems Design & Modeling	Materials & Composites II	Multi-disciplinary Analysis	Security & Safety Equipment	Airport II
GENERAL LECTURE IV - Chairman: F. Abbink, The Netherlands P. Ky, Eurocontrol/SESAR, BE; V. Cox, FAA, US: FUTURE AIR TRAFFIC MANAGEMENT - SAFE AND EFFICIENT (ICAS-2010-0.7 and ICAS-2010-0.8)											
8:00-9:30											
9:30-10:00	BREAK										
10:00-12:30	1.10	2.10	3.10	4.10	5.10	6.10	7.10	8.10	9.10	10.10	11.10
10:00-12:30	MDO and its application	Aerodynamic Configuration Design	Boundary Layers	Climate Challenges & Trade-offs	Flight Control II	UAV Configuration Aerodynamics	Complex Systems	Student Finalists	Aeroelasticity III	Maintenance & Organization	Human factors
LUNCH											
12:30-14:00											
14:00-15:30	1.11	2.11	3.11	4.11	5.11	6.11	7.11	8.11	9.11	10.11	11.11
14:00-15:30	Aircraft Design and Flight Testing II	Applied Aerodynamics	CFD for Unsteady Flow and Acoustics	Engine Performance & Numerical Simulations II	Flight Optimization II	RESERVE	Systems Architecture	RESERVE	Aeroelasticity IV	RESERVE	Descent trajectories
BREAK											
15:30-16:00											
VON KARMAN LECTURE: Chairman: C. Mari, France J Szodruch, DE, F. Quentin, FR: ACARE - ADVISORY COUNCIL FOR AERONAUTICS IN EUROPE (ICAS-2010-0.9)											
16:00-17:00											
17:00-17:30	CLOSING CEREMONY										
TECHNICAL VISITS											

Friday  
Sept. 24

Monday September 20<sup>th</sup> Morning Sessions

REGISTRATION	
OPENING SESSION	
<p>10:00 – 11:00 ICAS DANIEL &amp; FLORENCE GUGGENHEIM MEMORIAL LECTURE (INVITED) - Chairman: I. Poll, ICAS President, United Kingdom: M. Laroche, Safran, France: IMPROVING ENGINE DEVELOPMENT THROUGH GLOBAL MODELING (ICAS 2010-0.1)</p>	
<p>BREAK</p>	
11:00 – 11:30	12:00 – 12:30
11:30 – 12:00	12:30 – 13:00
<p>ICAS 2010-1.1 Future Aircraft Concepts I: Chairs: V. Gollnick, DLR, DE; V. Zhuraviev, MAI, RU</p>	
<p>ICAS 2010-1.1.1 COMPARISON OF POWERED-LIFT TURBO-FAN AIRCRAFT WITH CONVENTIONAL TURBO-PROP AIRCRAFT FOR ESTOL APPLICATION C. Gologan, D. Schmitt Bauhaus Luftfahrt, Germany</p>	<p>ICAS 2010-1.1.2 AIRCRAFT AND SYSTEMS INTEGRATION COMPARISON OF FUEL BURN AND NOISE CHARACTERISTICS OF NOVEL AIRCRAFT CONFIGURATIONS J. P. Fielding, P. Stocking, H. Smith Cranfield Univ., UK</p>
<p>ICAS 2010-2.1 CFD for Unsteady Flow: Chairs: J.-J. Thibert, ONERA, FR;</p>	
<p>ICAS 2010-2.1.1 NUMERICAL SIMULATION OF DROPLET IMPINGEMENT ON A HELICOPTER IN FORWARD FLIGHT K. Szilder, E. P. Lozowski* NRC/IAR; *Univ. of Alberta, Canada</p>	<p>ICAS 2010-2.1.2 THREE-DIMENSIONAL NUMERICAL STUDY ON UNSTEADY AERODYNAMIC EFFECTS OF WING-BODY INTERACTIONS IN INSECTS' FLAPPING FLIGHT J. Kim, K. Lee, C. Kim Seoul National Univ., Korea</p>
<p>ICAS 2010-3.1 Micro UAV testing: Chairs: S. Ueno, Yokohama National Univ., JP; R. Galbraith, University of Glasgow, UK</p>	
<p>ICAS 2010-3.1.1 THRUST MEASUREMENT FOR FLAPPING-FLIGHT COMPONENTS W. Send, F. Scharstein ANIPROP Gbr, Germany</p>	<p>ICAS 2010-3.1.2 EXPERIMENTAL STUDY ON FLOW INTERACTION BETWEEN FORE- AND HINDWINGS OF DRAGONFLY IN HOVERING AND FORWARD FLIGHT H. Nagai, K. Isogai, T. Fujimoto Nippon Bunri Univ., Japan</p>
<p>ICAS 2010-4.1 Fans, Compressors &amp; Turbines I: Chairs: R. Parker, Rolls-Royce, UK; J. Brochet, Turbomeca, FR</p>	
<p>ICAS 2010-4.1.1 AERODYNAMIC STUDIES IN HIGH-SPEED COMPRESSORS DEDICATED TO AERONAUTICAL APPLICATIONS F. Leboeuf, I. Trebinjac, X. Ottavy, et al Ecole Centrale de Lyon, France</p>	<p>ICAS 2010-4.1.2 SNECMA COUNTER ROTATING TURBO FAN AERODYNAMIC DESIGN LOGIC &amp; TESTS RESULTS J. Talbotec, M. Vernet Snecma, France</p>
<p>ICAS 2010-5.1 Operations and Noise: Chairs: M. Eijkman, NLR, NL</p>	
<p>ICAS 2010-5.1.1 AN AIRCRAFT ENGINE NOISE SIMULATION ENVIRONMENT, SUITABLE FOR THE DEVELOPMENT OF NOISE ABATEMENT PROCEDURES A. de Bruin, M. Tuinstra NLR, Netherlands</p>	<p>ICAS 2010-5.1.2 ASSESSMENT OF A 3D NOISE ABATEMENT PROCEDURE FOR COMMUNITY NOISE IMPACTS BASED ON MEASUREMENTS AND SIMULATIONS E. Anton, M. Basner*, L. Bertsch*, et al RWTH Aachen; *DLR, Germany</p>
<p>ICAS 2010-5.1.3 IMPACT OF AIRPORT NOISE REGULATIONS ON NETWORK TOPOLOGY AND DIRECT OPERATING COST OF AIRLINES P. N. Dikshit, D. A. DeLaurentis, W. A. Crossley Purdue Univ., USA</p>	
<p>ICAS 2010-3.1.3 DYNAMIC BEHAVIOR OF VORTEX SHEDDING FROM AN OSCILLATING THREE-DIMENSIONAL AIRFOIL H. Hasegawa, K. Nakagawa Akita Univ., Japan</p>	
<p>ICAS 2010-4.1.3 THE FLOW ON THE SURFACE OF ROTATING PROPELLER BLADE IN LOW REYNOLDS NUMBER REGION N. Arai, K. Hiraoka Tokai Univ., Japan</p>	

ICAS 2010-6.1 UAV Rotorcraft: Chairs: J. Drobik, DSTO, AU	
<p>ICAS 2010-6.1.1 VIRTUAL AUTOPILOT SYSTEM FOR HELICOPTERS UAV MISSIONS J. M. Lema, P. Royo, J. López, et al Technical Univ. of Catalonia, Spain</p>	<p>ICAS 2010-6.1.2 TACTILE ASSISTANCE SYSTEM FOR MANUAL HOVERING OF TELE-OPERATED UAV HELICOPTERS K. Friedl, Y. Zemba Univ. of Tokyo, Japan</p>
ICAS 2010-7.1 Navigation Systems: Chairs: C. Delaveau, Thales Group; FR	
<p>ICAS 2010-7.1.1 TECHNOLOGICAL TRENDS FOR FUTURE NAVIGATION SYSTEMS M. Mary, P.-J. Clemenceau THALES, France</p>	<p>ICAS 2010-7.1.2 AN AHRS BASED ON A KALMAN FILTER FOR THE INTEGRATION OF INERTIAL, MAGNETOMETRIC AND GPS DATA E. Denti, R. Galatolo, F. Schettini Univ. of Pisa, Italy</p>
ICAS 2010-8.1 Nano Composites: Chairs: P. Czarnocki, Warsaw University of Technology, PL	
<p>ICAS 2010-8.1.1 INVITED PROCESSING AND PROPERTIES OF AMORPHOUS AND NANO-STRUCTURED MATERIALS WITH APPLICATIONS IN AERONAUTICS C. Bolfarini Univ. of São Paulo, Brazil</p>	<p>ICAS 2010-8.1.2 NANOPARTICLES AND CNTS IN HIGH PERFORMANCE CFRPS FOR AEROSPACE &amp; SPACE APPLICATIONS: SOME TRULY BENEFITS &amp; MECHANISMS C. Arit, U. Riedel, H.G. Wulz* DLR; *EADS Astrium GmbH, Germany</p>
ICAS 2010-9.1 Dynamic Loading/Impact I: Chairs: R. Waddell, Dassault Systems, FR	
<p>ICAS 2010-9.1.1 RESEARCH OF PROTECTIVE PROPERTY AIRCRAFT STRUCTURE UNDER UNCONTAINED ENGINE DEBRIS IMPACT A. Chernov TsAGI, Russian Federation</p>	<p>ICAS 2010-9.1.2 BIRD STRIKE QUALIFICATION OF THE EXTERNAL STORES OF THE NEW DLR RESEARCH AIRCRAFT HALO C. Kindervater, D. Schwinn, A. Reiter DLR, Germany</p>
ICAS 2010-10.1 Fault Tolerant Control: Chairs: TDB	
<p>ICAS 2010-10.1.1 IMMUNE : INTELLIGENT MONITORING AND MANAGEMENT OF UNEXPECTED EVENTS C. Doell, A. Varga*, C. Kappenberger* ONERA, France; *DLR, Germany</p>	<p>ICAS 2010-10.1.2 USING SIMULATION-BASED FILTERING APPROACHES FOR IN-FLIGHT MONITORING OF CONTROL SURFACES C. Kappenberger DLR, Germany</p>
ICAS 2010-11.1 Airport Modeling: Chairs: J. Reichmuth, DLR, DE	
<p>ICAS 2010-11.1.1 ADSIM+: AN UPDATED AND ENHANCED VERSION OF THE AIRFIELD DELAY SIMULATION MODEL P. Lucic, D. He, J. Post* CSSI, Inc.; *FAA, USA</p>	<p>ICAS 2010-11.1.2 HOW TO ASSESS EFFICIENCY IMPROVEMENTS UNDER PARTICULAR CONSIDERATION OF ATM NETWORK EFFECTS T. Günther, H. Fricke TU Dresden, Germany</p>
ICAS 2010-6.1.3 ROTORCRAFT CONCEPTS FLIGHT PERFORMANCES EVALUATION AND OPTIMIZATION BY SIMULATION P.-M. Basset, A. Guillé* ONERA, *ISAE, France	
ICAS 2010-7.1.3 INTERACTING MULTIPLE MODEL ADAPTIVE UNSCENTED KALMAN FILTERS FOR NAVIGATION SENSOR FUSION D. Jwo, M. Chen, C. Tseng National Taiwan Ocean Univ., Taiwan, China	
ICAS 2010-8.1.3 SUPERSURFACES FROM CONDUCTIVE POLYMERS FOR ENVIRONMENTAL F. Guittard, T. Darmanin, E. Taffin de Givenchy, et al Univ. Nice Sophia Antipolis, France	
ICAS 2010-9.1.3 CRASHWORTHINESS OF ISOFIX AND LATCH CHILD RESTRAINT SYSTEMS IN TRANSPORT CATEGORY AIRCRAFT A. Shrimpton RMIT Univ., Australia	
ICAS 2010-10.1.3 ON-LINE PARAMETER IDENTIFICATION FOR IN-FLIGHT AIRCRAFT MONITORING G. Hardier, A. Buchardes ONERA, France	
ICAS 2010-11.1.3 ENABLING AIRCRAFT PERFORMANCE STUDIES IN AIRPORT AIRSIDE SIMULATIONS P. M. Böck TU Munich, Germany	

**Monday September 20<sup>th</sup> Afternoon Sessions**

14:00 – 14:30	14:30 – 15:00	15:30- 16:00	17:00 – 17:30	17:30 – 18:00	18:00 – 18:30
<p><b>ICAS 2010-1-2 Future Aircraft Concepts II:</b>                  Chairs: D. Schmitt, Bauhaus Luftfahrt, DE; H. Nakamura, Tokyo University, JP</p>					
<p>ICAS 2010-4.2.1                  HYDROGEN POWERED FREIGHTER AIRCRAFT – THE FINAL RESULTS OF THE GREEN FREIGHTER PROJECT                  K. Sebecki, W. Heinze*, D. Scholz                  Hamburg Univ. of Applied Sciences, TU Braunschweig, Germany</p>	<p>ICAS 2010-1.2.2                  TORUS-TYPE AIRSHIP AIMING AT HIGH AIRWORTHINESS QUALITY                  H. Suefuku, T. Hirayama, Y. Hirakawa, et al                  Yokohama National Univ., Japan</p>	<p>ICAS 2010-1.2.4                  SPORT AVIATION OF THE FUTURE: POSSIBLE CONCEPTS FOR FUTURE SPORT AIRCRAFT USING DIFFERENT ENVIRONMENTAL FRIENDLY PROPULSION CONCEPTS                  C. Jouannek, D. Lundström, K. Amadori, et al                  Linköping Univ., Sweden</p>	<p>ICAS 2010-1.3.1                  CONCEPTUAL STUDY OF A L2/BWB CONFIGURATION SST WITH VARIABLE SWEEP WING                  S. Horinouchi                  JAXA, Japan</p>	<p>ICAS 2010-1.3.3                  MULTI-POINT OPTIMIZATION STUDY OF HYDROGEN FUELED LOW BOOM SUPERSONIC TRANSPORT                  T. Yuhara, K. Rinole                  Univ. of Tokyo, Japan</p>	<p>ICAS 2010-1.3.4                  MULTIDISCIPLINARY DESIGN OPTIMIZATION OF A THREE-DIMENSIONAL SUPERSONIC BIPLANE BASED ON METHOD OF CHARACTERISTICS                  Y. Utsumi                  Tohoku Univ., Japan</p>
<p><b>ICAS 2010-2.2 CFD Algorithms:</b>                  Chairs: N. Kroll, DLR, DE; TBD</p>					
<p>ICAS 2010-2.2.1                  STUDY OF AN EDGE-BASED FINITE VOLUME SCHEME AT WING TRAILING EDGE AND THE INFLUENCE ON THE OVERALL ACCURACY                  L. Tyseil                  FOI, Sweden</p>	<p>ICAS 2010-2.2.2                  IMPLEMENTATION OF AN ERROR ESTIMATION AND GRID ADAPTATION MODULE INTO THE DLR TAU CODE                  J. Ponsin, A. Caloto, E. Andrés                  INTA, Spain</p>	<p>ICAS 2010-2.2.3                  CONSTRUCTION OF VERY HIGH ORDER RESIDUAL DISTRIBUTION SCHEMES FOR COMPRESSIBLE FLOW PROBLEMS                  R. Abgrall                  INRIA and IPB, France</p>	<p>ICAS 2010-2.3.1                  NUMERICAL OPTIMIZATION OF LEADING-EDGE DEFLECTION ANGLES FOR AN SST CONFIGURATION AT LOW SPEED                  Z. Lei, D.-Y. Kwak*                  Tokyo Univ. of Science, Suwa; *JAXA, Japan</p>	<p>ICAS 2010-2.3.2                  PREDICTION OF MULTI-ELEMENT AEROFIL, HIGH-LIFT AERODYNAMICS AT LOW-SPEED AND TRANSONIC FLOW CONDITIONS                  L. J. Johnston                  Univ. of Salford, UK</p>	<p>ICAS 2010-2.3.3                  A STUDY OF DIFFERENT MESH GENERATION APPROACHES TO CAPTURE AERODYNAMIC COEFFICIENTS FOR HIGH-LIFT CONFIGURATIONS                  A.P. Antunes, R.G. Silva*, J.L.F. Azevedo                  ITA; *Univ. of São Paulo, Brazil</p>
<p><b>ICAS 2010-3.2 Low Speed Aerodynamics Testing:</b>                  Chairs: H. Consigny, ONERA, FR; B. Barzegar, Airbus UK, UK</p>					
<p>ICAS 2010-3.2.1                  WIND TUNNEL INVESTIGATION FOR OSCILLATORY BLOWING ON HIGH LIFT SYSTEMS                  C. Nae                  INCAS, Romania</p>	<p>ICAS 2010-3.2.2                  WIND TUNNEL INVESTIGATION OF FLOWFIELD ON THE FOWLER FLAP AND IN THE COVE USING PIV METHOD                  Z. Patek, M. Zabloudek                  VZLU, Czech Republic</p>	<p>ICAS 2010-3.2.3                  TESTING OF ADAPTIVE AIRFOIL CONTROL FOR UNMANNED AERIAL VEHICLES USING SHAPE MEMORY ALLOY ACTUATORS                  E. Abdullhah, C. Bil, S. Watkins                  RMIT Univ., Australia</p>	<p>ICAS 2010-3.2.4                  AERODYNAMIC PERFORMANCE OPTIMIZATION OF A WING TUNNEL MORPHING WING MODEL SUBJECT TO VARIOUS FLOW CONDITIONS                  M. Mamou, Y. Mébarki, M. Khalid, et al                  NRC/AR, Canada</p>	<p>ICAS 2010-3.3                  CONTROL FOR UNMANNED AERIAL VEHICLES USING SHAPE MEMORY ALLOY ACTUATORS                  E. Abdullhah, C. Bil, S. Watkins                  RMIT Univ., Australia</p>	<p>ICAS 2010-3.3.3                  QUANTITATIVE 3D DENSITY MEASUREMENT OF SUPERSONIC FLOW BY COLORED GRID BACKGROUND ORIENTED SCHLIEREN (CGBO) TECHNIQUE                  M. Ota, K. Hamada, K. Maeno                  Chiba Univ., Japan</p>
<p><b>ICAS 2010-4.2 Fans, Compressors &amp; Turbines II:</b>                  Chairs: P. Marquez, I.T.P., ES; S. V. Pankov, CIAM, RU</p>					
<p>ICAS 2010-4.2.1                  NUMERICAL DESIGN AND OPTIMIZATION OF A NEW CASING TREATMENT FOR SHROUDED FANS                  L. Soulat, P. Ferrand, S. Aubert*, et al                  LMFA; Florem SAS., France</p>	<p>ICAS 2010-4.2.2                  NUMERICAL AND EXPERIMENTAL INVESTIGATIONS OF CRF WITH SIMULATION OF FLOW NON-UNIFORMITY IN THE BASIC FLIGHT CONDITIONS                  I. A. Brailko, V. I. Mileshtin, A. M. Volkov, et al                  CIAM, Russian Federation</p>	<p>ICAS 2010-4.2.3                  NUMERICAL AND EXPERIMENTAL INVESTIGATIONS OF A HIGH-LOADED TYPICAL MIDDLE STAGE MODEL OF HPC                  V. I. Mileshtin, I. K. Orekhov, S. V. Pankov, et al                  CIAM, Russian Federation</p>	<p>ICAS 2010-4.3.1                  A COMPUTATIONAL STUDY OF SCRAMJET COMBUSTION                  C. Fureby                  FOI, Sweden</p>	<p>ICAS 2010-4.3.2                  PULSE DETONATION AS AN OPTION FOR FUTURE INNOVATIVE GAS TURBINE COMBUSTION TECHNOLOGIES: A CONCEPT ASSESSMENT                  F. Giuliani, A. Lang                  Graz Univ. of Technology, Austria</p>	<p>ICAS 2010-4.3.4                  DETAILED INVESTIGATION IN DEVELOPMENTAL PROCESS OF FULL ANNULAR COMBUSTOR FOR SMALL AIRCRAFT JET ENGINE                  M. Makida, H. Yamada, K. Shimodaira                  JAXA, Japan</p>
<p><b>ICAS 2010-5.2 Environmental Noise:</b>                  Chairs: Y. Khaletskiy, CIAM, RU; A. M. Rolt, Rolls-Royce, UK</p>					
<p>ICAS 2010-5.2.1                  MODELING OF ATMOSPHERIC EFFECT ON SONIC BOOM                  S.L. Chernyshev, A.Ph. Kiselev, P.P. Vorotnikov                  TsAGI, Russian Federation</p>	<p>ICAS 2010-5.2.2                  WING LEADING EDGE CONCEPTS FOR NOISE REDUCTION                  A. Shnitlovich, Y. Yadin, D. Pitera                  The Boeing Company, USA</p>	<p>ICAS 2010-5.2.3                  ANALYTIC DESCRIPTION OF THE NOISE RADIATION FROM SINGLE- AND CONTRA-ROTATING PROPELLERS                  H. Brouwer                  NLR, Netherlands</p>	<p>ICAS 2010-5.3.1                  MATHEMATICAL STUDY OF LINEAR AND NONLINEAR ROTORCRAFT PILOT COUPLINGS                  S. Kolb, M. Menet                  CReA (French Air Force), France</p>	<p>ICAS 2010-5.3.2                  PECuliarities of MOTION CUEING FOR PRECISION CONTROL TASKS AND MANEUVERS                  L. E. Znachik, Y. P. Yashin, P. A. Desyatnik                  TsAGI, Russian Federation</p>	<p>ICAS 2010-5.3.3                  ANALYTICAL STUDY OF STABILITY OF WING ROCK MODELS                  R. M. U. Enz, L. G. N. Correa, F. D. Marques, et al                  Univ. of Sao Paulo, Brazil</p>
<p><b>ICAS 2010-5.3 Handling Quality &amp; Stability:</b>                  Chairs: A. Efremov, MAI, RU; F. Quagliotti, Politecnico di Torino, IT</p>					
<p>ICAS 2010-5.3.1                  MATHEMATICAL STUDY OF LINEAR AND NONLINEAR ROTORCRAFT PILOT COUPLINGS                  S. Kolb, M. Menet                  CReA (French Air Force), France</p>	<p>ICAS 2010-5.3.2                  PECuliarities of MOTION CUEING FOR PRECISION CONTROL TASKS AND MANEUVERS                  L. E. Znachik, Y. P. Yashin, P. A. Desyatnik                  TsAGI, Russian Federation</p>	<p>ICAS 2010-5.3.3                  ANALYTICAL STUDY OF STABILITY OF WING ROCK MODELS                  R. M. U. Enz, L. G. N. Correa, F. D. Marques, et al                  Univ. of Sao Paulo, Brazil</p>	<p>ICAS 2010-4.3.3                  A NEW TEST RIG FOR LASER OPTICAL INVESTIGATIONS OF LEAN JET ENGINE BURNERS                  D. Schneider, T. Aumeter, T. Behrendt, et al                  DLR, Germany</p>	<p>ICAS 2010-4.3.4                  DETAILED INVESTIGATION IN DEVELOPMENTAL PROCESS OF FULL ANNULAR COMBUSTOR FOR SMALL AIRCRAFT JET ENGINE                  M. Makida, H. Yamada, K. Shimodaira                  JAXA, Japan</p>	<p>ICAS 2010-5.3.4                  LONGITUDINAL STABILITY AUGMENTATION DESIGN WITH TWO DEGREE OF FREEDOM CONTROL STRUCTURE AND HANDLING QUALITY REQUIREMENT                  F. J. T. Vargas, P. Paglione*, F. J. de Oliveira Moreira                  EMBRAER; *ITA, Brazil</p>

ICAS 2010-6.2 UAV Control I:		ICAS 2010-6.3 UAV Control II:	
Chairs: W. Anemaat, DARCCORP, US; S. Sasa, JAXA, JP		Chairs: P. Riseborough, BAE Systems, AU; C. Clarkson, BAE Systems, UK	
<p>ICAS 2010-6.2.1 INVERTED APPLICATIONS OF MODERN CONTROL SYSTEM DESIGN TO UNMANNED AIR VEHICLES</p> <p>P. Riseborough BAE Systems, Australia</p>	<p>ICAS 2010-6.2.2 DEVELOPMENT OF FLIGHT MECHANICAL MODELS AND CONTROL LAWS FOR THE AUTONOMOUS HELICOPTER SKELDAR</p> <p>P. Weierfleth, O. Härkegård, E. Becklund Saab AB, Sweden</p>	<p>ICAS 2010-6.3.1 A SOFTWARE ARCHITECTURE FOR AUTONOMOUS UAV MISSION MANAGEMENT AND CONTROL</p> <p>P. Gunetti, D. Dodd, H. Thompson Univ. of Sheffield, UK</p>	<p>ICAS 2010-6.3.2 THEORETICAL AND EXPERIMENTAL INVESTIGATIONS OF AERODYNAMICS AND FLIGHT DYNAMICS FOR MICRO-UAVS</p> <p>Yu. Tiumentsev Moscow Aviation Institute, Russian Federation</p>
<p><b>ICAS 2010-7.2 Safety of Systems:</b></p> <p>Chairs: G. Rayczyk, Liebherr, DE; O. Savin, Dassault Aviation, FR</p>			
<p>ICAS 2010-7.2.1 AVIONICS OF ZERO MAINTENANCE EQUIPMENT</p> <p>V. Bukov, V. Kutahov*, A. Bekkiev* Institute Aircraft Equipment, Russian Federation; *State Corp. "Rostechologii", Russian Federation</p>	<p>ICAS 2010-7.2.2 EFFECTS OF ICE ACCRETION IN THE PERFORMANCE OF AIRCRAFT FUEL FEEDING SYSTEMS</p> <p>C. P. Lawson, S. Baena, J. Lam* Cranfield Univ.; *Airbus, UK</p>	<p>ICAS 2010-7.3.1 MODELING AND SIMULATION OF SAAB GRIPENS VEHICLE SYSTEMS, CHALLENGES IN PROCESSES AND DATA UNCERTAINTIES.</p> <p>S. Steinkellner, H. Andersson, H. Gavel, et al Saab AB, Sweden</p>	<p>ICAS 2010-7.3.2 EFFICIENT INTEGRATION OF TRANSIENT CONSTRAINTS IN THE DESIGN OF AIRCRAFT DYNAMIC SYSTEMS</p> <p>L. L. Phan, D. N. Mavris, J.-J. Charrier*, et al Georgia Institute of Technology, USA; *Hispano-Suiza (Safran Group), France</p>
<p><b>ICAS 2010-8.2 Impact Damage Assessment:</b></p> <p>Chairs: C. Kindervater, DLR, DE; D. Nouailhas, ONERA, FR</p>			
<p>ICAS 2010-8.2.1 ANALYSIS AND TESTS OF IMPACT DAMAGED SYMMETRIC AND BALANCED LAMINATES</p> <p>M. J. Wallin Helsinki Univ. of Technology, Finland</p>	<p>ICAS 2010-8.2.2 EFFECT OF THE IMPACT DAMAGE TO STRENGTH OF FIBROUS COMPOSITE</p> <p>I. Pavelko, V. Pavelko, M. Smoljaninov Riga Technical Univ., Latvia</p>	<p>ICAS 2010-8.3.1 NUMERICAL SIMULATION OF DAMAGE BEHAVIOUR OF TEXTILE REINFORCED COMPOSITES IN AIRCRAFT STRUCTURES</p> <p>P. Lindé, P. Middendorf*, B. van den Broecke*, et al Airbus; *EADS IW, Germany</p>	<p>ICAS 2010-8.3.2 ANALYSIS OF DAMAGE DEVELOPMENT IN CFRP NOTCHED COUPONS WITH ENERGY-BASED MULTI-AXIAL FAILURE DATA</p> <p>A.J. Litchfield, A.C. Orifici*, J.G. Michopoulos**, et al RMIT Univ., Australia; *CRC-ACS Ltd, Australia; **Naval Research Laboratory, USA</p>
<p><b>ICAS 2010-9.2 Structural Analysis &amp; Design I:</b></p> <p>Chairs: J. Wiggenrad, NLR, NL; TBD</p>			
<p>ICAS 2010-9.2.1 DESIGN OF AN INTEGRAL PRE-PROCESSOR FOR AIRCRAFT MULTI-MODEL GENERATION</p> <p>C. Cooper, T. Chiciudean TU Delft, Netherlands</p>	<p>ICAS 2010-9.2.2 ON THE COUPLING OF A REANALYSIS TECHNIQUE WITH A HYBRID DESIGN OPTIMIZATION METHOD</p> <p>D. Akcay, Perdahicoglu Univ. of Twente, Netherlands</p>	<p>ICAS 2010-9.3.1 EXPERIMENTAL AND ANALYTICAL TECHNIQUES FOR ACCURATE PREDICTION OF HIGH STRAIN RATE AND IMPACT BEHAVIOUR IN COMPOSITE</p> <p>M. K. Kim, J. Bayandor, I. Herszberg*, et al RMIT, Australia; *CRC-ACS Ltd, Australia</p>	<p>ICAS 2010-9.3.2 A MULTI-BODY APPROACH TO AIRCRAFT DYNAMIC GROUND LOADS COMPUTATION</p> <p>S. Sohoni, F. Engelsens*, J. Wang MSC Software Corp, USA; *The Boeing Company, USA</p>
<p><b>ICAS 2010-10.2 Airworthiness &amp; Risk Analysis:</b></p> <p>Chairs: C. Cifaldi, ENAC, IT; TBD</p>			
<p>ICAS 2010-10.2.1 DEFINITION OF AIRWORTHINESS CATEGORIES FOR UNMANNED AIRCRAFT SYSTEMS (UAS)</p> <p>R. A. Clothier, R. A. Walker, J. Palmer* Queensland Univ. of Technology; *DSTO, Australia</p>	<p>ICAS 2010-10.2.2 RISK ANALYSIS OF UNMANNED AIRCRAFT SYSTEMS (UAS) OVERFLYING POPULATED AREAS</p> <p>P. Wu, R. Clothier, R. Walker ARCAA, Queensland Univ. of Technology, Australia</p>	<p>ICAS 2010-10.3.1 ANALYSIS OF TWO 2005 WAKE VORTEX ENCOUNTER INCIDENTS</p> <p>C. Schwarz DLR, Germany</p>	<p>ICAS 2010-10.3.2 TOOLS FOR DYNAMIC ADJUSTMENT OF AIRCRAFT SEPARATIONS IN WAKE VORTICES</p> <p>L. Portier, P. Coton, M. Balésdent ONERA, France</p>
<p><b>ICAS 2010-11.2 ATM I:</b></p> <p>Chairs: D. Kügler, DLR, DE; M. Bloem, NASA, US</p>			
<p>ICAS 2010-11.2.1 EPISODES: NEW APPROACHES IN ATM CONCEPT VALIDATION</p> <p>P. Leplae EUROCONTROL, France</p>	<p>ICAS 2010-11.2.2 DEFINING DYNAMIC ROUTE STRUCTURE FOR AIRSPACE CONFIGURATION</p> <p>S. Zelinski NASA Ames, USA</p>	<p>ICAS 2010-11.3.1 SECTORLESS ATM - ANALYSIS AND SIMULATION RESULTS</p> <p>B. Korn, C. Edinger, T. Puetz*, et al DLR; *DFS - Deutsche Flugsicherung, Research and Development, Germany</p>	<p>ICAS 2010-11.3.2 METHODS TO INTEGRATE MULTIPLE STAKEHOLDER PERSPECTIVES INTO AIR TRANSPORTATION EFFICIENCY METRICS</p> <p>T. Kotegawa, D. DeLaurentis, G. Harden, et al Purdue Univ., USA</p>
<p><b>ICAS 2010-11.3 ATM II:</b></p> <p>Chairs: S.-J. Zelinski, NASA, US; C. Pusch, Eurocontrol, FR</p>			
<p>ICAS 2010-11.3.1 SECTORLESS ATM - ANALYSIS AND SIMULATION RESULTS</p> <p>B. Korn, C. Edinger, T. Puetz*, et al DLR; *DFS - Deutsche Flugsicherung, Research and Development, Germany</p>	<p>ICAS 2010-11.3.2 METHODS TO INTEGRATE MULTIPLE STAKEHOLDER PERSPECTIVES INTO AIR TRANSPORTATION EFFICIENCY METRICS</p> <p>T. Kotegawa, D. DeLaurentis, G. Harden, et al Purdue Univ., USA</p>	<p>ICAS 2010-10.3.3 REAL TIME MATHEMATICAL MODELING OF THE AERODYNAMIC CHARACTERISTICS OF AN AIRCRAFT ENCOUNTERING VORTEX WAKES</p> <p>A. Gaifullin, A. Korniyakov, Y. Swiridenko TsAGI, Russian Federation</p>	<p>ICAS 2010-10.3.4 EXPERIMENTAL AND NUMERICAL INVESTIGATIONS OF THE WAKE VORTEX SYSTEM OF A DELTA-CANARD CONFIGURATION</p> <p>J. Klar, C. Breitsamer, N. A. Adams TU Munich, Germany</p>
<p><b>ICAS 2010-11.3.4</b></p> <p>Chairs: S.-J. Zelinski, NASA, US; C. Pusch, Eurocontrol, FR</p>			
<p>ICAS 2010-11.3.4 SYSTEM ANALYSIS FOR FUTURE LONG-RANGE OPERATION CONCEPTS</p> <p>S. Langhans, F. Linke, P. Nolte DLR, Germany</p>	<p>ICAS 2010-11.3.4 FMS AUTOMATION ISSUES FOR FUTURE ATM INTEGRATION</p> <p>D. W. Fishers, G. T. Spence, D. J. Allerton Univ. of Sheffield, UK</p>	<p>ICAS 2010-9.3.4 FINITE ELEMENT SIMULATION OF SHOCK ENHANCEMENT IN CELLULAR STRUCTURES UNDER IMPACT LOADING</p> <p>T. Suo NPU, China</p>	<p>ICAS 2010-9.3.4 PATCH MATERIALS SELECTION FOR AGEING METALLIC AIRCRAFT STRUCTURES USING DIGITAL QUANTITATIVE MATERIALS SELECTION METHODS</p> <p>A. Abedian, K. Fayazbakhsh, E. Fouladi Sharif Univ. of Technology, Iran</p>

Tuesday September 21 <sup>st</sup> Morning Sessions			
GENERAL LECTURE I (INVITED) - Chairman: D. Mueller-Wiesner, Chairman ICAS Programme Committee, Germany J. Botti, EADS, Germany; M. Ganz., The Boeing Company, US: AVIATION AND THE ENVIRONMENT (ICAS 2010-0.2 and ICAS 2010-0.3)			
08:00 – 09:15	BREAK		
09:15 – 09:30	10:00 – 10:30	10:30 – 11:00	11:00 – 11:30
09:30 – 10:00	10:00 – 10:30	10:30 – 11:00	11:30 – 12:00
ICAS 2010-1.4 Aircraft Design Methods I: Chairs: R. Del Rosario, NASA, US; W. Kimmel, NASA, US			
ICAS 2010-1.4.1 WHY JET COMMERCIAL AIRPLANES CRUISE AT 30 000 FT ? CONCEPTUAL OPTIMAL CRUISE ALTITUDE J.-L. Boffier, L. Boveit* Isae-SupAéro and Onéra; *Airbus, France	ICAS 2010-1.4.2 AIRCRAFT MISSION AND SYSTEM FAILURE CONSIDERATIONS FOR FUNCTIONAL INDUCTION BASED CONCEPTUAL ARCHITECTURE DESIGN M. J. Armstrong, C. de Tenorio, E Garcia, et al; Georgia Institute of Technology, USA	ICAS 2010-1.4.3 CST PARAMETRIZATION FOR UNCONVENTIONAL AIRCRAFT DESIGN OPTIMIZATION P.D. Ciampa, T. Zili, B. Nagel DLR, Germany	ICAS 2010-1.4.4 RELATING & COMPARING OPERATING EFFICIENCIES OF CIVIL AIRCRAFT & MILITARY TRANSPORTS (JETS & TURBO-PROPS) R. K. Nangia, C. Zeune*, W. B. Blake* Nangia Aero Research, UK; *USAF-AFRL, USA
ICAS 2010-2.4 Advanced CFD Applications: Chairs: C-C. Rossow, DLR, DE; TBD			
ICAS 2010-2.4.1 SONIC-BOOM PREDICTION USING EULER CFD CODES WITH STRUCTURED/UNSTRUCTURED OVERSET METHOD H. Ishikawa, K. Tanaka*, Y. Makino**, et al Sanko Soft Co. Ltd.; *Ryoyu Systems Co. Ltd.; ** JAXA, Japan	ICAS 2010-2.4.2 AUTOMATIC GRID GENERATION FOR ACCURATE NAVIER-STOKES SIMULATIONS P. R. Lahur, A. Hashimoto*, K. Murakami*, et al Research Center of Computational Mechanics, Inc.; *JAXA, Japan	ICAS 2010-2.4.3 FROM GEOMETRY TO CFD-BASED AERODYNAMIC DERIVATIVES - AN AUTOMATED APPROACH M. Tomac, D. Eller KTH, Sweden	ICAS 2010-2.4.4 NUMERICAL SIMULATIONS OF TECHNOLOGICAL EFFECTS ENCOUNTERED ON TURBOMACHINERY CONFIGURATIONS WITH THE CHIMERA TECHNIQUE L. Castillon, S. Peron, C. Benoit ONERA, France
ICAS 2010-3.4 Aero Testing Techniques II: Chairs: D. Hunter, ARA, UK; F. Steinle, US Air Force, US			
ICAS 2010-3.4.1 SAO PROJECT - USING CFD CODES TO REDUCE UNCERTAINTIES OF WIND TUNNEL EXPERIMENTS G. Boyet, M. Lyonnet, S. Mouton ONERA, France	ICAS 2010-3.4.2 LOCALISING AIRCRAFT NOISE SOURCES WITH LARGE SCALE ACOUSTIC ANTENNA C. Cariou, O. Delverdier Airbus, France	ICAS 2010-3.4.3 EXPERIMENTAL RESEARCH FOR AERODYNAMIC INTERFERENCE BY UPPER MOUNTED ENGINE EXHAUST JET ON SST CONFIGURATIONS D. Y. Kwak, T. Hirotsani, M. Noguchi, et al JAXA, Japan	ICAS 2010-3.4.4 AIRFRAME NOISE MEASUREMENTS BY USING SIMPLIFIED HIGH LIFT MODEL H. Ura, Y. Yokokawa, T. Imamura, et al JAXA, Japan
ICAS 2010-4.4 Noise, Vibrations & Acoustics I: Chairs: D. Juvé, Ecole Centrale de Lyon, FR; D. Collin, Snecma, FR			
ICAS 2010-4.4.1 CEPRA19 : REDUCING THE JET NOISE : THE ACTIVE TECHNOLOGIES SYSTEM O. PICCIN, P. LECONTE, J.D. JOUTEAU ONERA, France	ICAS 2010-4.4.2 NUMERICAL TOOLS FOR CONTRA ROTATING OPEN-ROTOR PERFORMANCE, NOISE AND VIBRATION ASSESSMENT M. Laban, J. C. Kok, B. B. Prananta NLR, Netherlands	ICAS 2010-4.4.3 SEMI-BURIED ENGINES INSTALLATION: THE NACRE PROJECT EXPERIENCE J.-L. Godard ONERA, France	ICAS 2010-4.4.4 ANIBAL: A SUCCESSFUL AERO-ACOUSTIC OPTIMIZATION OF CARBON FIBER PROPELLER FOR LIGHT AIRCRAFT T. Lefebvre, S. Canard, C. Le Tallec, et al ONERA, France
ICAS 2010-5.4 Flight Control I: Chairs: L. Zaichik, TsAGI, RU; M. Yanagihara, JAXA, JP			
ICAS 2010-5.4.1 IMMUNE : CONTROL REALLOCATION AFTER SURFACE FAILURES USING MODEL PREDICTIVE CONTROL L. Lafourcade, C. Cumer, C. Doll ONERA, France	ICAS 2010-5.4.2 FLIGHT TRAJECTORY CONTROL BASED ON REQUIRED ACCELERATION N. Yoshitani Teikyo Univ., Japan	ICAS 2010-5.4.3 ADAPTIVE CONTROL USING SUPPORT VECTOR REGRESSION FOR HYPERSONIC AIRCRAFT CONTROL J. Shin, H. J. Kim, Y. Kim Seoul National Univ., Korea	ICAS 2010-5.4.4 AN ADAPTIVE CONTROL TECHNOLOGY FOR IMPROVED FLIGHT SAFETY G. Crespo, M. Matsutani*, A. Annaswamy* National Institute of Aerospace; *MIT, USA

<b>ICAS 2010-6.4 UAV Formation Flying: Chairs: M. Hagström, FOI, SE; TBD</b>			
ICAS 2010-6.4.1 INVITED IMPLEMENTATION OF DECONFLICTION IN MULTIVEHICLE AUTONOMOUS SYSTEMS A. Melander, J. Vian, K. Morgensen, N. Powell, et al The Boeing Company, USA	ICAS 2010-6.4.2 AUTONOMOUS FORMATION FLIGHT USING BIFURCATING POTENTIAL FIELDS M. Suzuki, K. Uchiyama, D. J. Bennet*, et al; Nihon Univ., Japan; *Univ. of Strathclyde, UK	ICAS 2010-6.4.3 DECENTRALIZED CONTROLLER DESIGN FOR FORMATION FLIGHT WITH UAV FAILURE DETECTION LOGIC J. Seo, Y. Kim Seoul National Univ., Korea	ICAS 2010-6.4.4 SIMPLE FORMATION CONTROL SCHEME TOLERANT TO COMMUNICATION FAILURES FOR SMALL UNMANNED AIR VEHICLES T. Hino Univ. of Tokyo, Japan
<b>ICAS 2010-7.4 More Electrical Systems I: Chairs: M. Sinai, The Boeing Company, US; P. Krus, Linköping University, SE</b>			
ICAS 2010-7.4.1 KEY ENABLERS FOR POWER OPTIMIZED AIRCRAFT J. Bosson THALES, France	ICAS 2010-7.4.2 OBJECT-ORIENTED MODELLING OF FLIGHT CONTROL ACTUATION SYSTEMS FOR POWER ABSORPTION ASSESSMENT G. Di Rito, E. Denti, R. Galatolo Univ. of Pisa, Italy	ICAS 2010-7.4.3 ACTIVE RECTIFIER COMBINED WITH ENERGY STORAGE DEVICES FOR AN ELECTRICAL SUB NETWORK J. Simon Hispano-Suiza, France	ICAS 2010-7.4.4 A LANDING GEAR ACTUATOR USING A DUAL-OUTPUT POWER CONVERTER BASED MOTOR DRIVE T. Wijekoon, L. Empringham, P. Wheeler, et al Univ. of Nottingham, UK
<b>ICAS 2010-8.4 Advances in Aerospace Materials: Chairs: A. Blom, FOI, SE; J. Komorowski, NRC, CA</b>			
ICAS 2010-8.4.1 COMPOSITE REPAIR FOR METALLIC AIRCRAFT STRUCTURES, DEVELOPMENT & QUALIFICATION ASPECTS G. Günther, A. Maier EADS, Germany	ICAS 2010-8.4.2 Z-PIN COMPOSITES: AEROSPACE STRUCTURAL DESIGN CONSIDERATIONS A. Mouritz RMIT Univ., Australia	ICAS 2010-8.4.3 MATERIALS EVOLUTION IN HOT PARTS OF AERO TURBOENGINES J.Y. GUEDOU Snecma, France	ICAS 2010-8.4.4 USE OF STEEL IN AERONAUTIC JET ENGINES AND EQUIPMENTS FOR SAFRAN GROUP L. Ferrer Snecma, France
<b>ICAS 2010-9.4 Structural Analysis &amp; Design II: Chairs: M. Jackson, Lockheed Martin, US; T. Mulyanto, Institute Technology Bandung, ID</b>			
ICAS 2010-9.4.1 SIMULATION OF FAILURE AND COLLAPSE LOAD PREDICTION OF POST- BUCKLED CFRP AIRCRAFT WING RIBS L. E. Romera, S. Hernández, J. Diaz, et al Univ. of La Coruña, Spain	ICAS 2010-9.4.2 STUDY ON BUCKLING BEHAVIOUR OF LAMINATED SHELLS UNDER PULSE LOADING E. Eglitis, K. Kalnins, C. Bisagni* Riga Technical Univ., Latvia; *Politecnico di Milano, Italy	ICAS 2010-9.4.3 ANALYTICAL METHOD FOR LIMIT LOAD CAPACITY CALCULATION OF THIN WALLED AIRCRAFT STRUCTURES A. Pistek Brno Univ. of Technology, Czech Republic	ICAS 2010-9.4.4 FINITE ELEMENT MODELING AND ANALYSIS OF MULTI-LAYER PIEZOELECTRIC ENERGY HARVESTER R. Cesar, C. De Marqui Univ. of São Paulo, Brazil
<b>ICAS 2010-10.4 ATM &amp; Human Factors: Chairs: A. Leger, THALES, FR; TBD</b>			
ICAS 2010-10.4.1 SAFETY WINDOW'S KNOWLEDGE MAPS FOR ACCIDENT PREDICTION AND PREVENTION IN MULTIFACTOR FLIGHT SITUATIONS I. Burdun INTELEONICS Ltd., Russian Federation	ICAS 2010-10.4.2 AN ASSESSMENT FOR UAS TRAFFIC AWARENESS OPERATIONS E. Pastor, X. Prats, L. Delgado, et al Technical Univ. of Catalonia, Spain	ICAS 2010-10.4.3 A DATA AUTHENTICATION SOLUTION OF ADS-B SYSTEM BASED ON X.509 CERTIFICATE Z. Feng, W. Pan*, Y. Wang Sichuan Univ., *Air Traffic Management College, China	ICAS 2010-10.4.4 INVESTIGATIONS ON A NON-INVASIVE METHOD FOR PILOT AND ATC OPERATOR WORKLOAD MONITORING J. Luig, Ch. Kranzler, A. Sontacchi, et al Univ. of Music and Performing Arts Graz, Austria
<b>ICAS 2010-11.4 Trajectories: Chairs: S. Conway, The Boeing Company, US; TBD</b>			
ICAS 2010-11.4.1 ARRIVAL TIME CONTROLLABILITY OF A CONSTRAINED TAILORED ARRIVAL PATH AND ITS OPTIMIZATION N. Takeichi, D. Inami, M. Kudo*, et al Nagoya Univ., *ENRI, Japan	ICAS 2010-11.4.2 HUMAN-IN-THE-LOOP SIMULATION OF TRAJECTORY-BASED TERMINAL-AREA OPERATIONS T. Callantine, E. Palmer*, M. Kupfer San Jose State Univ. / NASA Ames; *NASA Ames, USA	ICAS 2010-11.4.3 HUMAN IN THE LOOP TO ASSESS 4D TRAJECTORY MANAGEMENT WITH CONTRACT-OF-OBJECTIVES S. Guibert, L. Guichard, J.Y. Grau* EUROCONTROL, *INEOVA, France	ICAS 2010-11.4.4 A FIELD TEST OPERATING CONCEPT FOR TRAJECTORY BASED OPERATIONS WITH AIR/GROUND DATA LINK COMMUNICATIONS D. McNally, S. E. Sahlman* NASA Ames; *Univ. of California, Santa Cruz, USA
<b>ICAS 2010-11.4.5</b>			
<b>POSTER PROMOTIONS</b>			

GENERAL LECTURE II (INVITED) - Chairman: R. Bengelink, USA  
S. Chernychev, Tsagi, Russia: PROGRESS IN RUSSIAN AVIATION - PROBLEMS AND SOLUTIONS (ICAS 2010-0.4)

13:30 – 14:15	GENERAL LECTURE II (INVITED) - Chairman: R. Bengelink, USA S. Chernychev, Tsagi, Russia: PROGRESS IN RUSSIAN AVIATION - PROBLEMS AND SOLUTIONS (ICAS 2010-0.4)		16:30 – 17:00	17:00 – 17:30	17:30 – 18:00	18:00 – 18:30
14:15 – 14:30	BREAK					
14:30 – 15:00	15:00 – 15:30	15:30 – 16:00	16:30 – 17:00	17:00 – 17:30	17:30 – 18:00	18:00 – 18:30
<p><b>ICAS 2010-1.5 Aircraft Design Methods II:</b> Chairs: M. R. Kirby, Georgia Tech., US; E. Jesse, ADSE, NL</p>						
<p>ICAS 2010-1.5.1 COST-RANGE TRADE-OFF IN THE DESIGN AND OPERATION OF LONG RANGE TRANSPORT AIRPLANES R. Martinez-Val, E. Perez, C. Cuerno, et al E. I.S.I. Aeronauticos (UPM), Spain</p>	<p>ICAS 2010-1.5.2 AIRCRAFT DESIGN FOR LOW COST GROUND HANDLING – THE FINAL RESULTS OF THE ALOHA PROJECT P. Kramer, O. Junker*, A. Dengler**, et al Hamburg Univ. of Applied Sciences; *Airport Research Center GmbH; **Airbus Operations GmbH, Germany</p>	<p>ICAS 2010-1.5.3 TOWARDS A META MODEL FOR CONCEPTUAL AIRCRAFT DESIGN M. Glas Bauhaus Luftfahrt, Germany</p>	<p>ICAS 2010-1.6.1 INVITED ENVIRONMENTALLY RESPONSIBLE AVIATION – REAL SOLUTIONS FOR ENVIRONMENTAL CHALLENGES F. Collier, NASA, USA</p>	<p>ICAS 2010-1.6.2 DESIGN AND FLIGHT TESTING OF A 5TH GENERATION FIGHTER K. Anadori, D. Lundström, I. Staack, et al; Linköping Univ., Sweden</p>	<p>ICAS 2010-1.6.3 VUT 001 MARABU: UNIVERSAL EXPERIMENTAL AIRCRAFT A. Pisek, J. Hlinka Brno Univ. of Technology, Czech Republic</p>	<p>ICAS 2010-1.6.4 ENFICA-FC: DESIGN, REALIZATION AND FLIGHT TEST OF ALL ELECTRIC 2-SEAT AIRCRAFT POWERED BY FUEL CELLS G. Romeo, F. Borello, G. Correa Politecnico di Torino, Italy</p>
<p><b>ICAS 2010-2.5 Turbulence Modeling:</b> Chairs: P. Eliasson, FOI, SE</p>						
<p>ICAS 2010-2.5.1 NUMERICAL SIMULATION AND MODELLING OF HIGH-LIFT AERODYNAMICS IN GROUND-EFFECT M. Barth, B. Calmels, B. Aupoix* Airbus; *ONERA, France</p>	<p>ICAS 2010-2.5.2 THE EFFECT OF UNSTRUCTURED GRID TOPOLOGY AND RESOLUTION ON SIMULATIONS OF DECAYING TURBULENCE C. Winkler, A. Dorgan, M. Mani The Boeing Company, USA</p>	<p>ICAS 2010-2.5.3 DETAILS OF TURBULENCE MODELING IN NUMERICAL SIMULATIONS OF A SCRAMJET INTAKE T. Nguyen, G. Schieffer RWTH Aachen, Germany</p>	<p>ICAS 2010-2.6.1 CAD-BASED AERODYNAMIC SHAPE OPTIMIZATION WITH THE DLR TAU CODE M. Martin, E. Andres, M. Wildhalm* INTA, Spain; *DLR, Germany</p>	<p>ICAS 2010-2.6.2 FAST CFD FOR SHAPE AND FLOW PARAMETERIZATION WITH META-MODELS BUILT ON HIGH ORDER DERIVATIVES. FAST DESIGN APPLICATIONS P. Ferrand CNRS, France</p>	<p>ICAS 2010-2.6.3 INFLUENCE OF PARAMETERIZATION AND OPTIMIZATION METHOD ON THE OPTIMUM AIRFOIL B. G. Marinus Royal Military Academy - von Karman Institute, Belgium</p>	<p>ICAS 2010-2.6.4 USER-PREFERENCE PARTICLE SWARM ALGORITHM FOR AIRFOIL DESIGN ARCHITECTURE R. Carrese, H. Winarto, J. Watmuff, et al RMIT Univ., Australia</p>
<p><b>ICAS 2010-3.5 Aerothermodynamics:</b> Chairs: S. Tatsumi, MHI, JP; B. Reinartz, RWTH Aachen Univ., DE</p>						
<p>ICAS 2010-3.5.1 SHOCK WAVE IMPINGEMENT ON BOUNDARY AND ENTROPY LAYERS OF A BLUNT PLATE Y. V. Borovoy, V. I. Egorov, S. A. Skuratov TsAGI, Russian Federation</p>	<p>ICAS 2010-3.5.2 NUMERICAL SIMULATION OF RECEIPTIVITY AND STABILITY OF A SUPERSONIC BOUNDARY LAYER V. Soudakov, I. Egorov, A. Fedorov, et al TsAGI, Russian Federation</p>	<p>ICAS 2010-3.5.3 HYPERSONIC AERODYNAMICS OF TOROIDAL BALLUTES V. V. Ribov Rivier College, USA</p>	<p>ICAS 2010-3.6.1 THE EFFECT OF PLASMA SYNTHETIC WALL JET ON THE LAMINAR BOUNDARY LAYER B. Gibson, M. Arjomandi, R. Kelso Univ. of Adelaide, Australia</p>	<p>ICAS 2010-3.6.2 PERFORMANCE AND OPTIMIZATION OF AERODYNAMIC PLASMA ACTUATOR FOR AGILE AIRCRAFT T. Matsuno, K. Ota, T. Kanatani, et al Tohoku Univ., Japan</p>	<p>ICAS 2010-3.6.3 PROPORTIONAL OPPOSITION CONTROL OF TURBULENCE G. M. Di Cicca Politecnico di Torino, Italy</p>	<p>ICAS 2010-3.6.4 APPLICATION OF THE PASSIVE CONTROL OF THE SHOCK WAVE TO THE REDUCTION OF THE HELICOPTER ROTOR HIGH-SPEED IMPULSIVE NOISE O. Szulc, P. Doerfler Institute of Fluid-Flow Machinery, Poland</p>
<p><b>ICAS 2010-4.5 Noise, Vibrations &amp; Acoustics II:</b> Chairs: D. Collin, Snecma, FR</p>						
<p>ICAS 2010-4.5.1 APPLICATION OF RANDOM FOREST TO ENGINE HEALTH MONITORING J. Ricordeau, J. Lacaille Snecma, France</p>	<p>ICAS 2010-4.5.2 AERODYNAMIC AND AEROACOUSTIC INVESTIGATION OF ROUND AND RECTANGULAR FREE JET CHARACTERISTICS H. Feischer EADS Deutschland GmbH, Germany</p>	<p>ICAS 2010-4.5.3 SIMULATION OF THE SHAFT OVER-SPEED IN A TWO-SPOOL GAS TURBINE M. Ferlauto, R. Marsilio Politecnico di Torino, Italy</p>	<p>ICAS 2010-4.6.1 A REVIEW OF COMPLETE, GAS TURBINE ENGINE SIMULATIONS R. Claus, S. Townsend* NASA Glenn; *ASRC Aerospace Corp, USA</p>	<p>ICAS 2010-4.6.2 OPTIMIZATION OF A NOVEL ROCKET-BASED COMBINED-CYCLE PROPULSION SYSTEM BY GENETIC ALGORITHM G. Chorkawij, J. Etele Carleton Univ., Canada</p>	<p>ICAS 2010-4.6.3 ASSESSMENT OF NEW AERO ENGINE CORE CONCEPTS AND TECHNOLOGIES IN THE EU NETWORK 6 NEWAC PROGRAMME A. M. Rolt, M. Andreoletti*, K. Kyprianidis** Rolls-Royce plc, UK; *Snecma, France; **Cranfield Univ., USA</p>	<p>ICAS 2010-4.6.4 INNOVATIVE ENGINE ARCHITECTURES: SNECMA ANSWER TO ENVIRONMENTAL CHALLENGES S. Dron Snecma, France</p>
<p><b>ICAS 2010-5.5 Flight Optimization I:</b> Chairs: T. Tsuchiya, University of Tokyo, JP; J.-P. Jung, ONERA, FR</p>						
<p>ICAS 2010-5.5.1 INVITED DEVELOPMENT AND EVALUATION OF TRAJECTORY PREDICTION MODEL Y. Fukuda, M. Shirakawa, A. Senoguchi ENRI, Japan</p>	<p>ICAS 2010-5.5.2 SUB-OPTIMAL MISSILE GUIDANCE WITH PULSE-MOTOR CONTROL LOGIC USING THE SINGULAR PERTURBATIONS METHOD E. Sigal, J. Z. Ben-Asher Technion, Israel</p>	<p>ICAS 2010-5.5.3 OPTIMAL CONTROL OF CRUISE FLIGHT AT CONSTANT ALTITUDE A. Franco, A. Valenzuela, D. Rivas Univ. de Sevilla, Spain</p>	<p>ICAS 2010-5.6.1 INVITED CLIMATE IMPACT OF AVIATION AT SHORT AND LONG TIME SCALES U. Schumann DLR, Germany</p>	<p>ICAS 2010-5.6.2 THE U.S. STRATEGY FOR TACKLING AVIATION CLIMATE IMPACTS L. Maurice, C. Burleson, M. Gupta FAA, USA</p>	<p>ICAS 2010-5.6.3 AN INVESTIGATION OF THE POTENTIAL IMPLICATIONS OF CO2 EMISSION METRICS ON FUTURE AIRCRAFT DESIGNS M. R. Kirby, T. Nam, G. A. Burdette, et al Georgia Institute of Technology, USA</p>	<p>ICAS 2010-5.6.4 THE CLEAN SKY "SMART FIXED WING AIRCRAFT INTEGRATED TECHNOLOGY DEMONSTRATOR": PROJECT STATUS J. Koenig, T. Hellstrom* Airbus Operations GmbH, Germany; *SAAB AB, Sweden</p>

<b>ICAS 2010-6.5 Sense and Avoid:</b> <b>Chairs: R. Walker, Queensland University of Technology, AU</b> ICAS 2010-6.5.1 INVITED UAS MID-AIR COLLISION AVOIDANCE SYSTEM FOR EUROPE J. Pellebergs Saab, Sweden M. Consiglio, D. Wing, J. Murdoch NASA Langley, USA		<b>ICAS 2010-6.6 UAV Mission Planning:</b> <b>Chairs: G. Holmberg, SAAB, SE; TBD</b> ICAS 2010-6.6.1 MISSION OPTIMISATION AND MULTIDISCIPLINARY DESIGN OF HYBRID UNMANNED AERIAL SYSTEMS (UAS) OPERATIONS J. Hung, L. F. Gonzalez, R. Walker ARCAA, Queensland Univ. of Technology, Australia ICAS 2010-6.6.2 A MOBILE AIRCRAFT TRACKING SYSTEM IN SUPPORT OF UNMANNED AIR VEHICLE OPERATIONS M. Wilson Boeing Research & Technology Australia, Australia ICAS 2010-6.6.3 DEVELOPMENT OF AN PATH PLANNING ALGORITHM FOR UAS IN DYNAMIC ENVIRONMENT USING DIFFERENTIAL GEOMETRY AND PROBABILITY FUNCTIONS S. Moon, H. Shim KAIST, Korea ICAS 2010-6.6.4 TOWARDS AN UAV VISUAL AIR-TO-GROUND TARGET TRACKING IN AN URBAN ENVIRONMENT Y. Watanabe, P. Fabiani, G. Le Besnerais ONERA, France	
<b>ICAS 2010-6.5 Sense and Avoid:</b> <b>Chairs: R. Walker, Queensland University of Technology, AU</b> ICAS 2010-6.5.2 HUMAN IN THE LOOP SIMULATION MEASURES OF PILOT RESPONSE DELAY M. Consiglio, D. Wing, J. Murdoch NASA Langley, USA		<b>ICAS 2010-7.6 Physics phenomena and Systems:</b> <b>Chairs: S. Prudhomme, Airbus, FR</b> ICAS 2010-7.6.1 DEVELOPMENT OF A PNEUMATIC SYSTEM TO ENABLE FLIGHT WITHOUT CONVENTIONAL CONTROL SURFACES C. P. Lawson, G. Monterzino Cranfield Univ., UK ICAS 2010-7.6.2 CALCULATION OF THE HEAT TRANSFER AND TEMPERATURE ON THE AIRCRAFT ANTI-ICING SURFACE W. Dong, J. J. Zhu, X. H. Min Shanghai Jiaotong Univ., China ICAS 2010-7.6.3 AEROTHERMOELASTIC SHAPE OPTIMIZATION OF A HYPERSONIC STRUCTURE M. Bhatia Virginia Polytechnic Institute and State Univ., USA ICAS 2010-7.6.4 BIOMIMETIC DESIGN OF AEROSPACE COMPOSITE JOINTS L. Burns RMIT Univ., Australia	
<b>ICAS 2010-7.5 More Electrical Systems II:</b> <b>Chairs: S. Dubois, Thales Group, FR; Y. Fu, BUAA - Beihang University, CN</b> ICAS 2010-7.5.1 SIC TECHNOLOGY, A WAY TO IMPROVE AEROSPACE INVERTER EFFICIENCY S. Viellard Hispano Suiza, France ICAS 2010-7.5.2 ELECTRICAL POWER DISTRIBUTION SYSTEM (EPDS), FOR APPLICATION IN MORE ELECTRIC AIRCRAFT I. Izquierdo, A. Azcona EADS, Spain ICAS 2010-7.5.3 DESIGN OF ALL ELECTRIC SECONDARY POWER SYSTEM FOR FUTURE ADVANCED MALE UAV S. Chiesa, S. Farragiat*, N. Viola Politecnico di Torino; *Alenia Aeronautica S.p.A., Italy		<b>ICAS 2010-8.6 Materials &amp; Composites I:</b> <b>Chairs: A. Blom, FOI, SE; TBD</b> ICAS 2010-8.6.1 SURROGATE MODELING FOR EFFICIENT DESIGN OPTIMISATION OF COMPOSITE AIRCRAFT FUSELAGE PANELS J. Vankan, R. Maas NLR, Netherlands ICAS 2010-8.6.2 MULTILEVEL APPROACH FOR STRENGTH AND WEIGHT ANALYSES OF COMPOSITE AIRFRAME STRUCTURES A. Shanygin, G. Zamula, V. Fomin TsAGI, Russian Federation ICAS 2010-8.6.3 AEROTHERMOELASTIC SHAPE OPTIMIZATION OF A HYPERSONIC STRUCTURE M. Bhatia Virginia Polytechnic Institute and State Univ., USA ICAS 2010-8.6.4 BIOMIMETIC DESIGN OF AEROSPACE COMPOSITE JOINTS L. Burns RMIT Univ., Australia	
<b>ICAS 2010-8.5 Crack Propagation:</b> <b>Chairs: C. York, University of Glasgow, UK</b> ICAS 2010-8.5.1 VALIDATION OF CRITICAL CRACK LENGTH ESTIMATES THROUGH FULL-SCALE TESTING FOR LARGE MILITARY TRANSPORT AIRCRAFT M. Laubach, J. Karnes, L. Braden, et al National Institute of Aviation Research, USA ICAS 2010-8.5.2 THREE DIMENSIONAL PROGRESSIVE DAMAGE PROGNOSIS OF FASTENED COMPOSITE JOINTS M. Chishti, J. Bayandor, R. Thomson* RMIT Univ.; *CRC-ACS Ltd, Australia		<b>ICAS 2010-9.6 Aeroelasticity I:</b> <b>Chairs: V. Giavotto, Politecnico di Milano, IT; TBD</b> ICAS 2010-9.6.1 REDUCED UNCERTAINTIES IN THE ROBUST FLUTTER ANALYSIS OF THE AEROSTRUCTURES TEST WING S. Lung, C.-G. Pak* Tyberin Corporation; *NASA Dryden, USA ICAS 2010-9.6.2 DEMONSTRATION OF PITCH-PLUNGE FLUTTER SUPPRESSION USING LQG CONTROL A. N. Sutherland CSIR, South Africa ICAS 2010-9.6.3 PANEL FLUTTER SIMULATION CONSIDERING TURBULENT BOUNDARY LAYER A. Hashimoto, T. Aoyama JAXA, Japan ICAS 2010-9.6.4 EXPERIMENTAL TESTING AND NUMERICAL SIMULATION TO DESIGN AN INNOVATIVE BLAST RESISTANT TEXTILE LUGGAGE CONTAINER R. Dotoli, A. Bozzolo*, A. Tyas**, et al Consorziol Ceima; *D'Appolonia S.p.A., Italy; **Blastech Ltd, UK	
<b>ICAS 2010-9.5 Structural Modeling &amp; Simulation:</b> <b>Chairs: S. Musti, MSC Software, US</b> ICAS 2010-9.5.1 AN EXPERIMENTAL METHOD AND NUMERICAL SIMULATION FOR COMPOSITE MATERIALS ENERGY ABSORPTION DETERMINATION F. Garattoni, E. Trolani Univ. of Bologna, Italy ICAS 2010-9.5.2 3D FINITE ELEMENT MODELING OF SINGLE-LAP SHEAR BOLTED JOINTS A. Sevarathnam, J. Frailley, J. Eisenmann Lockheed Martin Aeronautics, USA ICAS 2010-9.5.3 A GENERAL APPROACH FOR THE COUPLING OF EXISTING SIMULATIONS COMPONENTS INTO A GENERAL MULTIPHYSICS ENVIRONMENT. M. G. Zielonka, S. C. Rennich MSC Software Corp, USA		<b>ICAS 2010-10.6 Structural Monitoring and Sensors:</b> <b>Chairs: T. Aoki, University of Tokyo, JP; TBD</b> ICAS 2010-10.6.1 THE ON-BOARD LOAD DIAGNOSIS CHAIN - AN APPROACH TO AIRFRAME HEALTH MONITORING M. Gojny, L. Bensch, O. Lindenauf* Airbus Operations GmbH; *HEAD GmbH on behalf of AIRBUS Operations GmbH, Germany ICAS 2010-10.6.2 PROBLEMS OF STRUCTURAL HEALTH MONITORING OF AIRCRAFT V. Pavelko, E. Ozolins, I. Ozolins, et al Riga Technical Univ., Latvia ICAS 2010-10.6.3 DETECTABILITY COMPARISON OF THE SENSORS EMBEDDED IN GLASS-EPOXY WOVEN COMPOSITE LAMINATES W.-G. Guo, X.-Q. Zhang NPJ, China	
<b>ICAS 2010-10.5 Safety Tools I:</b> <b>Chairs: J. van Toor, EADS, DE</b> ICAS 2010-10.5.1 A NEW METHODOLOGY FOR SOFTWARE RELIABILITY AND SAFETY ASSURANCE IN ATM SYSTEMS F. Matarese, D. Dell'Amura SESM, Italy ICAS 2010-10.5.2 SOFTWARE VERIFICATION WORK AIMED AT AIRCRAFT SOFTWARE AIRWORTHINESS Y. Wu, B. Liu, F. Sun Beihang Univ., China ICAS 2010-10.5.3 MAINTAINABILITY AND SUPPORTABILITY CAD BASED ON DIGITAL PLATFORM W. J. Zhang, Y. F. Sun, L. Ma, et al Beijing Univ. of Aeronautics and Astronautics, China		<b>ICAS 2010-11.6 Airport I:</b> <b>Chairs: B. Lamiscarre, ONERA, FR; TBD</b> ICAS 2010-11.6.1 APPLICATION OF ENVIRONMENTAL MODELS IN THE CONTEXT OF TOTAL AIRPORT MANAGEMENT COLLABORATIVE PLANNING F. Plekert, S. Kaitenhaeuser, H. Feldhaus, et al AT-One (DLR), Germany ICAS 2010-11.6.2 OPTIMIZATION PROBLEMS FOR STRATEGIC AIR TRAFFIC MANAGEMENT AT AIRPORTS WITH INTERDEPENDENT ARRIVAL/DEPARTURE CAPACITIES E. Gilbo Volpe National Transportation Systems Center, USA ICAS 2010-11.6.3 VIRTUAL BLOCK CONTROL & SEPARATION BUBBLES - INCREASING TAXIWAY THROUGHPUT IN LOW VISIBILITY CONDITIONS V. Molwitz, F. J. van Schaik* AT-One (DLR), Germany; *AT-One (NLR), Netherlands ICAS 2010-11.6.4 TOWARDS WAKE VORTEX SAFETY AND CAPACITY INCREASE: INTEGRATED FUSION APPROACH AND ITS DEMANDS ON MODELS AND SENSORS S. Schoenhals, M. Steen, P. Hecker TU Braunschweig, Germany	
<b>ICAS 2010-11.5 Arrivals sequencing:</b> <b>Chairs: P. U. Lee, NASA, US; R. de Boer, NLR, NL</b> ICAS 2010-11.5.1 INVITED CONFLICT-FREE ARRIVAL SEQUENCING FOR NEXTGEN ATM H. Erzberger Univ. of California at Santa Cruz, USA ICAS 2010-11.5.2 FUTURE AIR GROUND INTEGRATION: A SCALABLE CONCEPT TO START WITH GREEN APPROACHES TODAY A. Kuenz DLR, Germany ICAS 2010-11.5.3 IMPROVING METROPLEX OPERATIONS EFFICIENCY USING SPEED SEGREGATION AND TRAJECTORY FLEXIBILITY H. Idriis Engility Corporation, USA			

Wednesday September 22<sup>nd</sup> Morning Sessions

08:00 – 09:00 GENERAL LECTURE III (INVITED) - Chairman: S. Ying, US  
G. Wu, COMAC, China: THE ARJ21 REGIONAL JET PROGRAM (ICAS 2010-0.5)

09:00 – 09:30 BREAK

09:30 – 10:00 10:00 – 10:30 10:30 – 11:00 11:00 – 11:30 11:30 – 12:00

ICAS 2010-1.7 UAS Concepts: Chairs: R. Williams, BAE Systems, UK; Y. Miyazawa, Kyushu University, JP				
ICAS 2010-1.7.1 INVITED THE ADOPTION OF UAS TECHNOLOGY IN THE UK SECURITY MARKET R.J. Williams BAE Systems, UK	ICAS 2010-1.7.2 MULTI-DISCIPLINARY OPTIMISATION OF A SOLAR-POWERED HIGH ALTITUDE LONG ENDURANCE UAV O. Montagnier, L. Bovet CRaA (French Air Force), France	ICAS 2010-1.7.3 THE DEVELOPMENT OF A UAV SYSTEMS MODULAR RESEARCH LABORATORY AND INTEGRAL RESEARCH UAV J. S. Monk CSIR, South Africa	ICAS 2010-1.7.4 SMART UAV RESEARCH PROGRAM STATUS UPDATE: ACHIEVEMENT OF TILT-ROTOR TECHNOLOGY DEVELOPMENT AND VISION AHEAD O. S. Ahn, J. M. Kim, C. H. Kim Korea Aerospace Research Institute, Korea	ICAS 2010-1.7.5 ACQUIRING TEAM-LEVEL PERFORMANCE FOR UAS MISSION S. Lacheze, V. Ferrari CRaA (French Air Force), France
ICAS 2010-2.7 Aerodynamic Optimization: Chairs: J. Rokicki, WUT, PL; TBD				
ICAS 2010-2.7.1 FAST AERODYNAMIC DESIGN TECHNOLOGIES V. V. Vyshinsky, E. A. Dorofeev, Y. N. Sviridenko* Moscow Institute of Physics and Technology; *TsAGI, Russian Federation	ICAS 2010-2.7.2 DIRECT OPTIMIZATION METHOD AND AERODYNAMIC SHAPE DESIGN AT SUPERSONIC FLIGHT CONDITIONS S. A. Takovitski TsAGI, Russian Federation	ICAS 2010-2.7.3 AERODYNAMIC OPTIMIZATION OF COAXIAL ROTOR IN HOVER AND AXIAL FLIGHT O. Rand, V. Khromov Technion, Israel	ICAS 2010-2.7.4 MULTIOBJECTIVE OPTIMIZATION PROCEDURE FOR THE WING DESIGN AT CRUISE AND LOW-SPEED CONDITIONS M. A. Gubanova TsAGI, Russian Federation	ICAS 2010-2.7.5 MULTIPOINT MULTI-OBJECTIVE OPTIMIZATION DESIGN OF LOW-REYNOLDS-NUMBER AIRFOILS FOR THE PROPELLER OF LOW-DYNAMIC AIRCRAFT R. Ma, B. Zhong*, D. Drikakis*, et al Beihang Univ./Fluid Mechanics Institute, China; *Cranfield Univ., UK
ICAS 2010-3.7 Flow Control II: Chairs: A. Baron, Politecnico di Milano, IT; I. Peltzer, TU Berlin, DE				
ICAS 2010-3.7.1 NUMERICAL SIMULATION OF FLOW CONTROL BY SYNTHETIC JET ACTUATION E. van der Weide, H. de Vries, H. Hoeijmakers Univ. of Twente, Netherlands	ICAS 2010-3.7.2 APPLICATION OF TANGENTIAL JET BLOWING FOR SUPPRESSION OF SHOCK-INDUCED FLOW SEPARATION AT TRANSONIC SPEEDS A. V. Petrov, V. D. Bokser, G. G. Sudakov, et al TsAGI, Russian Federation	ICAS 2010-3.7.3 SEPARATION POSTPONEMENT BY MEANS OF PERIODIC SURFACE EXCITATION L. Veldhuis, M. van der Jagt TU Delft, Netherlands	ICAS 2010-3.7.4 DYNAMIC ROUGHNESS AS A MEANS OF LEADING EDGE FLOW CONTROL P. D. Gali, W. W. Huebsch West Virginia Univ., USA	ICAS 2010-3.7.5 AN INNOVATIVE TECHNIQUE FOR FLOW SEPARATION CONTROL X. Ming, Y. Bai, L. Zhou Nanjing Univ. of Aeronautics and Astronautics, China
ICAS 2010-4.7 Operations and Climate: Chairs: C. Goodchild, University of Glasgow, UK; TBD				
ICAS 2010-4.7.1 SIMULATION AND OPTIMIZATION METHODS FOR ASSESSING THE IMPACT OF AVIATION OPERATIONS ON THE ENVIRONMENT B. Sridhar, N. Chen*, H. Ng* NASA Ames; *Univ. of California, Santa Cruz, USA	ICAS 2010-4.7.2 POTENTIAL OF OPERATIONAL CHANGES TO MITIGATE ENVIRONMENTAL IMPACTS OF AVIATION T. G. Reynolds, K. B. Marais*, R. J. Hansman MIT; *Purdue Univ., USA	ICAS 2010-4.7.3 AIRLINE ROUTE NETWORK DESIGN CONSIDERING ENVIRONMENTAL AND ECONOMIC TARGETS M. Braun, A. Koch, K. Dahlmann, et al DLR, Germany	ICAS 2010-4.7.4 ENVIRONMENTAL BENEFIT OF NEW CONTINUOUS DESCENT OPERATIONS AT LOS ANGELES INTERNATIONAL AIRPORT S. Liu, W. White, R. Nehl FAA, USA	ICAS 2010-4.7.5 ATMOSPHERIC UNCERTAINTY ON CLEAN TAKE-OFF FLIGHT PATHS FOR CIVIL AIRCRAFT R. Torres Airbus, France
ICAS 2010-5.7 Parameter Identification: Chairs: V. Malyshev, MAI, RU; M. Sato, JAXA, JP				
ICAS 2010-5.7.1 REAL-TIME SYSTEM IDENTIFICATION OF AIRCRAFT DYNAMICS USING TIME-FREQUENCY WAVELET ANALYSIS M. Naruoka, T. Hino, T. Tsuchiya Univ. of Tokyo, Japan	ICAS 2010-5.7.2 IDENTIFICATION OF PARAMETERS DESCRIBING UNSTEADY AERODYNAMICS OF AN AEROBATIC AIRPLANE B. Gáti, F. Holzapfel* Budapest Univ. of Technology and Economics, Hungary; *TU Munich, Germany	ICAS 2010-5.7.3 DEVELOPMENT OF AN ONLINE PARAMETER ESTIMATION CAPABILITY FOR AIRCRAFT P. -D. Jameson Cranfield Univ., UK	ICAS 2010-5.7.4 ANALYTICAL NONLINEAR ANALYSIS METHODOLOGY FOR REDUCED AIRCRAFT DYNAMICAL SYSTEMS A. Omran, B. Newman Old Dominion Univ., USA	ICAS 2010-5.7.5 POSE ESTIMATION OF AN LOW ALTITUDE AERIAL VEHICLE USING QUATERNION THEORY AND KALMAN FILTER G. Anitha, S. Aravindan Madras Inst. of Technology, India

ICAS 2010-6.7 Human/Machine Modeling: Chairs: H. Andersson, Saab AB, SE; TBD			
ICAS 2010-6.7.1 A VERSATILE SIMULATION ENVIRONMENT OF FTC ARCHITECTURES FOR LARGE TRANSPORT AIRCRAFT D. Ossmann, S. Hecker, A. Varga DLR, Germany	ICAS 2010-6.7.2 DEVELOPMENT OF A PILOT MODEL SUITABLE FOR THE SIMULATION OF LARGE AIRCRAFT M. M. Lone, A. K. Cooke Cranfield Univ., UK	ICAS 2010-6.7.3 DEVELOPMENT OF PILOT MODELING AND ITS APPLICATION TO MANUAL CONTROL TASKS A. Efremov, V. Alexandrov, A. Koshelenko, et al Moscow Aviation Institute, Russian Federation	ICAS 2010-6.7.5 EFFECT OF CONTROL ALLOCATION ON PILOT-INDUCED OSCILLATION (PIO) OF AIRCRAFTS WITH MULTIPLE CONTROL EFFECTORS Y. Liu, S. Yan, Z. Gao NPU, China
ICAS 2010-7.7 Through Life Support: Chairs: O. Candelli, SAAB, SE; K. Iijima, SJAC, JP			
ICAS 2010-7.7.1 INVITED SERVICE THINKING STYLES IN THE SUSTAINMENT OF COMPLEX AERONAUTICAL PRODUCTS L. Wood Univ. of Adelaide, Australia	ICAS 2010-7.7.2 THE ADAPTIVE POTENTIAL OF THE PRIMARY SHOP PROCESS OF KLM ENGINE SERVICES IN PROVIDING LIFE CYCLE VALUE FOR THE CRJ-900 M. C. W. Van Loon, R. Kroon*, R. Curran TU Delft; *KLM Engine Services, Netherlands	ICAS 2010-7.7.3 BENEFIT COMPARISON BETWEEN DIFFERENT MAINTENANCE PROCEDURES IN ORDER TO MAKE AN INFORMED DECISION N. de Oliveira TU Delft, Netherlands	ICAS 2010-7.7.5 EMERGENCE OF THE INTELLIGENT SYSTEMS SUPPORT SUPPLIER L. Webb, C. Bil RMIT Univ., Australia
ICAS 2010-8.7 Fatigue: Chairs: M. Rodzewicz, TU Warzaw, PL; G. Sala, Politecnico di Milano, IT			
ICAS 2010-8.7.1 CORROSION TREATMENTS AND FATIGUE OF AIRCRAFT STRUCTURAL JOINTS A. Jaya, U. Tiong, R. Mohammed, et al RMIT Univ., Australia	ICAS 2010-8.7.2 EFFECT OF PITTING CORROSION ON FATIGUE AND CRACK GROWTH BEHAVIOR OF BOTH ALUMINUM ALLOY 2024-T62 AND ITS PANEL J. Liu, B. Chen, X. Ye, et al Beijing Institute of Aeronautical Materials, China	ICAS 2010-8.7.3 PLATFORM SUSTAINMENT - LESSONS LEARNT ON AN AGEING AIRCRAFT P. van Staden Boeing Defence Australia Ltd., Australia	ICAS 2010-8.7.5 MEASUREMENT OF THE STRAIN AND BENDING MOMENT ON THE WING OF A AIRCRAFT AND USING OF THESE FINDINGS FOR FATIGUE TEST I. Jebacek Brno Univ. of Technology, Czech Republic
ICAS 2010-9.7 Aeroelasticity II: Chairs: M. Zichenkov, TsAGI, RU; M. Spieck, DLR, DE			
ICAS 2010-9.7.1 AEROELASTIC SCALING LAWS WITH CONSIDERATIONS TO THE DESIGN OF AN EXPERIMENTAL SLENDER WING MODEL E. Cestino, G. Frulla, P. Marzocca* Politecnico di Torino, Italy, *Clarkson Univ., USA	ICAS 2010-9.7.2 INNOVATIVE AIRCRAFT AEROLASTIC MODELLING AND CONTROL E. Cestino, G. Frulla, M. Battipede, et al Politecnico di Torino, Italy	ICAS 2010-9.7.3 STRENGTH/AEROELASTICITY RESEARCH AT MULTIDISCIPLINARY STRUCTURAL DESIGN OF HIGH ASPECT RATIO WING S. Kuzmina, V. Chedrik, F. Ishmuratov TsAGI, Russian Federation	ICAS 2010-9.7.5 APPLICATION OF COMPUTATIONAL AEROELASTICITY TO DESIGN OF HELICOPTER ROTOR BLADES M. Righi Zurich Univ. of Applied Sciences, Switzerland
ICAS 2010-10.7 Safety & Systems: Chairs: J.-V. Legrand, SAFRAN, FR; TBD			
ICAS 2010-10.7.1 DESIGN AND PILOT EVALUATION OF A DIRECTIVE RUNWAY CONFLICT ALERTING AND RESOLUTION SYSTEM D. Zammit-Mangion, A. Sammut*, B. Zammit*, et al Cranfield Univ., UK; *Univ. of Malta, Malta	ICAS 2010-10.7.2 PILOT LANDING CONTROL ANALYSIS USING NEURAL NETWORKS UNDER SEVERE FLIGHT CONDITIONS R. Mori, Y. Yamaguchi*, S. Suzuki* ENRI; *Univ. of Tokyo, Japan	ICAS 2010-10.7.3 THE MULTI-COLLISION DISPLAY: RELATIVE POSITION VECTORS FOR THE DETECTION OF CONFLICTING AIR TRAFFIC S. Gaukrödger, B. L. W. Wong, B. Fields, et al; Middlesex Univ., UK	ICAS 2010-10.7.5 DEVELOPMENT OF A LONG RANGE AIRBORNE DOPPLER LIDAR H. Inokuchi, H. Tanaka*, T. Ando* JAXA; *Mitsubishi Electric Corporation, Japan
ICAS 2010-11.7 Separation Management: Chairs: S. Nagaoka, ENRI, JP; TBD			
ICAS 2010-11.7.1 MODELING AND SIMULATION OF IN-TRAIL FOLLOWING AIRCRAFT UNDER AIRBORNE SEPARATION ASSISTANCE SYSTEM E. Itoh, M. Everdijl*, G. J. Bakker*, et al ENRI, Japan; *NLR, Netherlands	ICAS 2010-11.7.2 FUNCTIONAL ALLOCATION WITH AIRBORNE SELF-SEPARATION EVALUATED IN A PILOTTED SIMULATION D. WING, J. MURDOCH NASA Langley, USA	ICAS 2010-11.7.3 SEPARATION MANAGEMENT APPROACHES DURING PERIODS OF COMMUNICATION FAILURE S.-J. Fan, J.-J. Ford, L.F. Gonzalez ARCAA, Queensland Univ. of Technology, Australia	ICAS 2010-11.7.5 AUTOMATED AIRCRAFT TRACKING AND CONTROL IN CLASS G AIRSPACE R. Baumeister, i. Estkowski, t. Spence* The Boeing Company, USA; *Univ. of Sheffield, Switzerland

**Wednesday September 22<sup>nd</sup> Afternoon Sessions**

<p><b>13:30 – 14:15</b></p> <p><b>ICAS HENRI FABRE LECTURE FOR INNOVATION IN AERONAUTICS (INVITED) - Chairman: M Scott, Australia</b>  <b>Innovation Award Recipient: J. -C. Hironde, Dassault, France: INNOVATIVE SHAPE AND CONTROL CONFIGURATIONS (ICAS 2010-0.6)</b></p>		<p><b>15:30 – 16:00</b></p>	<p><b>16:30 – 17:00</b></p>	<p><b>17:00 – 17:30</b></p>	<p><b>17:30 – 18:00</b></p>	<p><b>18:00 – 18:30</b></p>	
<p><b>ICAS 2010-1.8 Air Launched Space Systems:</b>  <b>Chairs: C. Stavrinidis, ESA, NL</b></p>							
<p>ICAS 2010-1.8.1                  AIR LAUNCH INTERNATIONAL AEROSPACE PROJECT                  A. Karpov                  ALAC, Russian Federation</p>	<p>ICAS 2010-1.8.2                  AIRCRAFT MEANS APPLICATION FOR SUBORBITAL TOURIST FLIGHTS AND COMMERCIAL SATELLITES LAUNCHING INTO AN ORBIT                  E. Dudar, A. Bruk*                  NPO Moyniya, *Miyasishchev Design Bureau, Russian Federation</p>	<p>ICAS 2010-1.8.3                  PROPOSAL FOR ONE-TIME USE WINGS FOR SMALL FIXED-WING SPACE SHUTTLES                  M. Tanaka                  Tsutsumi Tech, Japan</p>	<p>ICAS 2010-1.9.1                  PAPER TITLE TBD                  SPEAKER TBD</p>	<p>ICAS 2010-1.9.2                  PAPER TITLE TBD                  SPEAKER TBD</p>	<p>ICAS 2010-1.9.3                  PAPER TITLE TBD                  SPEAKER TBD</p>	<p>ICAS 2010-1.9.4                  PAPER TITLE TBD                  SPEAKER TBD</p>	
<p><b>ICAS 2010-2.8 Supersonic Aerodynamics:</b>  <b>Chairs: T. Ohnuki, JAXA, JP; I. Egorov, TsAGI, RU</b></p>							
<p>ICAS 2010-2.8.1                  EXTENSION OF BUSEMANN BIPLANE THEORY TO THREE DIMENSIONAL WING FUSELAGE CONFIGURATION                  K. Matsushima, D. Maruyama*                  Univ. of Toyama; *Tohoku Univ., Japan</p>	<p>ICAS 2010-2.8.2                  CONCLUDING REPORT OF FLIGHT TEST DATA ANALYSIS ON THE SUPERSONIC EXPERIMENTAL AIRPLANE OF NEXT PROGRAM BY JAXA                  K. Yoshida, D.-Y. Kwak, N. Tokugawa, et al; JAXA, Japan</p>	<p>ICAS 2010-2.8.3                  AERODYNAMIC SHAPE OPTIMIZATION OF HYPERSONIC AIRLINERS CONSIDERING MULTI-DESIGN-POINT                  A. Ueno, H. Taguchi, K. Suzuki*                  JAXA; *Univ. of Tokyo, Japan</p>	<p><b>ICAS 2010-2.9 Flapping Wing Aerodynamics:</b>  <b>Chairs: R. Rzakowski, IMP, PL; TBD</b></p>				
<p>ICAS 2010-3.8.1                  NUMERICAL ANALYSIS OF A ROTATING CYLINDER WITH SPANNING DISCS                  N. Thouault, C. Breitsamter, J. Seifert*, et al                  TU Munich; *Bauhaus Luftfahrt e. V., Germany</p>	<p><b>ICAS 2010-3.8 Fluid Dynamics:</b>  <b>Chairs: J.-J. Thibert, ONERA, FR</b></p>		<p>ICAS 2010-3.8.2                  AERODYNAMIC EFFICIENCY STUDY UNDER THE INFLUENCE OF HEAVY RAIN VIA TWO-PHASE FLOW APPROACH                  T. Wan, S.P. Pan                  Tamkang Univ., Taiwan, China</p>	<p>ICAS 2010-3.9.1                  MODELLING AND CONTROL OF CAVITY INSTABILITIES AND NOISE                  K. Knowles, B. Khanal, D. Bray, et al                  Cranfield Univ., UK</p>	<p>ICAS 2010-3.9.2                  SIMULATION OF NOISE GENERATED BY FLOWS OVER AIRFOILS USING A HIGH-ORDER IMMERSED BOUNDARY METHOD                  R. Lauterjung Queiroz, M. A. Ortega, R. F. M. Bobenrieth Misericordia*, et al                  ITA; *Univ. de Brasilia, Brazil</p>	<p>ICAS 2010-3.9.3                  ON THE PROPAGATION OF SOUND IN A HIGH-SPEED NON-ISOTHERMAL SHEAR FLOWS                  L. M. B. C. Campos, M. H. Kobayashi                  CCTAE/IST, Portugal</p>	<p>ICAS 2010-3.9.4                  FLOW INSTABILITY AROUND A 2D AIRFOIL INDUCED BY ACOUSTIC DISTURBANCES AT LOW REYNOLDS NUMBERS                  T. Atobe, T. Ikeda                  JAXA, Japan</p>
<p><b>ICAS 2010-4.8 Supersonic/Hypersonic Technologies I:</b>  <b>Chairs: H. Heim, General Electric, UK</b></p>							
<p>ICAS 2010-4.8.1                  DESIGN OF TOP MOUNTED SUPERSONIC INLET FOR SILENT SUPERSONIC TECHNOLOGY DEMONSTRATOR S3TD                  Y. Watanabe, A. Murakami                  JAXA, Japan</p>	<p>ICAS 2010-4.8.2                  EXPERIMENTAL INVESTIGATION ON MIXING ENHANCEMENT MECHANISMS OF RAMP INJECTORS IN SUPERSONIC FLOW                  W.D. Liu, S.P. Zhang                  National Univ. of Defense Technology, China</p>	<p>ICAS 2010-4.8.3                  DETECTION OF LAMINAR-TURBULENT TRANSITION IN A FREE-FLIGHT EXPERIMENT USING THERMOGRAPHY AND HOT-FILM ANEMOMETRY                  P. Schreivogel                  Univ. of Dresden, Germany</p>	<p><b>ICAS 2010-4.9 Supersonic/Hypersonic Technologies II:</b>  <b>Chairs: E. Prisell, FMV, SE; TBD</b></p>				
<p>ICAS 2010-4.9.1                  MINIMIZING ENVIRONMENTAL IMPACT OF CIVIL SUPERSONIC AC BY VARIABLE CYCLE ENGINES AND IMPLICATIONS FOR CERTIFICATION                  M. Plohr                  DLR, Germany</p>	<p>ICAS 2010-4.9.2                  GSP PERFORMANCE SIMULATION OF AN IDEAL MIXER-EJECTOR TURBOFAN ENGINE FOR A SUPERSONIC BUSINESS JET                  E.R. Rademaker                  NLR, Netherlands</p>	<p>ICAS 2010-4.9.3                  HYPERSONIC INTAKE DESIGN AND OFF-DESIGN PERFORMANCE                  A.M.Z. Almeida                  Inst. of Aviation Engineering and Technology, Egypt</p>	<p><b>ICAS 2010-5.8 Emissions:</b>  <b>Chairs: F. Haselbach, Rolls-Royce, UK</b></p>				
<p>ICAS 2010-5.8.1                  CRUISE NOX EMISSION REDUCTION BY THE RATIONAL CHOICE OF SUPERSONIC BUSINESS JET ENGINE DESIGN VARIABLES                  A. Mirzoyan                  CIAM, Russian Federation</p>	<p>ICAS 2010-5.8.2                  COMPREHENSIVE ANALYSIS OF MECHANISMS OF GASEOUS AND PARTICULATE POLLUTANT FORMATION IN ELEMENTS OF GAS TURBINE ENGINE AND IN THE EXHAUST PLUME                  A. Starik, A. Savelyev, N. Thova                  CIAM, Russian Federation</p>	<p>ICAS 2010-5.8.3                  CHEMICAL IMPACT OF AVIATION IN AIRPORTS AREAS                  W. Ghedrafi                  ONERA, France</p>	<p><b>ICAS 2010-5.9 : ISABE Session</b>  <b>Chairs: TBD</b></p>				
<p>ICAS 2010-5.9.1                  PAPER TITLE TBD                  SPEAKER TBD</p>	<p>ICAS 2010-5.9.2                  PAPER TITLE TBD                  SPEAKER TBD</p>	<p>ICAS 2010-5.9.3                  PAPER TITLE TBD                  SPEAKER TBD</p>	<p><b>ICAS 2010-5.9.4</b>                  PAPER TITLE TBD                  SPEAKER TBD</p>				

<p><b>ICAS 2010-6.8 Flight Modeling:</b> Chairs: K. Rein-Weston, The Boeing Company, US</p> <p>ICAS 2010-6.8.1 MODEL BASED AIRCRAFT CONTROL SYSTEM DESIGN AND SIMULATION C. C. Venkata, M. Tarkian, R. C. M. Weisberg, A. Nilsson Saab AB, Sweden</p> <p>ICAS 2010-6.8.2 A DYNAMIC REAL TIME MODEL FOR AIR-TO-AIR REFUELING P. Weisberg, A. Nilsson Saab AB, Sweden</p> <p>ICAS 2010-6.8.3 HIGH ANGLE OF ATTACK FLIGHT CHARACTERISTICS OF A WING-IN-PROPELLER-SLIPSTREAM AIRCRAFT D. Kubo, K. Muraoka, N. Okada JAXA, Japan</p>	<p><b>ICAS 2010-7.8 Systems Analysis:</b> Chairs: O. Reichert, Sagem, FR</p> <p>ICAS 2010-7.8.1 WHEN THE OBVIOUS IS NOT OBVIOUS: USING MULTIREOLUTION MODELING TO DISCOVER HIDDEN FACTORS IN DECISION MAKING J. N. Nixon, P. T. Blitgen Integrative Engineering: *BAE Systems, USA</p> <p>ICAS 2010-7.8.2 CREATING SUCCESSFUL CABIN PRODUCTS THROUGH OPEN INNOVATION I. Wuggetzer Airbus Operations GmbH, Germany Saab AB, Sweden</p> <p>ICAS 2010-7.8.3 ENGINEERING RESEARCH AND THEORY APPLICATIONS ON THE ANALYSIS AND EVALUATION FOR DEVELOPMENT RISK OF AIRCRAFT J.X. Xie, B.T. Song, W.P. Shi China Aerospace Engineering Consultation Center: *NPU, China</p>	<p><b>ICAS 2010-8.8 Smart Structures:</b> Chairs: D. Ewins, University of Bristol, UK</p> <p>ICAS 2010-8.8.1 SELECTIVELY DEFORMABLE STRUCTURES FOR DESIGN OF ADAPTIVE WINGS G. A. Amiravants, V. A. Malyutin, V. P. Timoshin, et al TsAGI, Russian Federation</p> <p>ICAS 2010-8.8.2 EXPERIMENTAL TESTING OF AN ADAPTIVE LEADING EDGE HIGH LIFT DEVICE FOR COMMERCIAL TRANSPORTATION AIRCRAFTS M. Kintscher, H. P. Monner DLR, Germany</p> <p>ICAS 2010-8.8.3 PRESSURE ADAPTIVE HONEYCOMB: A NOVEL CONCEPT FOR MORPHING AIRCRAFT STRUCTURES R. Vos, R. M. Barrett TU Delft, Netherlands; *The Univ. of Kansas, USA</p>	<p><b>ICAS 2010-9.8 Experimental Investigations:</b> Chairs: H. Climent, EADS CASA, ES</p> <p>ICAS 2010-9.8.1 DYNAMIC AND QUASI-STATIC CRUSH TESTING OF CLOSED CARBON/FIBRE/EPOXY ELEMENTS A. Jackson, M. David, A. J. Gunnion, et al Univ. of New South Wales, Australia; *DLR, Germany; **CRC-ACS Ltd, Australia</p> <p>ICAS 2010-9.8.2 CRASHWORTHINESS ASSESSMENT IN AIRCRAFT DITCHING INCIDENTS S. Shah, J. Bayandor, J. Watmuff RMIT Univ., Australia</p> <p>ICAS 2010-9.8.3 THE DEVELOPMENT OF 3 DOF WING SECTION MODEL FOR AEROELASTIC AND ACTIVE CONTROL WIND TUNNEL EXPERIMENTAL TESTS R. Adhy Sasongko, L. Gunawan Institute of Technology Bandung, Indonesia</p>	<p><b>ICAS 2010-10.8 Safety Tools II:</b> Chairs: A. Mauritz, EADS Innovation Works, DE</p> <p>ICAS 2010-10.8.1 AVIATION ACCIDENTS AETIOLOGY FROM CATASTROPHE THEORY POINT OF VIEW K. Sibiriski, M. Lasek Air Force Institute of Technology; *The State Commission of Aircraft Accidents Investigation, Poland</p> <p>ICAS 2010-10.8.2 EXPERIMENTAL STUDY ON DECISION MAKING OF JET AIRLINER PILOTS -A CASE OF WIND SHEAR- A. Kono, H. Hatake, K. Rinole Univ. of Tokyo; *All Nippon Airways Co., Ltd., Japan</p> <p>ICAS 2010-10.8.3 PC TOOL DEVELOPMENT FOR SIMULATING FLIGHT MANAGER PROCESS OF JET AIRLINER PILOTS A. Tezuka, H. Hatake, K. Rinole Waseda Univ.; *All Nippon Airways; **Univ. of Tokyo, Japan</p>	<p><b>ICAS 2010-11.8 Delays:</b> Chairs: H. Pfander, Georgia Tech., US</p> <p>ICAS 2010-11.8.1 AIR TRANSPORTATION DELAY IMPLICATIONS OF A LOCAL GPS OUTAGE IN THE U.S.: A SIMULATION STUDY J. Post, K. Noonan, J. Barrer FAA; *The MITRE Corporation, USA</p> <p>ICAS 2010-11.8.2 EVALUATING THE BENEFIT OF AIRCRAFT OPERATORS BY MARGINAL REDUCTION OF GROUND OR AIRBORNE DELAYS M. Kreuz DLR, Germany</p> <p>ICAS 2010-11.8.3 THE POTENTIAL FOR AN AIR-TAXI BUSINESS IN JAPAN'S SKIES K. Izumi JAXA, Japan</p>
<p><b>ICAS 2010-6.9 Flight Testing:</b> Chairs: K. Muraoka, JAXA, JP; TBD</p> <p>ICAS 2010-6.9.1 A METHOD TO VALIDATE WAKE VORTEX ENCOUNTER MODELS FROM FLIGHT TEST DATA D. Fischerberg DLR, Germany</p> <p>ICAS 2010-6.9.2 IEP: A MULTIDISCIPLINARY FLYING TESTED FOR NEW AIRCRAFT CONCEPTS P. Schmoligruuber, H. W. Jentink ONERA, France; *NLR, Netherlands et al</p> <p>ICAS 2010-6.9.3 DEVELOPMENT OF AN LIGHT WEIGHT AND AFFORDABLE DATA ACQUISITION SYSTEM FOR MODEL AIRCRAFT FLIGHT TESTING I. Staack, D. Lundström, K. Annadori, et al Linköping Univ., Sweden</p> <p>ICAS 2010-6.9.4 IMPROVING THE DIRECTIONAL STABILITY OF TAILLESS AIRCRAFT USING MINIATURE TRAILING EDGE EFFECTORS S.-H. Yoon, Hak-Tae Lee*, David Hyunchul Shim KAIST, Korea; *HAAKWORKS, USA</p>	<p><b>ICAS 2010-7.9 Systems Design &amp; Modeling:</b> Chairs: M. Nordlund, Emerson Tank Radar, SE; TBD</p> <p>ICAS 2010-7.9.1 INVITED SYSTEMS DESIGN AND MODELING - A VISUAL ANALYTICS APPROACH D. Mavris Georgia Institute of Technology, USA</p> <p>ICAS 2010-7.9.2 CONFIGURATION MANAGEMENT OF MODELS FOR AIRCRAFT SIMULATION H. Andersson, S. Steinkellner, H. Erlandsson, et al Saab AB, Sweden</p> <p>ICAS 2010-7.9.3 A ROUTE TOWARD VIRTUAL CERTIFICATION OF AIRCRAFT O. H. Tabaste MSC-Software, France</p>	<p><b>ICAS 2010-8.9 Materials &amp; Composites II:</b> Chairs: E. Ingram, Lockheed Martin, US; TBD</p> <p>ICAS 2010-8.9.1 OPTIMAL WEIGHT DESIGN OF LAMINATED COMPOSITE PANELS WITH DIFFERENT STIFFENERS UNDER BUCKLING LOADS E. Barkanov, S. Gluhikh, O. Ozolinsh, et al Riga Technical Univ., Latvia</p> <p>ICAS 2010-8.9.2 BUCKLING OF FUNCTIONALLY GRADED PLATES (FGP) UNDER SHEAR AND IN-PLANE DIRECTIONAL LOADING M. Badaly, M. A. Kouchakzadeh Sharif Univ. of Technology, Iran</p> <p>ICAS 2010-8.9.3 THERMO-MECHANICAL COUPLING IN MULTILAYERED PLATES AND SHELLS E. Carrera, S. Brischetto Politecnico di Torino, Italy</p> <p>ICAS 2010-8.9.4 CHARACTERISATION OF THREE-DIMENSIONAL ELEMENT PREFORMS BUILT FROM MICROCT SCANS L. P. Dijkic, I. Hershberg*, D. H. Moltenhauer** Univ. of New South Wales; *CRC-ACS Ltd, Australia; **AFRL-WFAB, USA</p>	<p><b>ICAS 2010-9.9 Multidisciplinary Analysis:</b> Chairs: TBD; TBD</p> <p>ICAS 2010-9.9.1 MANOEUVRE-LOADS COMPUTATIONS USING CFD-BASED STATIC AEROELASTIC SIMULATIONS FOR MULTIPLE STORE CONFIGURATIONS B. Prananta, R. Veul, O. Boelens NLR, Netherlands</p> <p>ICAS 2010-9.9.2 NUMERICAL SIMULATION OF WING FLUTTER BASED ON MULTIGRID METHOD Z. Zhu, Z. D. Qiao, W. P. Song NPU, China</p> <p>ICAS 2010-9.9.3 AEROTHERMODYNAMIC ANALYSIS OF A CAPSULE VEHICLE FOR MANNED EXPLORATION MISSIONS TO MARS A. Viviani, G. Pezzella* Seconda Univ. di Napoli (SUN), Italy; *CIRA, Italy</p> <p>ICAS 2010-9.9.4 NUMERICAL SIMULATION OF FLOW FIELDS IN LARGE-SCALE SEGMENTED-TYPE ARC HEATERS Y. Takahashi, H. Kihara, K. Abe Kyushu Univ., Japan</p>	<p><b>ICAS 2010-10.9 Security &amp; Safety Equipment:</b> Chairs: J.-C. Derrien, SAFRAN, FR; TBD</p> <p>ICAS 2010-10.9.1 PASSIVATION OF MISUSED AIRCRAFT TO PROTECT PASSENGERS, AIRPORTS AND INFRASTRUCTURE D.-R. Schmitt, H. Tobben, M. Philippens* AT-One (DLR), Germany; *42 Solutions, Netherlands</p> <p>ICAS 2010-10.9.2 DEVELOPMENT OF A NOVEL CONCEPT OF EXPLOSION-RESISTANT CARGO CONTAINER FOR NARROW-BODY AIRCRAFTS D. Zangani, S. Ambrosetti, P. Frantiza*, et al D'Appolonia S.p.A., Italy; *STFI, Germany</p> <p>ICAS 2010-10.9.3 A TRANSRAURAL BEAMFORMER AS ADVANCED AIR TRAFFIC CONTROL COMMUNICATION SET UP M. Guldenschuh, A. Sontacchi, H. Hering Univ. of Music and Performing Arts Graz, Austria; *Eurocontrol Experimental Center, France</p> <p>ICAS 2010-10.9.4 THE EFFECT OF LASER SAFETY GLASSES ON COLOUR DIFFERENTIATION FOR A DIGITAL COCKPIT DISPLAY S. O'Byrne, M. Copeland, R. Lewis, et al Univ. of New South Wales, Australia</p>	<p><b>ICAS 2010-11.9 Airport II:</b> Chairs: C. Michaut, ONERA, FR; TBD</p> <p>ICAS 2010-11.9.1 A HOLISTIC APPROACH TO DEFINITION AND ASSESSMENT OF AIRPORT FLEXIBILITY AND PREDICTABILITY F. J. Vormer, A. Marsden, V. Duong EUROCONTROL Experimental Centre, France</p> <p>ICAS 2010-11.9.2 DEVELOPMENT OF AN OPTIONS-BASED APPROACH TO THE SELECTION OF AIRPORT CAPACITY-ENHANCING TECHNOLOGY PORTFOLIOS O. J. Pinon, E. Garcia, D. N. Mavris Georgia Institute of Technology, USA</p> <p>ICAS 2010-11.9.3 HIGHER-LEVEL SERVICES OF AN ADVANCED SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEMS (A-SMGCS) M. Roeder, J. Jakobi, M. Biella DLR, Germany</p> <p>ICAS 2010-11.9.4 FAST: FUTURE AIRPORT STRATEGIES L. Laplace, N. Lenoir*, B. Badaniq** M3 SYSTEMS; *The French Civil Aviation Univ. (ENAC), France; **Univ. of Zilina, Slovakia</p>

Thursday September 23 <sup>rd</sup> Morning Sessions			
GENERAL LECTURE IV (INVITED) - Chairman: F. Abbink, Netherlands P. Ky, Eurocontrol/SESAR, Belgium; V. Cox, FAA, US; FUTURE AIR TRAFFIC MANAGEMENT – SAFE AND EFFICIENT (ICAS 2010-0.7 and ICAS2010-0.8)			
BREAK			
09:30 – 10:00	10:30 – 11:00	11:00 – 11:30	11:30 – 12:00
12:00 – 12:30			
ICAS 2010-1.10 MDO and its application: Chairs: M. Spieck, DLR, DE; K. C. Wong, AU			
ICAS 2010-1.10.1 THE NEW MDO FRONTIER, THE MULTIDISCIPLINARY DESIGN ORGANIZATION CHALLENGE M. Ravachol, P. Thomas Dassault-Aviation, France	ICAS 2010-1.10.2 MULTI-DISCIPLINARY OPTIMISATION CAPABILITY DEVELOPMENT FOR THE PRELIMINARY DESIGN PHASE R. Johnson Airbus, France	ICAS 2010-1.10.3 MULTI-DISCIPLINARY OPTIMIZATION INCLUDING ENVIRONMENTAL ASPECTS APPLIED TO SUPERSONIC AIRCRAFTS J. Brezillon, G. Carrier*, M. Laban** DLR, Germany; *ONERA, France; **NLR, Netherlands	ICAS 2010-1.10.4 COOPERATION AND COMPETITION IN A MULTIDISCIPLINARY OPTIMIZATION FOR AERONAUTICAL DESIGN J. A. Désidéri, R. Duvigneau INRIA, France
ICAS 2010-2.10 Aerodynamic Configuration Design: Chairs: I. Kroo, Stanford Univ., UK; Y. Chen, Comac, CN			
ICAS 2010-2.10.1 DESIGN, WIND TUNNEL TESTING, AND VERIFICATION OF CAL POLY'S 10 FOOT SPAN HYBRID WING-BODY LOW NOISE CESTOL AIRCRAFT K. Jameson, D. Marshall, R. gaeta*, et al California Polytechnic State Univ.; *Georgia Tech Research Institute, USA	ICAS 2010-2.10.2 OVER-THE-WING-NACELLE-MOUNT CONFIGURATION FOR NOISE REDUCTION D. Sasaki, R. Yoneta, K. Nakahashi Tohoku Univ., Japan	ICAS 2010-2.10.3 REVIEW OF RECENT DEVELOPMENTS AND FUTURE CHALLENGES FOR THE SIMULATION-BASED DESIGN OF AIRCRAFT F. Chalot, M. Mallet, G. Rogé Dassault Aviation, France	ICAS 2010-2.10.4 AERODYNAMIC INVESTIGATIONS ON AN AEROELASTOFLEXIBLE MORPHING WING CONFIGURATION B. Beguin, C. Breitsamter, N. Adams TU Munich, Germany
ICAS 2010-3.10 Boundary Layers: Chairs: L. De Luca, Università di Napoli "Federico II", IT; C. Stemmer, TU München, DE			
ICAS 2010-3.10.1 DIRECT TRANSITION TO TURBULENCE IN A 3D BOUNDARY LAYER B. Viaud, E. Serre*, J. M. Chomaz** CreA (French Air Force); *M2P2 (CNRS); **LadHyX (CNRS), France	ICAS 2010-3.10.2 STRUCTURE OF HIGH REYNOLDS NUMBER ADVERSE PRESSURE GRADIENT TURBULENT BOUNDARY LAYER M. Tutkun, W. K. George*, M. Stanislas** FFI, Norway; *Chalmers Univ., Sweden; **UMR CNRS, France	ICAS 2010-3.10.3 EXPERIMENTAL AND NUMERICAL STUDY OF THE INTERACTION BETWEEN T-S WAVES AND AN ISOLATED WALL ROUGHNESS I. B. de Paula, W. Würz, L. F. Souza* Univ. Stuttgart, Germany; *Univ. de Sao Paulo, Brazil	ICAS 2010-3.10.5 THE UNSTEADY PRESSURE SIGNATURE OF TRANSONIC SHOCK WAVE/BOUNDARY LAYER INTERACTION S. Pirozzoli, M. Bernardini, F. Grasso Univ. of Rome "La Sapienza", Italy
ICAS 2010-4.10 Climate Challenges & Trade-offs: Chairs: B. Glover, The Boeing Company, US; TBD			
ICAS 2010-4.10.1 INVITED Paper title TBD R Gardner Manchester Metropolitan University, UK	ICAS 2010-4.10.2 ASSESSING THE CO2 CHALLENGE FACING AVIATION J. I. Hileman, E. de la Rosa Blanco, P. A. Bonnefoy, et al MIT, USA	ICAS 2010-4.10.3 OPERATIONAL IMPLICATIONS OF CRUISE SPEED REDUCTIONS FOR NEXT GENERATION FUEL EFFICIENT SUBSONIC AIRCRAFT A. Bonnefoy, J. Hansman MIT, USA	ICAS 2010-4.10.4 DEVELOPMENT OF AN INTERACTIVE CAPABILITY TO RAPIDLY TRADE OFF NEW TECHNOLOGIES AND AIRCRAFT TO REDUCE AVIATION ENVIRONMENT M. R. Kirby, K. Becker, T. Nam, et al Georgia Institute of Technology, USA
ICAS 2010-5.10 Flight Control II: Chairs: J. L. Vian, The Boeing Company, US; L. A. Mirzoyan, MAI, RU			
ICAS 2010-5.10.1 BENCHMARKING CEASIM SOFTWARE TO PREDICT FLYING QUALITIES AND DESIGN FLIGHT CONTROL FOR THE B-747 J. Opperstrup, T. Richardson*, C. McFarlane*, et al KTH, Sweden; *Univ. of Bristol, UK	ICAS 2010-5.10.2 PILOT-IN-THE-LOOP INFLUENCE ON CONTROLLED TILTROTOR STABILITY AND GUST RESPONSE M. Gennaretti, D. Muro, J. Serafini Univ. Roma Tre, Italy	ICAS 2010-5.10.3 GUST LOAD ALLEVIATION ON A LARGE BLENDED WING BODY AIRLINER A. Wildschek EADS Innovation Works, Germany	ICAS 2010-5.10.4 DYNAMIC MODELING AND CONTROL SYSTEM FOR A SHROUDED PROPELLER SYSTEM Y. D. Jeong, G. H. Kim, D. H. Shim, et al KAIST, Korea
ICAS 2010-5.10.5 COMPLETE FLIGHT CONTROL SYSTEM INTEGRATION AND OPTIMISATION FROM A CONCEPTUAL DESIGN PHASE C. S. Beaverstock, A. Maher†, T. S. Richardson, et al Univ. of Bristol; †Northumbria Univ., UK			

ICAS 2010-6.10 UAV Configuration Aerodynamics: Chairs: J. Fielding, Cranfield University, UK; TBD			
ICAS 2010-6.10.1 EXPERIMENTAL AND COMPUTATIONAL STUDY OF TWO FLAPPED AIRFOILS AT LOW REYNOLDS NUMBERS N. Yililammi, A.V.G. Cavalieri*, E. Soenne Helsinki Univ. of Technology, Finland; *ITA, Brazil	ICAS 2010-6.10.2 COMPARISONS OF TWO UCAY WING DESIGNS INCLUDING LOW-SPEED EXPERIMENTAL VERIFICATION R. K. Nangia, O. J. Boelens*, M. Tormalim** Nangia Aero Research, UK; *NLR, Netherlands; **FOI, Sweden, Sweden	ICAS 2010-6.10.3 PROGRESS IN THE GUST RESISTANT MAV PROGRAMME C. Galinski Warsaw Univ. of Technology, Poland	ICAS 2010-6.10.5 EFFECT OF WING GEOMETRY ON THE AERODYNAMIC FORCES AND FLOW STRUCTURES GENERATED BY AN INSECT-LIKE FLAPPING WING IN HOVER N. Phillips, K. Knowles Cranfield Univ., UK
ICAS 2010-7.10 Complex Systems: Chairs: J. Hlinka, Brno University of Technology, CZ; L. Acosta, Embraer, BR			
ICAS 2010-7.10.1 INTELLIGENT & COMMUNICATING AIRCRAFT IN 2030 : TECHNICAL AND SCIENTIFIC CHALLENGES P. Fossier THALES, France	ICAS 2010-7.10.2 TOWARDS THE IMPLEMENTATION OF VISION-BASED UAS SENSE-AND-AVOID SYSTEM L. Mejias, J. Ford, J. Lai ARC-AA, Queensland Univ. of Technology, Australia	ICAS 2010-7.10.3 ASSESSMENT OF THE USE OF ELECTRONIC FLIGHT BAGS FOR DISPLAYING ENHANCED TRAFFIC AND WEATHER INFORMATION S. Wu, J. Lachter, W. Johnson*, et al NASA Ames / San Jose State Univ.; *NASA Ames, USA	ICAS 2010-7.10.5 DECISION SUPPORT FOR THE GRIPEN NG AIRCRAFT AND BEYOND S. Molander, J. Alfredson, A. Lundqvist, et al Saab AB, Sweden
ICAS 2010-8.10 Student Finalists: Chairs: G.M. Carlomagno, Università di Napoli "Federico II", IT; C. Bil, RMIT, AU			
ICAS 2010-8.10.1	ICAS 2010-8.10.2	ICAS 2010-8.10.3	ICAS 2010-8.10.5
ICAS 2010-9.10 Aeroelasticity III: Chairs: S. Kuzmina, Tsagi, RU; C. Weishaupt, EADS, DE			
ICAS 2010-9.10.1 FURTHER DEVELOPMENT OF UNIFIED BOUNDARY ELEMENT FORMULATION FOR AERODYNAMIC-ACOUSTIC-STRUCTURE H. Djiojodhardjo, M. Akbar*, L. Gunawan*, et al Univ. Putra, Malaysia; *Institute of Technology Bandung, Indonesia	ICAS 2010-9.10.2 HIGH-TEMPERATURE MODAL SURVEY OF A HOT-STRUCTURE CONTROL SURFACE N. Spivey NASA Dryden, USA	ICAS 2010-9.10.3 AEROELASTIC BEHAVIOR OF TYPICAL SECTIONS WITH STRUCTURAL NONLINEARITY IN TRANSONIC FLOW E. Camilo, J.L.F. Azevedo CTA/IAE/ALA, Brazil	ICAS 2010-9.10.5 DETERMINATION OF TWIN TURBOPROP UTILITY AIRCRAFT WHIRL FLUTTER STABILITY BOUNDARIES J. Ceardle VZLU, Czech Republic
ICAS 2010-10.10 Maintenance & Organization: Chairs: R. Henke, RWTH Aachen University, DE; TBD			
ICAS 2010-10.10.1 ASSESSING ORGANISATIONAL FACTORS IN AIRCRAFT ACCIDENTS: METHODOLOGIES AND LIMITATIONS J. Debrincat, C. Bil, G. Clark RMIT Univ., Australia	ICAS 2010-10.10.2 TARGETING ZERO ERROR: INTRODUCING AVIATION MAINTENANCE SAFETY PROACTIVE MONITORING PROCESS H. Rashid, S. Place, G. Braithwaite Cranfield Univ., UK	ICAS 2010-10.10.3 DEVELOPING A SYSTEMIC INVESTIGATION METHOD FOR KLM ENGINEERING AND MAINTENANCE ERROR TAXONOMY A. A. Ghobbar, P. M. Van Meer TU Delft, Netherlands	ICAS 2010-10.10.5 ADVANCED MONITORING SYSTEM BASED ON UNMANNED AERIAL VEHICLES; FLEET AND INTEGRATED LOGISTIC SYSTEM SIZING BY MONTE-CARLO SIMULATION S. Chiesa, S. Corpino, A. Chiesa* Politecnico di Torino; *S.P.A.I.C. srl, Italy
ICAS 2010-11.10 Human factors: Chairs: B. Sridhar, NASA, US; TBD			
ICAS 2010-11.10.1 AN INTEGRATED TOOL SUITE FOR EN ROUTE RADAR CONTROLLERS IN NEXTGEN J. Mercier, T. Prevot, M. Kupfer, et al San Jose State Univ. / NASA Ames, USA	ICAS 2010-11.10.2 AN EXPRESSION OF AIR TRAFFIC CONTROLLER'S WORKLOAD BY RECOGNITION-PRIMED DECISION MODEL H. Aoyama, H. Iida*, K. Shiomi ENRI; *Institute of Science of Labor, Japan	ICAS 2010-11.10.3 TASK-BASED WORKLOAD MODELS FOR THE EVALUATION OF CONCEPTUAL CHANGES IN AIR TRAFFIC CONTROL S. Herr, M. Teichmann DFS GmbH, Germany	ICAS 2010-11.10.5 USER CENTERED DESIGN OF A HUMAN-MACHINE-INTERFACE FOR THE TOWER CONTROLLER J. Bergner, H. Ebert*, T. Hofmann** DFS GmbH; *delair Air Traffic Systems GmbH; **TU Darmstadt, Germany

Thursday September 23 <sup>rd</sup> Afternoon Sessions	
14:00 – 14:30	14:30 – 15:00
ICAS 2010-1-1.11 Aircraft Design and Flight Testing II: Chairs: C. Atkin, City Univ. London, UK	
<p>ICAS 2010-1.11.1 DESIGN AND INTEGRATION OF FLEXI-BIRD - A LOW-COST SUB-SCALE RESEARCH AIRCRAFT FOR SAFETY AND ENVIRONMENTAL ISSUES Z. Goraj, K. Kittmann*, R. Voit-Nitschmann*, et al Warsaw Univ. of Technology, Poland; *Stuttgart Univ., Germany</p>	<p>ICAS 2010-1.11.2 AIRCRAFT AND SYSTEMS INTEGRATION DEVELOPMENT OF THE DEMON TECHNOLOGY DEMONSTRATOR UAV J. P. Fielding, C. P. Lawson, R. M. Pires Cranfield Univ., UK</p>
<p>ICAS 2010-2.11 Applied Aerodynamics: Chairs: I. Lipatov, TsAGI, RU; J. Zoltak, ILOT, PL</p> <p>ICAS 2010-2.11.1 WATER-DROPPING AERODYNAMICS FOR FIRE-FIGHTING AMPHIBIAN T. Ito, H. Kato, Y. Goda*, et al JAXA; *ShimMaywa Industries Ltd., Japan</p>	<p>ICAS 2010-2.11.2 PERFORMANCE INVESTIGATION OF A BLENDED-WING-BODY AIRCRAFT UNDER THE INFLUENCE OF HEAVY RAIN CONDITION T. Wan, H. Yang Tamkang Univ., Taiwan, China</p>
ICAS 2010-3.11 CFD for Unsteady Flow and Acoustics: Chairs: J. R. Meneghini, University of Sao Paulo, BR; TBD	
<p>ICAS 2010-3.11.1 SMALL DISTURBANCE NAVIER-STOKES COMPUTATIONS EMPLOYING THE WILCOX K-OMEGA TURBULENCE MODEL A. Pechloff, B. Laschka TU Munich, Germany</p>	<p>ICAS 2010-3.11.2 INSTABILITY OF SHOCK WAVES ON AIRFOILS IN TRANSONIC FLIGHT A. Kuzmin St Petersburg State Univ., Russian Federation</p>
ICAS 2010-4.11 Engine Performance & Numerical Simulations I: Chairs: N. Youssef, Pratt & Whitney, CA	
<p>ICAS 2010-4.11.1 OBJECTIVES, PLANS &amp; FIRST ACHIEVEMENTS OF THE SUSTAINABLE AND GREEN ENGINES ITD OF THE CLEAN SKY JTI A. LEBRUN, M. PACEY* Sneema, France; *Rolls-Royce, UK</p>	<p>ICAS 2010-4.11.2 EVOLUTION OF ENGINES NEW GENERATION AIRPLANES: PROBLEMS AND SOLUTION V. S. Baklanov Tupolev Design Bureau, Russian Federation</p>
ICAS 2010-5.11 Flight Optimization II: Chairs: S. Ueno, Yokohama National Univ., JP; M-J. Tahk, KAIST, KR	
<p>ICAS 2010-5.11.1 OPTIMAL COLLISION AVOIDANCE TRAJECTORIES FOR WING IN GROUND EFFECT CRAFT C. Grillo, M. Ciarcia, C. Gatto Univ. of Palermo, Italy</p>	<p>ICAS 2010-5.11.2 OPTIMIZATION OF AIR RACE TRAJECTORIES F. Fisch, J. Lenz, F. Holzapfel, et al TU Munich, Germany</p>
ICAS 2010-6.11 : RESERVE: Chairs:	
ICAS 2010-6.11.1	ICAS 2010-6.11.2
	ICAS 2010-6.11.3
<p>15:00 – 15:30</p> <p>ICAS 2010-1.11.3 THE ROLE OF RAPID PROTOTYPING AND MANUFACTURING FOR UAVS: FROM WIND TUNNEL TO REAL TIME ACQUISITION M. A. Barcala-Montejano, F. Gandia-Agüera, A. A. Rodríguez-Sevillano, et al Universidad Politécnica de Madrid, Spain</p> <p>ICAS 2010-2.11.3 BASIS FUNCTION APPROXIMATION OF TRANSONIC AERODYNAMIC INFLUENCE COEFFICIENT MATRIX W. Li, C. Pak NASA Dryden, USA</p> <p>ICAS 2010-3.11.3 NUMERICAL SIMULATION AROUND AIRFOIL WITH TONAL NOISE GENERATION T. Kurotaki, T. Sumi, J. Hiyama JAXA, Japan</p> <p>ICAS 2010-4.11.3 A STUDY ON GENERATION OF GAS TURBINE COMPONENT MAPS USING PERFORMANCE TEST DATA C. Kong, S. Lim, K. Kim Chosun Univ., Department of Aerospace Engineering, Korea</p> <p>ICAS 2010-5.11.3 A NEW HYBRID DYNAMIC PROGRAMMING APPROACH IN PERFORMANCE OPTIMIZATION OF AN AEROSPACE PLANE T. Hanaoka Atomi Univ., Japan</p> <p>ICAS 2010-6.11.3</p>	

<p>ICAS 2010-7.11 Systems Architecture: Chairs: M. Nordlund, Emersom Tank Radar, SE</p>		
<p>ICAS 2010-7.11.1 SYSTEM INTEGRATION AND RISK PROPAGATION IN AN AERONAUTICAL SYSTEM-OF-SYSTEMS M. Mane, D. DeLaurentis Purdue Univ., USA</p>	<p>ICAS 2010-7.11.2 PRELIMINARY DESIGN OF FUTURE RECONFIGURABLE IMA PLATFORMS P. Bieber, E. Noulard, C. Pagetti, et al ONERA, France</p>	<p>ICAS 2010-7.11.3 A CONCEPT FOR SEMANTIC-BASED INFORMATION MANAGEMENT FOR CONTROL ROOM DEVELOPMENT D. Eier, E. Gringinger*, D. Merkl** Frequentis USA Inc., USA; *Frequentis AG; **Vienna Univ. of Technology, Austria</p>
<p>ICAS 2010-8.11 RESERVE: Chairs:</p>		
<p>ICAS 2010-8.11.1</p>	<p>ICAS 2010-8.11.2</p>	<p>ICAS 2010-8.11.3</p>
<p>ICAS 2010-9.11 Aeroelasticity IV: Chairs: L. Tichy, DLR, DE</p>		
<p>ICAS 2010-9.11.1 HIGHLY EFFICIENT HIGH-FREQUENCY FINITE ELEMENTS FOR STRUCTURAL DYNAMICS AND ACOUSTICS L. Morino, F. Cetta* Univ. Roma Tre; *Univ. of Pisa, Italy</p>	<p>ICAS 2010-9.11.2 MAJOR IMPROVEMENTS IN STORES SEPARATION ANALYSIS USING FLEXIBLE AIRCRAFT H. Wallenius, A. Lindberg Saab AB, Sweden</p>	<p>ICAS 2010-9.11.3 COMBINED SCALAR AND VECTOR VELOCITY POTENTIAL FOR COMPUTATION OF AERODYNAMIC AND ACOUSTIC INFLUENCE IN ACOUSTO-AEROELAST H. Djojodihardjo Univ. Al Azhar Indonesia, Indonesia</p>
<p>ICAS 2010-10.11 RESERVE: Chairs:</p>		
<p>ICAS 2010-10.11.1</p>	<p>ICAS 2010-10.11.2</p>	<p>ICAS 2010-10.11.3</p>
<p>ICAS 2010-11.11 Descent trajectories: Chairs: S. Levedag, DLR, DE</p>		
<p>ICAS 2010-11.11.1 TRAJECTORY PREDICTION UNCERTAINTY MODELING FOR CONTINUOUS DESCENT APPROACHES G. Enea, R. Vivona, D. Karr Engility Corporation, USA</p>	<p>ICAS 2010-11.11.2 FLIGHT TESTING OF STEEP PRECISION APPROACHES BASED ON GBAS R. Geister DLR, Germany</p>	<p>ICAS 2010-11.11.3 DEVELOPMENT AND TESTING OF AUTOMATION FOR EFFICIENT ARRIVALS IN CONSTRAINED AIRSPACE R. A. Coppenbarger NASA Ames, USA</p>
<p>15:30 – 16:00 BREAK</p>		
<p>16:00 – 17:00 VON KARMAN LECTURE (INVITED) - Chairman: C. Mari, Messier-Bugatti, France J. Szodruch, Germany; F. Quentin, France: ACARE- ADVISORY COUNCIL FOR AERONAUTICS IN EUROPE (ICAS 2010-0.9)</p>		
<p>17:00 – 17:30 CLOSING CEREMONY</p>		
<p>Friday 24<sup>th</sup>. TECHNICAL VISITS</p>		

## ACCEPTED PAPERS - CATEGORY B – STANDBY

These papers are standby for oral presentation in case papers are withdrawn from an appropriate session.  
Full papers will appear in the congress CD-Rom proceedings  
They may also be presented as posters in the Poster area

### 1. AIRCRAFT AND SYSTEMS INTEGRATION

**ICAS2010-1.2 ST1:** K Sibilski: Wroclaw Univ. of Technology, Poland

MICROELECTROMECHANICAL FLYING INSECTS - STATE OF THE ART

**ICAS2010-1.3 ST1:** N. Seto: Tokyo Metropolitan Univ., Japan

MULTIDISCIPLINARY DESIGN OPTIMIZATION OF SUPERSONIC TRANSPORT WING USING SURROGATE MODEL

**ICAS2010-1.3 ST2:** G. F. Fournier: GFIC, France

ECONOMIC SUPERSONIC TRANSPORT

**ICAS2010-1.5 ST1:** D. Smith, A. Isikveren, N. Ursache\*: Univ. of Bristol, UK; \*Brunel Univ., UK

MULTIDISCIPLINARY DESIGN OPTIMIZATION OF AN ACTIVE NONPLANAR POLYMORPHING WING

**ICAS2010-1.6 ST1:** F. Buysschaert, M. Yacoubi\*, J. Sans, et al: Univ. Libre de Bruxelles, Belgium

DEVELOPMENT AND EVALUATION OF A VTOL OBSERVATION PLATFORM

**ICAS2010-1.7 ST1:** S. Bagassi, R. Corvaglia, D. Francia, et al: Univ. of Bologna, Italy

PRELIMINARY STUDY OF A NEW UAV CONCEPT: THE VARIABLE GEOMETRY VEHICLE

**ICAS2010-1.10 ST1:** D.G Cui, D.P Qian, W.Y Cheng, et al: AVIC, China

MULTI-DISCIPLINARY OPTIMIZATION FOR WING FLAP CONSIDERING NOISE AND LIFT BASED ON GRID TECHNOLOGY

### 2. AERODYNAMICS

**ICAS2010-2.1 ST1:** J. H. Xu, W. P. Song, F. T. Xie: NPU, China

APPLICATION OF HIGH-RESOLUTION SCHEME FOR ROTOR FLOW SIMULATION

**ICAS2010-2.2 ST1:** T. Ishida: Tohoku Univ., Japan

FLOW COMPUTATIONS AROUND MOVING AND DEFORMING BODIES ON BLOCK STRUCTURED CARTESIAN MESHES

**ICAS2010-2.2 ST2:** T. Sumi, T. Kurotaki\*, J. Hiyama\*: Tottori Univ., Japan; \*JAXA, Japan

NEW MULTI-BLOCK COMPUTATIONAL METHODOLOGY BY CHARACTERISTIC INTERFACE CONDITIONS WITH HIGH-ORDER INTERPOLATION

**ICAS2010-2.3 ST1:** A. Dervieux, A. Belme, B. Koobus\*, et al: INRIA Sophia Antipolis, France; \*Univ. of Montpellier II, France

APPLICATION OF HYBRID AND VMS-LES TURBULENT MODELS TO AERODYNAMIC SIMULATIONS

**ICAS2010-2.3 ST2:** J.A. Oliveira Neto, E. Basso\*, J.L.F. Azevedo: ITA, Brazil; \*Instituto de Aeronautica e Espaco, Brazil

CALCULATION OF HIGH-LIFT FLOWS USING STRUCTURED AND UNSTRUCTURED GRIDS

**ICAS2010-2.4 ST1:** M. R. Chiarelli, M. Cagnoni, M. Ciabattari, et al: Univ. of Pisa, Italy

HIGH ASPECT RATIO WING WITH CURVED PLANFORM: CFD AND FE ANALYSES

**ICAS2010-2.4 ST2:** J. Hospers, H. Hoeijmakers: Univ. of Twente, Netherlands

NUMERICAL METHOD FOR ICE ACCRETION ON MULTIPLE-ELEMENT AIRFOIL SECTIONS

**ICAS2010-2.5 ST1:** K. Zhang, W. P. Song: NPU, China

RE-AVERAGED NAVIER-STOKES SIMULATIONS WITH FULL  $E^N$  TRANSITION PREDICTION METHOD FOR INFINITE SWEEP-WINGS

**ICAS2010-2.7 ST1:** M. Kanazaki, S. Jeong\*: Tokyo Metropolitan Univ., Japan; \*Tohoku Univ., Japan

DATA MINING BASED MULTIPOINT DESIGN OF NEXT GENERATION TRANSONIC WING WITH SMALL SWEEP BACK

**ICAS2010-2.7 ST2:** N. Wood, G. Schrauf\*: Airbus Operations Ltd, UK; \*Airbus Operations GmbH, Germany

NATURAL LAMINAR FLOW FOR TRANSPORT AIRCRAFT APPLICATIONS

**ICAS2010-2.8 ST1:** A. Sigal: Shehafim R&D, Israel

AN ENGINEERING LEVEL METHOD TO ESTIMATE THE NORMAL-FORCE INCREMENT DUE TO WEDGE SECTION

**ICAS2010-2.9 ST1:** R. E. Callahan: Cornell Univ., USA

BIO-INSPIRED BAT WING DESIGN AND FABRICATION

**ICAS2010-3.1 ST1:** M. Koike, T. Wakamatsu: Akashi National College of Technology, Japan

EFFECTS OF TURBULATORS ON WINGS AT LOW REYNOLDS NUMBERS

**ICAS2010-3.1 ST2:** Y. F. Zhang: NPU, China

LIFT AND THRUST CHARACTERISTICS OF THE FLAPPING WING MICRO AIR VEHICLE

**ICAS2010-3.2 ST1:** M. Matejka, P. Pick, L. Popelka\*, et al: Czech Technical Univ.; \*\*AS CR, Institute of Thermodynamics, Czech Republic

AN EXPERIMENTAL STUDY ON THE EFFECT OF AMPLITUDE MODULATION OF THE SYNTHETIC JET FLOW ON THE CONTROL OF THE WAKE

**ICAS2010-3.2 ST2:** F. Rasi Marzabadi, M.R. Soltani, M. Masdari: Sharif Univ. of Technology, Iran

EXPERIMENTAL INVESTIGATION OF THE LEADING-EDGE ROUGHNESS ON THE BOUNDARY LAYER OF A PLUNGING AIRFOIL

**ICAS2010-3.3 ST1:** L. Santana, C. Pagani, F. Catalano: Univ. of São Paulo, Brazil

THE EFFORTS FOR BACKGROUND NOISE REDUCTION AT LAE-USP WIND TUNNEL

**ICAS2010-3.3 ST2:** S. Tsuchikura, T. Inage, M. Ota, et al: Chiba Univ., Japan

HYBRID ART FOR 3-D LASER INTERFEROMETRIC CT (LICT) MEASUREMENT OF SHOCK WAVE INTERACTION AROUND A RECTANGULAR ROD

**ICAS2010-3.4 ST1:** A. Mazelet: Snecma, France

DEVELOPMENT OF A CONTRA ROTATIVE PROPELLERS AEROACOUSTIC RIG

**ICAS2010-3.4 ST2:** F. Blumrich: DLR, Germany

ON THE OCCURRENCE OF SYSTEMATIC ERRORS IN CROSS-CORRELATION BASED MEASUREMENTS FOR AERODYNAMICS

**ICAS2010-3.5 ST1:** R. Bura: Institut Teknologi Bandung, Indonesia

LARGE-EDDY SIMULATION OF TRANSITIONAL SHOCK-WAVE/BOUNDARY-LAYER INTERACTIONS IN HYPERSONIC FLOWS

**ICAS2010-3.6 ST1:** I.I. Lipatov, .Yu. Tolkachev\*: TsAGI; \*Moscow Institute of Physics and Technology, Russian Federation

ASYMPTOTICAL MODELS OF BOUNDARY LAYER FLOW CONTROL

<b>ICAS2010-3.7 ST1:</b> A. Touyeras: Snecma, France FLOW-CONTROL CONCEPTS FOR COMPRESSORS
<b>ICAS2010-3.7 ST2:</b> Y. L. Li, D. Li, Y. Yang: NPU, China THE STUDIES OF OPTIMUM WAVELENGTH CHOICE IN DISTRIBUTED ROUGHNESS LAMINAR FLOW CONTROL TECHNIQUE
<b>ICAS2010-3.8 ST1:</b> O. Almeida, J. Roberto Barbosa, R. H. Self*, et al: ITA, Brazil; *Institute of Sound and Vibration, UK AEROACOUSTICS OF SINGLE SUBSONIC JETS: VALIDATION AND INDUSTRIAL APPLICATION
<b>ICAS2010-3.9 ST1:</b> T. Atobe, T. Ikeda: JAXA, Japan FLOW INSTABILITY AROUND A 2D AIRFOIL INDUCED BY ACOUSTIC DISTURBANCES AT LOW REYNOLDS NUMBERS
<b>ICAS2010-9.9 ST1:</b> F. AREVALO, H. CLIMENT*, P. GARCIA-FOGEDA**: AIRBUS MILITARY & UNIV. POLITECNICA DE MADRID; *AIRBUS MILITARY; **UNIV. POLITECNICA DE MADRID, Spain NONLINEAR TIME-DOMAIN STRUCTURE/AERODYNAMICS COUPLING IN SYSTEMS WITH CONCENTRATED STRUCTURAL NONLINEARITIES
<b>ICAS2010-9.9 ST2:</b> W. P. Song, R. F. Xu, Z. H. Han: NPU, China STUDY ON THE IMPROVED KRIGING-BASED OPTIMIZATION METHOD FOR AERODYNAMIC DESIGN
<b>ICAS2010-2.10 ST1:</b> H. Kawazoe, S. Abe, T. Matsuno, et al: Tottori Univ., Japan LOW-SPEED AERODYNAMIC CHARACTERISTICS OF A BUSEMANN-TYPE SILENT SUPERSONIC BIPLANE
<b>ICAS2010-2.11 ST1:</b> A. Cenko: NAVAIR, USA LESSONS LEARNED IN 30 YEARS OF USING CFD FOR STORE SEPARATION
<b>ICAS2010-3.10 ST1:</b> L. Popelka, D. Simurda, M. Matejka, et al: Institute of Thermodynamics, Czech Republic BOUNDARY LAYER TRANSITION, SEPARATION AND FLOW CONTROL ON AIRFOILS AND BODIES IN CFD, WIND-TUNNEL AND IN-FLIGHT STUDIES
<b>ICAS2010-3.11 ST1:</b> O. Almeida, B.S. Aflalo, R. Lauterjung Queiroz, et al: ITA, Brazil NUMERICAL INVESTIGATION OF A HELMHOLTZ RESONATOR
<b>ICAS2010-6.10 ST1:</b> J. S. Jang, S. Y. Wie, D. J. Lee: KAIST, Korea EXPERIMENTAL AND NUMERICAL STUDY OF DUCTED FAN UAV
<b>ICAS2010-6.10 ST2:</b> H. M. Choi, M. H. Ryu, J. S. Cho: Hanyang Univ., Korea AERODYNAMIC DESIGN AND EXPERIMENTAL STUDY ON THE DUCTED FAN VTOL MAV
<b>3. MATERIALS AND STRUCTURES</b>
<b>ICAS2010-4.4 ST:</b> P. R. Pamidi, J. Maronick, X. Chen*, et al: MSC.Software Corp, USA; *GE Research, USA AIRCRAFT CABIN NOISE COLLABORATIVE STUDY USING FRF-BASED ASSEMBLY OF ROTORDYNAMIC SYSTEM
<b>ICAS2010-8.2 ST1:</b> M. Tehrani, A. Abedian: Sharif Univ. of Technology, Iran A FEM STUDY OF THE OVERLAPPING RATIO EFFECT ON SUPERPLASTIC FORMATION OF METAL MATRIX COMPOSITES
<b>ICAS2010-8.3 ST P.</b> Hintikka, M. Wallin, O. Saarela: Helsinki Univ. of Technology, Finland THE EFFECT OF MOISTURE ON THE INTERLAMINAR FRACTURE TOUGHNESS OF CFRP LAMINATE
<b>ICAS2010-8.4 ST1:</b> M. T. Heitzmann, C-T. Ng, B. Lindenberger*: Univ. of Queensland, Australia; *Univ. of Stuttgart, Germany SINGLE PLANT BASED NATURAL FIBRE COMPOSITE FOR AIRCRAFT CABIN INTERIOR MATERIALS MADE SOLELY FROM THE CASTOR PLANT
<b>ICAS2010-8.4 ST2:</b> J. W. Lee, J. W. Kim, H. G. Kim: Korea Aerospace Research Institute, Korea FULLY ISOTROPIC LAMINATES WITH UP TO TWENTY SEVEN PLYS
<b>ICAS2010-8.5 ST1:</b> R. Pullin, J. J. Hensman*, M. J. Eaton, et al: Cardiff School of Engineering, UK; *Univ. of Sheffield, UK AUTOMATED FATIGUE FRACTURE DETECTION, IDENTIFICATION AND LOCATION IN STEEL STRUCTURES USING ACOUSTIC EMISSION
<b>ICAS2010-8.6 ST1:</b> E Dubovikov: TsAGI, Russian Federation INFLUENCE OF COMPOSITE WING ELASTICITY PARAMETERS ON STRUCTURE WEIGHT
<b>ICAS2010-8.6 ST2:</b> H. Cui, Y. Li: NPU, China NUMERICAL SIMULATION OF THE FAILURE OF COMPOSITE T-JOINTS BASED ON COHESIVE ZONE MODEL
<b>ICAS2010-8.7 ST1:</b> S. Wang, M. Liu, X. Wang*: Xian Jiaotong Univ.; *The First Aircraft Design Institute, AVIC, China EFFECT OF STRESS ON MULTIPLE SITE DAMAGE
<b>ICAS2010-8.8 ST1:</b> M. G. Zielonka: MSC.Software Corp, USA ADAPTIVE MESH REFINEMENT: ADVANCES AND APPLICATIONS TO THE ANALYSIS OF AEROSPACE STRUCTURES.
<b>ICAS2010-8.9 ST1:</b> A. Abedian, H. Dastoom Latleily: Sharif Univ. of Technology, Iran NONLINEAR RESPONSE ANALYSIS OF FGM PLATES UNDER THERMO-MECHANICAL LOADS USING HIGHER ORDER SHEAR DEFORMATION THEORIES
<b>ICAS2010-8.9 ST2:</b> M. Leite Ribeiro, R. Afonso Angélico, V. Tita: Univ. of São Paulo, Brazil PROGRESSIVE FAILURE STUDY OF COMPOSITE CYLINDRICAL STRUCTURES
<b>ICAS2010-9.1 ST1:</b> P. Xue, C. F. Qiao, J. J. Tian, et al: NPU, China CRASHWORTHINESS STUDY OF A CIVIL AIRCRAFT SUB-FLOOR STRUCTURE
<b>ICAS2010-9.2 ST1:</b> S. Hernandez, A. Baldomir, J. Diaz, et al: Univ. of La Coruña, Spain DESIGN OPTIMIZATION OF STRUCTURES CONSIDERING UNDEFORMED AND
<b>ICAS2010-9.3 ST1:</b> J. Liu, Y. Li: NPU, China OPTIMIZATION INVERSION ON CONSTITUTIVE MODEL PARAMETERS OF BIRD IN THE SIMULATION OF BIRD STRIKE ON THE AIRCRAFT
<b>ICAS2010-9.4 ST1:</b> A. Pistek: Brno Univ. of Technology, Czech Republic ANALYTICAL METHOD FOR LIMIT LOAD CAPACITY CALCULATION OF THIN WALLED AIRCRAFT STRUCTURES
<b>ICAS2010-9.5 ST1:</b> M. G. Zielonka, S. C. Rennich: MSC.Software Corp, USA A GENERAL APPROACH FOR THE COUPLING OF EXISTING SIMULATIONS COMPONENTS INTO A GENERAL MULTIPHYSICS ENVIRONMENT.
<b>ICAS2010-9.6 ST2:</b> T Ahmad, R Varatharajoo: Univ. Putra Malaysia, Malaysia BIRD IMPACT TESTS ON F5 AIRCRAFT CANOPY
<b>ICAS2010-9.7 ST1:</b> V. Weissberg: Israel Aerospace Industries, Israel TOWARDS AN ALL COMPOSITE FASTENERLESS COMPOSITE WING

<b>ICAS2010-9.7 ST2:</b> R. Doubrava, V. Strnad: VZLU, Czech Republic BIRD STRIKE ANALYSES ON THE PARTS OF AIRCRAFT STRUCTURE
<b>ICAS2010-9.8 ST1:</b> B. Li, J. P. Wen, Z. C. Yang, et al: NPU, China MATERIAL DAMPING TEST OF HIGH TEMPERATURE ALLOY
<b>ICAS2010-10.6 ST1:</b> M. Liu, F. Hu, H. Gao*, et al: Xian Jiaotong Univ.; *Xi'an Jiao-tong Univ., China THE CRACK-DETECTED COATING SENSOR AND ITS APPLICATIONS IN R&M OF AIRCRAFTS
<b>ICAS2010-9.10 ST1:</b> B. Landkof, H. Abramovich, O. Igudisman: Technion, Israel BUCKLING BEHAVIOR OF STRINGER STIFFENED CURVED PANELS MADE OF MAGNESIUM, ALUMINUM AND COMPOSITES UNDER COMPRESSIVE LOAD
<b>ICAS2010-9.10 ST2:</b> Y. Li, Z. C. Yang: NPU, China PROBABILISTIC FLUTTER ANALYSIS AND RISK ASSESSMENT OF AN AIRFOIL
<b>ICAS2010-9.11 ST1:</b> J. Su, F. Zhang: NRC/IAR, Canada DEVELOPMENT OF AN AEROELASTIC METHOD FOR PREDICTING ROTOR AIRLOADS AND STRUCTURAL LOADS
<b>4. PROPULSION</b>
<b>ICAS2010-4.1 ST1:</b> A. Zammit, M. Kim, J. Bayandor: RMIT Univ., Australia BIRD-STRIKE DAMAGE TOLERANCE ANALYSIS OF COMPOSITE TURBOFAN ENGINES
<b>ICAS2010-4.2 ST1:</b> D. Bardaro, L. Barone, A. Gerardi, et al: Consorzio Cetma, Italy THERMO-MECHANICAL AND RELIABILITY ANALYSYS TO DESIGN AN INNOVATIVE GAS TURBINE CERAMIC VANE
<b>ICAS2010-4.2 ST2:</b> A. Devaux: Aubert & Duval, France NEW GRADES FOR TURBINE DISKS & ENGINE SHAFTS
<b>ICAS2010-4.3 ST1:</b> W. Y. K. Chan, D. J. Mee: Univ. of Queensland, Australia BOUNDARY LAYER COMBUSTION FOR VISCOUS DRAG REDUCTION IN PRACTICAL SCRAMJET CONFIGURATIONS
<b>ICAS2010-4.6 ST1:</b> H. Lalit, V. Chernoray, J. Larsson*: Chalmers Univ. of Technology; *Volvo Aero Corporation, Sweden EXPERIMENTAL STUDY OF THE INFLUENCE OF SURFACE NON-CONFORMANCES ON THE LOW PRESSURE TURBINE OUTLET GUIDE VANE FLOW
<b>ICAS2010-4.8 ST1:</b> A. Vinogradov, A. Stepanov: CIAM, Russian Federation 2D AND 3D INTAKES PERFORMANCE AND DRAG OF CRUISE M=1.6 CIVIL AIRCRAFT
<b>5. FLIGHT DYNAMICS AND CONTROL</b>
<b>ICAS2010-5.4 ST1:</b> D. P. T. Ferreira, P. Paglione*, C. D. P. S. Silva: EMBRAER; *ITA, Brazil DESIGN OF FLIGHT CONTROL SYSTEMS CONSIDERING THE MEASUREMENT AND CONTROL OF STRUCTURAL MODES
<b>ICAS2010-5.5 ST1:</b> L. M. B. C. Campos, J. M. G. Marques*: CCTAE/IST; *CCTAE/ULHT, Portugal ON THE MAXIMIZATION OF CONTROL POWER IN LOW-SPEED FLIGHT FOR A FLYING-WING CONFIGURATION
<b>ICAS2010-5.5 ST2:</b> K. Bousson: Univ. of Beira Interior, Portugal VIABLE OPTIMAL TRAJECTORY CONTROL IN A NAVIGATION CORRIDOR
<b>ICAS2010-6.2 ST1:</b> Z. X. Yao: Shenyang Aircraft Design and Research Institute, China RESEARCH ON FLIGHT CONTROL METHOD OF MORPHING UCAV BASED ON REINFORCEMENT LEARNING
<b>ICAS2010-6.3 ST1:</b> A. Maqsood, Y. G. Tiauw Hiong: Nanyang Technological Univ., Singapore TRANSITION FLIGHT ANALYSIS OF AN AGILE UNMANNED AIR VEHICLE
<b>ICAS2010-6.3 ST2:</b> J. T. Khan: Univ. of Toronto, Canada IBVS CONTROL OF VTOL UAVS TRACKING A MOVING TARGET
<b>ICAS2010-6.4 ST1:</b> H. van Dijk, A. de Reus: NLR, Netherlands AUTOMATION AND MULTIPLE UAV CONTROL
<b>ICAS2010-6.6 ST1:</b> P. G. Garrec: THALES, France MAGIC ATOLS : MICROWAVE AND GPS INTEGRATED COOPERATIVE AUTOMATIC TAKE-OFF AND LANDING SYSTEM
<b>ICAS2010-6.7 ST1:</b> X. H. Xiao, L. C. Liu, T. F. L. Tian: Chinese Flight Test Establishment, China THE SIMULATION RESEARCH OF THE LOW ALTITUDE PENETRATION FLIGHT TESTING TECHNOLOGY
<b>ICAS2010-6.7 ST2:</b> Z. Li, Y. Hou, C. Liu*: Chinese Flight Test Establishment; *Shanghai aircraft design institute, China THE FUSION FOR COMPOSED NAVIGATION INFORMATION AND ACCURACY ESTIMATION IN FLIGHT TEST
<b>ICAS2010-6.8 ST1:</b> D. Greer, R. Mudford, R. A. Walker: ARCAA, Queensland Univ. of Technology, Australia AIRBORNE SYSTEMS LABORATORY FOR AUTOMATION RESEARCH
<b>ICAS2010-6.9 ST1:</b> I. M. Malaquias, P. Iscold, F. R. F. Reis, et al: Federal Univ. of Minas Gerais, Brazil DESIGN AND CHARACTERIZATION OF A TELEMETRY SYSTEM FOR FLIGHT TESTS IN LIGHT AIRCRAFTS
<b>ICAS2010-5.10 ST1:</b> M. Becerra-Vargas, E. M. Belo: Univ. of São Paulo, Brazil FUZZY SLIDING MODE CONTROL OF A FLIGHT SIMULATOR MOTION BASE
<b>ICAS2010-5.10 ST2:</b> A. R. da Silva Filho, P. Iscold, F. R. F. Reis, et al: Federal Univ. of Minas Gerais, Brazil DEVELOPMENT AND EVALUATION OF STRATEGIES FOR PILOTING ASSISTANCE FOR LIGHT AIRCRAFT
<b>6. SYSTEMS, SUBSYSTEMS AND EQUIPMENT</b>
<b>ICAS2010-7.1 ST1:</b> N. Rutherford, C. Turner, L.F. Gonzalez, et al: ARCAA, Queensland Univ. of Technology, Australia PUBLIC MOBILE DATA NETWORKS FOR AERONAUTICAL PURPOSES
<b>ICAS2010-7.2 ST1:</b> J. Gauci, D. Zammit-Mangion: Cranfield Univ., UK CORRESPONDENCE AND CLUSTERING TECHNIQUES OF A STEREOVISION-BASED OBSTACLE DETECTION SYSTEM FOR AIRCRAFT IN AERODROMES
<b>ICAS2010-7.3 ST1:</b> M. Ni??, D. Scholz: Hamburg Univ. of Applied Sciences, Germany PROCESS CHAIN ANALYSIS AND TOOLS FOR CABIN DESIGN AND REDESIGN ACTIVITIES
<b>ICAS2010-7.4 ST1:</b> P. Monclar, G. Balducci*: SAFRAN; *Messier-Dowty, France PRESENTATION OF TEST RESULTS ON AN ELECTRICALLY ACTUATED NOSE LANDING GEAR
<b>ICAS2010-7.10 ST1:</b> J. López, A. Mata, A. Albala, et al: Technical Univ. of Catalonia, Spain MAREA MIDDLEWARE FOR UAS MISSIONS

<b>7. SYSTEMS ENGINEERING AND SUPPLY CHAIN</b>
<b>ICAS2010-7.7 ST1:</b> Z. Wang: The Boeing Company, USA A SIMULATION-BASED STUDY OF INVENTORY DISTRIBUTION NETWORK
<b>ICAS2010-7.9 ST1:</b> J. -L. Voirin: THALES, France METHOD & TOOLS TO SECURE AND SUPPORT COLLABORATIVE ARCHITECTING OF CONSTRAINED SYSTEMS
<b>ICAS2010-7.11 ST1:</b> B Nagel, T Zill, M Hepperle: DLR, Germany CHALLENGES ARISING FROM THE ADVANCED INTEGRATION OF TECHNOLOGIES AIMING AT SYSTEM LEVEL IMPROVEMENTS
<b>8. AIR TRANSPORT SYSTEM EFFICIENCY</b>
<b>ICAS2010-11.1 ST1:</b> D. Troegner: DLR, Germany ENHANCING DOMAIN-SPECIFIC MODELING LANGUAGES FOR RUNWAY ASSIGNMENT SYSTEMS BY EXPERIENTIAL KNOWLEDGE BASED MODEL GUIDANCE
<b>ICAS2010-11.2 ST1:</b> K. Sheth, S. Gutierrez-Nolasco*: NASA Ames; *UC Santa Cruz/UARC, USA ANALYSIS OF FACTORS FOR IMPROVING COLLABORATION IN AIR TRAFFIC MANAGEMENT
<b>ICAS2010-11.3 ST1:</b> Z. Michaelides: The Univ. of Liverpool, UK THE DEVELOPMENT OF FUTURE AIR TRANSPORT SECTOR MODELS: A PARADIGM SHIFT
<b>ICAS2010-11.4 ST1:</b> A. S. Filatyev, O. V. Yanova: TsAGI, Russian Federation THE SYNTHESIS OF WORST-CASE DISTURBANCES FOR CRITICAL FLIGHT CONDITIONS GENERATION
<b>ICAS2010-11.5 ST1:</b> A. Andreeva: Univ. of Tokyo, Japan GUIDELINES FOR FLIGHT TIME MANAGEMENT AND SUSTAINABLE AIRCRAFT SEQUENCING
<b>ICAS2010-11.6 ST1:</b> Gunnar Spies, Michael Eisele: Barco Orthogon GmbH, Germany AIRSIDE TACTICAL WORKING POSITION
<b>ICAS2010-11.7 ST1:</b> K. Kageyama, Y. Fukuda*: ENRI, Japan STUDY ON ANALYSIS METHOD OF HORIZONTAL FLIGHT DISTANCE FOR ATM PERFORMANCE ASSESSMENT
<b>ICAS2010-11.7 ST2:</b> O. Techakesari, J. J. Ford: ARCAA, Queensland Univ. of Technology, Australia AUTOMATED CENTRALISED SEPARATION MANAGEMENT WITH ONBOARD DECISION SUPPORT
<b>ICAS2010-11.8 ST1:</b> P. Flener, F. Hassani Bijarbooneh, J. Pearson: Uppsala Univ., Sweden TOWARD DYNAMIC DEMAND-CAPACITY BALANCING
<b>ICAS2010-11.9 ST1:</b> T. Ludwig, K. Werner, M. Biella: DLR, Germany THE IMPLEMENTATION OF TAXI-CPDLC FUNCTIONALITY WITHIN THE EU PROJECT EMMA2
<b>ICAS2010-11.10 ST1:</b> D. Karikawa, H. Aoyama*, M. Takahashi: Tohoku Univ.; *ENRI, Japan PERFORMANCE VISUALIZATION IN AIR TRAFFIC CONTROL USING COGNITIVE SYSTEMS SIMULATION
<b>ICAS2010-11.10 ST2:</b> T. Prevot, P. U. Lee, J. R. Homola: San Jose State Univ. / NASA Ames, USA MANAGING DEMAND AND CAPACITY USING MULTI-SECTOR PLANNING AND FLEXIBLE AIRSPACE: HUMAN-IN-THE-LOOP EVALUATION
<b>ICAS2010-11.11 ST1:</b> Y. J. Zhao: Univ. of Minnesota, USA STOCHASTIC TRAJECTORY PLANNING FOR TRADEOFF BETWEEN OPTIMALITY AND PREDICTABILITY
<b>9. SAFETY AND SECURITY</b>
<b>ICAS2010-10.4 ST1:</b> J. Rohacs: Budapest Univ. of Technology and Economics, Hungary SAFETY ASPECTS OF THE PERSONAL AIR TRANSPORTATION SYSTEM
<b>ICAS2010-10.5 ST1:</b> Y. Wu: Beihang Univ., China SOFTWARE RELIABILITY ACCELERATED TESTING METHOD AND ITS RELIABILITY MODELING
<b>ICAS2010-10.7 ST2:</b> F. Wenchun, G. Huanwen: First Aircraft Institute, China MULTI-PARAMETER AND MULTI-MODE CONTROL SIMULATION ANALYSIS OF EJECTION SEAT
<b>ICAS2010-10.8 ST1:</b> M. Tanaka: Trust tech JAPAN, Japan FLIGHT TAXIING GUIDANCE SYSTEM FOR AIRCRAFT ON BOARD AIRCRAFT CARRIERS
<b>ICAS2010-10.9 ST1:</b> R. Walton, I. Sinka: Embry-Riddle Aeronautical Univ., USA RAMP SAFETY REVISITED
<b>ICAS2010-10.10 ST1:</b> S. Knight, A. Trueman*, G. Clark: RMIT Univ.; *DSTO, Australia THE EFFECT OF INTERGRANULAR CORROSION ON ALUMINIUM ALLOYS IN AIRCRAFT STRUCTURE
<b>ICAS2010-10.10 ST2:</b> A. A. Ghobbar, N. de Oliveira: TU Delft, Netherlands EVALUATION OF MAINTENANCE PROCEDURES BY INTRODUCING CANNIBALIZATION AND COMPONENTS COMMONALITY AS A LEGITIMATE PROCEDURE
<b>10. CHALLENGE OF THE ENVIRONMENT</b>
<b>ICAS2010-4.7 ST1:</b> M. Battipede, A. Della Corte, M. Vazzola, et al: Politecnico di Torino, Italy INNOVATIVE AIRPLANE GROUND HANDLING SYSTEM FOR GREEN OPERATIONS
<b>ICAS2010-4.7 ST2:</b> S. Bagassi, T. Bombardi, D. Francia, et al: Univ. of Bologna, Italy TERMINAL AREA "GREEN" OPTIMIZATION USING JOB-SHOP SCHEDULING TECHNIQUES
<b>ICAS2010-5.1 ST1:</b> X. Prats, V. Puig, J. Quevedo, et al: Technical Univ. of Catalonia, Spain SPREADING NOISE ANNOYANCE BY COMBINING SUB-OPTIMAL PROCEDURES
<b>ICAS2010-5.2 ST1:</b> D. Zammit-Mangion, M. Xuereb*, K. Chircop*: Cranfield Univ., UK; *Univ. of Malta, Malta A GENERIC FRAMEWORK FOR MULTI-PARAMETER OPTIMISATION OF FLIGHT TRAJECTORIES
<b>ICAS2010-5.6 ST2:</b> H. Nakamura, Y. Kajikawa, S. Suzuki: Univ. of Tokyo, Japan ACADEMIC LANDSCAPE OF AVIATION AND ENVIRONMENT
<b>ICAS2010-5.8 ST1:</b> A. Elie, R. Kervarc, N. Huynh: ONERA, France A MODULAR PLATFORM FOR THE SIMULATION OF AIR TRAFFIC ENVIRONMENTAL IMPACT
<b>ICAS2010-4.10 ST1:</b> M. Goulain: Airbus, France HOW TO MANAGE AIRBUS R&T PORTFOLIO FOR ECO EFFICIENCY?
<b>ICAS2010-4.10 ST2:</b> J.-H. Pfander, H. Jimenez, D. Mavris, Georgia Institute of Technology, USA A SYSTEM DYNAMICS ANALYSIS OF FLEET TECHNOLOGY AND POLICY OPTIONS FOR ENVIRONMENTAL IMPACT MITIGATION

## ACCEPTED PAPERS - CATEGORY C – POSTERS

These papers will be presented in the Poster area  
Most papers will also appear in the congress CD proceedings

### 1. AIRCRAFT AND SYSTEMS INTEGRATION

**ICAS2010-P1.1:** L. -M. Fan, X. -M. Fan, Z. -B. Jiang, Beijing Aeronautical Engineering Technology Center, China  
UAV-BASED DISTRIBUTED ECM SYSTEM

**ICAS2010-P1.2:** K. W. Reynolds, I. M. Kroo, Stanford Univ., USA  
MULTI-OBJECTIVE OPTIMIZATION OF MANNED AND UNMANNED ELECTRIC AIRCRAFT FOR MAXIMUM RANGE AND SPEED

**ICAS2010-P1.3:** T. Mulyanto, H. P. Thien, H. Muhammad, Institute of Technology Bandung, Indonesia  
CONFIGURATION STUDY OF A COAXIAL ROTOR MAV BASED ON DYNAMIC MODEL

**ICAS2010-P1.4:** J. Hung, L. Gonzalez, R. Walker, ARCAA, Queensland Univ. of Technology, Australia  
MULTI-DISCIPLINARY DESIGN OPTIMISATION AND SIMULATION OF A HYBRID-ELECTRIC UNMANNED AERIAL VEHICLE (UAV)

### 2. AERODYNAMICS

**ICAS2010-P2.1:** A. Kuryachii, D. Rusyanov, TsAGI, Russian Federation  
ABOUT REDUCTION OF TURBULENT SKIN FRICTION BY ELECTROHYDRODYNAMIC INTERACTION IN UNIPOLAR CHARGED FLUID

**ICAS2010-P2.2:** H. B. Hao, Y. Yang, NPU, China  
SHOCK DETECTION AND LIMITING WITH DISCONTINUOUS GALERKIN METHODS FOR EULER EQUATIONS ON UNSTRUCTURED MESH

**ICAS2010-P2.3:** S. H. Zuo, Y. Yang, D. Li, NPU, China  
EXPERIMENTS OF CROSS-FLOW INSTABILITY IN A SWEEP-WING BOUNDARY LAYER

**ICAS2010-P2.4:** Y. H. Guo, Y. Yang, Z. J. Duan, NPU, China  
THE RESEARCH OF DISCONTINUOUS GALERKIN P-MULTIGRID SOLVER

**ICAS2010-P2.5:** Z. M. Tian, Q. Lin, W. Bai, Aviation Industry Development Research Center, China  
APPLICATION OF GRID COMPUTING IN AIRCRAFT DESIGN

**ICAS2010-P2.6:** J. Z. Chai, X. Gao, Q. Lil, AVIC, China  
HIGH-TEMPERATURE IONIZED AIR RADIATION SIMULATION ON UNSTRUCTURED GRIDS

**ICAS2010-P2.7:** S. Munawar, National Univ. of Sciences and Technology, Pakistan  
ANALYSIS OF GRID FINS AS EFFICIENT CONTROL SURFACE IN COMPARISON TO CONVENTIONAL PLANAR FINS

**ICAS2010-P2.8:** G.N Li, F.W Li, Z.H Zhou, NPU, China  
A MULTI-BLOCK FLOW SOLVER CODE ACCELERATING WITH MULTI-GRID TECHNIQUE

**ICAS2010-P2.9:** L. F. Bergamo, E. M. Gennaro, M. A. F. Medeiros, Univ. of São Paulo, Brazil  
COMPUTATIONAL SIMULATION OF NOISE GENERATED AERODYNAMICALLY VIA DNS AND ACOUSTIC ANALOGY

**ICAS2010-P2.10:** A. Obraz, Moscow Institute of Physics and Technology, Russian Federation  
PREDICTION OF LAMINAR-TURBULENT TRANSITION REYNOLDS NUMBERS FOR COMPRESSIBLE BOUNDARY LAYERS

**ICAS2010-P2.11:** X. Zhang, Harbin Institute of Technology, China  
NUMERICAL INVESTIGATION ON THE PROPULSIVE EFFECTS OF AIRFOIL FLAPPING WITH DIFFERENT RATIO BETWEEN DOWN-STROKE AND UP-STROKE

**ICAS2010-P2.12:** V. Malatesta, M. Augusto Faraco de Medeiros, Univ. of São Paulo, Brazil  
NUMERICAL SIMULATION OF THE MIXING LAYER GENERATED BY THE SLAT

**ICAS2010-P2.13:** N. Mirkov, B. Rasuo\*, Institute of Nuclear Sciences "Vinca", Serbia; \*Univ. of Belgrade, Serbia  
NUMERICAL SIMULATION OF AIR JET ATTACHMENT TO CONVEX WALLS AND APPLICATIONS

**ICAS2010-P2.14:** A. G. Rumyantsev, V. A. Silantyev, Siberian Aeronautical Research Institute, Russian Federation  
DESIGN OPTIMIZATION OF HIGH LIFT CONFIGURATIONS BASED ON NAVIER-STOKES EQUATIONS

**ICAS2010-P2.15:** R. Cosin, F. M. Catalano, L. G. N. Correa, et al, Univ. of São Paulo, Brazil  
AERODYNAMIC ANALYSIS OF MULTI-WINGLETS FOR LOW SPEED AIRCRAFTS

**ICAS2010-P2.16:** R. Morgan, M. McGilvray, A. Dann\*, Univ. of Queensland, Australia; \*Centre for Hypersonics, Australia  
X3 EXPANSION TUBE - SUPERORBITAL TEST FACILITY

**ICAS2010-P2.17:** K.M. Chung, National Cheng Kung Univ., Taiwan, China  
TUNNEL BACKGROUND NOISE ON COMPRESSIBLE CONVEX-CORNER FLOWS

**ICAS2010-P2.18:** G.H. Kim, Y.D. Jeong, S.O. Park, KAIST, Korea  
MEASUREMENT AND PREDICTION OF CONTROL VANE FORCE IN THE WAKE OF A SHROUDED PROPELLER SYSTEM

**ICAS2010-P2.19:** T. ISHIDE, N. NISHIKAWA\*, Kisarazu National College of Technology; \*Chiba Univ., Japan  
SMOKE VISUALIZATION AND DATA ANALYSIS OF HOT WIRE MEASUREMENTS IN SEPARATED VORTICES OVER AN AXISYMMETRIC PARABOLOID

**ICAS2010-P2.20:** E. Vasilevskiy, TsAGI, Russian Federation  
HEAT TRANSFER ON BLUNTED BODIES IN A HIGH-SPEED DUSTED FLOW

**ICAS2010-P2.21:** L. G. N. Correa, R. M. U. Entz, F. M. Catalano, et al, Univ. of São Paulo, Brazil  
ACOUSTIC CONTROL OF LAMINAR SEPARATION BUBBLES

**ICAS2010-P2.22:** J. Stults, R. Huffman, US Air Force Institute of Technology, USA  
MICROWAVE TOMOGRAPHY OF AN ATMOSPHERIC PRESSURE DIELECTRIC BARRIER DISCHARGE

**ICAS2010-P2.23:** E. Hallberg, United States Naval Academy, USA  
ANALYSIS OF TARGETING POD EFFECTS ON ADJACENT STORES

**ICAS2010-P2.24:** R. Bura, Institut Teknologi Bandung, Indonesia  
TURBULENCE MODEL COMPARISONS FOR SHOCK CONTROL BUMP ON A TRANSONIC AIRFOIL

**ICAS2010-P2.25:** U. Jung, C. Breitsamter, TU Munich, Germany  
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**ICAS2010-P2.26:** H. Otsu, Y. Kamada\*, Y. Yamagiwa\*, et al, Ryukoku Univ., Japan; \*Shizuoka Univ., Japan; \*\*Hirobo Ltd., Japan; \*\*\*JAXA, Japan  
ATTITUDE CONTROL OF UAV USING DBD PLASMA ACTUATOR

<b>ICAS2010-P2.27:</b> H. D. Cerón-Muñoz, F. M. Catalano, Univ. of São Paulo, Brazil AERODYNAMIC INTERFERENCE OF A POWER-PLANT SYSTEM ON A BLENDED WING BODY CONFIGURATION
<b>ICAS2010-P2.28:</b> M. Neamtu, S. Nebancea, INCAS, Romania FAST METHOD FOR AERODYNAMIC INTERFERENCE CALCULATION OF MULTIPLE SURFACE-BODY COMBINATIONS IN SUBSONIC FLOW
<b>3. MATERIALS AND STRUCTURES</b>
<b>ICAS2010-P3.1:</b> A. -N. Tang, Z. -T. Zhou, J. -T. Cao, Chinese Flight Test Establishment, China A TECHNIQUE OF LANDING GEAR LOADS CALIBRATION WITH STRAIN GAUGES
<b>ICAS2010-P3.2:</b> X. H. Wang, S. P. Cheng, Beihang Univ., China STRUCTURAL DESIGN APPROACHES TO IMPROVE ENVIRONMENTAL WORTHINESS OF HUMIDITY, FUNGUS AND SALT FOG FOR AIRBORNE EQUIPMENT
<b>ICAS2010-P3.3:</b> M. Fairuz, R. Mohammed, G. Clark, et al, RMIT Univ., Australia; *DSTO, Australia STABLE TEARING IN AIRCRAFT MATERIALS
<b>ICAS2010-P3.4:</b> Z. Louli, M. Heller*, G. Clark**, QinetiQ AeroStructures P/L, Australia; *DSTO, Australia; **RMIT Univ., Australia ANALYSIS METHODS FOR CRACK GROWTH IN AIRCRAFT UPPER WING STRUCTURE AFTER HIGH LOADS
<b>ICAS2010-P3.5:</b> U.H. Tiong, B. Crawford*, G. Clark, RMIT Univ., Australia; *DSTO, Australia THERMO-MECHANICAL FATIGUE BEHAVIOUR OF COATING SYSTEMS AT AIRCRAFT JOINTS
<b>ICAS2010-P3.6:</b> Y. Badrukhin, Siberian Aeronautical Research Institute, Russian Federation NONLINEAR ANALYSIS BY STRENGTH EVALUATION AND FABRICATION METHOD OF THIN-WALLED AIRFRAMES
<b>ICAS2010-P3.7:</b> M. Rathnasabapathy, J. Bayandor, RMIT Univ., Australia CRASHWORTHINESS ANALYSIS OF ADVANCED AEROSPACE STRUCTURES SUBJECT TO BALLISTIC IMPACTS
<b>ICAS2010-P3.8:</b> A.C. Orifici, V. Pickerd*, I. Herszberg**, RMIT Univ., Australia; *Monash Univ., Australia; **CRC-ACS Ltd, Australia AN EXPERIMENTAL INVESTIGATION INTO DAMAGE MODES AND SCALE EFFECTS IN CFRP OPEN HOLE TENSION COUPONS
<b>ICAS2010-P3.9:</b> Z. Wang, Y. Y. Wang, Beijing Aeronautical Technology Research Center, China A STUDY OF THE METHOD FOR CALCULATING FATIGUE DAMAGE OF AIRCRAFT BY USING RECORDED LOAD FACTORS
<b>ICAS2010-P3.10:</b> M. Badiy, A. Abedian, Sharif Univ. of Technology, Iran DESIGN OF A LARGE SPACE STRUCTURE FOR PASSIVE VIBRATION CONTROL AND WEIGHT REDUCTION AS A MULTIDISCIPLINARY OPTIMIZATION
<b>ICAS2010-P3.11:</b> F. H. Dezfuli, S. Khalilian, A. Abedian, Sharif Univ. of Technology, Iran DYNAMIC CONTROL OF PLATE WITH EMBEDDED SHAPE MEMORY ALLOY WIRES
<b>ICAS2010-P3.12:</b> A. Tronche, Albert & Duval, France NEW GRADES IN STAINLESS STEELS, ALUMINIUM & TITANIUM ALLOYS FOR AERO-STRUCTURES
<b>4. PROPULSION</b>
<b>ICAS2010-P4.1:</b> Y. R. Ma, Chinese Flight Test Establishment, China FLIGHT TEST TO VALIDATE ENGINE SURGE-ELIMINATING SYSTEM USING DISTURBED BOARD ON FLIGHT TEST BED
<b>ICAS2010-P4.2:</b> M. Chen, Beihang Univ., China CONTROL LAW DESIGN OF A MA 3.5, MIXED FLOW, AFTERBURNING, TWO-SPOOL TURBOFAN ENGINE
<b>ICAS2010-P4.3:</b> L. Cho, S. Lee, J. Cho, Hanyang Univ., Korea NUMERICAL AND EXPERIMENTAL ANALYSES OF THE DUCTED FAN FOR THE SMALL VTOL UAV PROPULSION
<b>ICAS2010-P4.4:</b> L. Pintat, R. Royan, R. Martet, et al, Snecma, France LOW PRESSURE TURBINE DESIGN TIME AND PERFORMANCE IMPROVEMENT USING MULTIDISCIPLINARY OPTIMIZATION AND DETAILED CAD MODEL
<b>ICAS2010-P4.5:</b> C. Fureby, FOI, Sweden A COMPUTATIONAL STUDY OF A MULTI-BURNER ANNULAR AERO GAS TURBINE
<b>5. FLIGHT DYNAMICS AND CONTROL</b>
<b>ICAS2010-P5.1:</b> M. Sato, T. Hagiwara, JAXA, Japan IN-FLIGHT SIMULATOR CONTROLLER DESIGN AND EXPERIMENTAL RESULT
<b>ICAS2010-P5.2:</b> J. Lee, D. Lee, Korea Aerospace Research Institute, Korea ESTIMATION AND VALIDATION OF LATERAL-DIRECTIONAL STABILITY/CONTROL DERIVATIVES FOR THE FLIGHT TRAINING DEVICE
<b>ICAS2010-P5.3:</b> R. K. Nangia, M. E. Palmer, Nangia Aero Research, UK X-31 VECTOR AIRCRAFT, LOW SPEED STABILITY & CONTROL, UNDERSTANDING FROM COMPARING WIND TUNNEL DATA & THEORY
<b>6. SYSTEMS, SUBSYSTEMS AND EQUIPMENT</b>
<b>ICAS2010-P6.1:</b> Y. Zhu, Beijing Aeronautical Technology Research Center, China MODELING OF RADAR DETECTION RANGE WITH JAMMING
<b>ICAS2010-P6.2:</b> M. Jie, Y. Zhu, Q. Gao, Beijing Aeronautical Technology Research Center, China AN EFFECTS EVALUATION METHOD ON AM ANGLE DECEPTION JAMMING
<b>ICAS2010-P6.3:</b> C. L. Wang, J. G. Wang, S. M. Hong, Beijing Aeronautical Technology Research Center, China ANTI-JAMMING CAPABILITY EVALUATION OF COHERENT SIDELobe CANCELLATION
<b>ICAS2010-P6.4:</b> H. Jin, J. -Y. Ki, S. -H. Kho, et al, Easy Gas Turbine Co., Ltd., Korea FLOW CHARACTERISTICS OF CIRCUMFERENTIALLY ARRAYED CIRCULAR MULTIPLE
<b>ICAS2010-P6.5:</b> Y. -J. Yoo, S. -H. Kho*, J. -Y. Ki*, et al, Agency for Defense Development; *Easy Gas Turbine Co.; **Firstec Co., Korea A STUDY ON THE CONCEPTUAL DESIGN OF ENVIRONMENTAL CONTROL SYSTEM WITH MODELING AND SIMULATION S/W
<b>ICAS2010-P6.6:</b> H. Kobayashi, A. Nishizawa, JAXA, Japan DECREASE IN GROUND-RUN DISTANCE OF AIRPLANES BY APPLYING ELECTRICALLY-DRIVEN WHEELS
<b>ICAS2010-P6.7:</b> D. Jwo, Y. Chang, F. Chung, National Taiwan Ocean Univ., Taiwan, China GPS RECEIVER CODE TRACKING LOOP DESIGNS USING THE NONLINEAR FILTERS

<b>ICAS2010-P6.8:</b> H. Zhang, F. Mollet, S. Saudemont, et al, HEI, France; *Hispano-Suiza, France HYBRID STORAGE AND DISSIPATION SYSTEMS BASED POWER MANAGEMENT IN A LOCAL DC POWER DISTRIBUTION SYSTEM OF MEA
<b>ICAS2010-P6.9:</b> Y. Jianyuan, L. Hanghang, G. Liangmin, Beijing Aeronautical Technology Research Center, China STUDY AND APPLICATION OF THE AIRBORNE VERTICAL ATMOSPHERIC PROFILING SYSTEM'S INSTALLATION ON AIRCRAFT
<b>ICAS2010-P6.10:</b> R. Meuret, O. Berry*, Y. Hamieh**, et al, Hispano-Suiza, France; *Green Lab.*; **Ampere Lab.** SIC INVERTER OPTIMIZATION FOR HIGH TEMPERATURE APPLICATIONS
<b>ICAS2010-P6.11:</b> L. Borello, P. Maggiore, M. Dalla Vedova, Politecnico di Torino, Italy A COMPARISON BETWEEN DRY FRICTION DISCONTINUOUS COMPUTATIONAL ALGORITHMS
<b>ICAS2010-P6.12:</b> J. Larsson, R. Ekrot, Saab AB, Sweden THE COBRA HELMET MOUNTED DISPLAY SYSTEM IN GRIPEN
<b>ICAS2010-P6.13:</b> P. Rosati, S. Ricci*, A. Scotti*, et al, Centro Soccorso Alpino di Trento, Italy; *Politecnico di Milano, Italy; **Kong s.p.a., Italy ACTIVE STRETCHER CONTROL DEVICE FOR IMPROVING MOUNTAIN S.A.R. HELICOPTER MISSIONS
<b>ICAS2010-P6.14:</b> Y. I. Jenie, H. Mohamad, B. Sabastian, et al, Institute of Technology Bandung, Indonesia EXPERIMENT ON THE APPLICATION OF A CUBE TYPE GYROSCOPE-FREE INERTIAL MEASUREMENT UNIT ON LAPANS RUM PAYLOAD-TEST ROCKETS
<b>7. SYSTEMS ENGINEERING AND SUPPLY CHAIN</b>
<b>ICAS2010-P7.1:</b> C. van der Velden, H-L. Zhang, X. Yu, et al, RMIT Univ., Australia; *GKN Aerospace Engineering Services Pty Ltd, Australia EXTRACTING ENGINEERING FEATURES FROM B-REP GEOMETRIC MODELS
<b>ICAS2010-P7.2:</b> T. Kosmider, K. Santarek, TECHNOLOGY PARTNERS Foundation, Poland STRUCTURAL OPTION FOR FOSTERING INNOVATION IN THE AEROSPACE AND AVIATION INDUSTRIES
<b>ICAS2010-P7.3:</b> A. Pozzetti, C. Bil, G. Clark, RMIT Univ.; Australia IMPLEMENTATION OF PERFORMANCE BASED SYSTEM ASSESSMENT OF MILITARY MULTI-MISSION PLATFORMS
<b>8. AIR TRANSPORT SYSTEM EFFICIENCY</b>
<b>ICAS2010-P8.1:</b> M. Zanin, Innaxis Foundation & Research Institute, Spain MEASURING AIRCRAFT FLOWS COMPLEXITY
<b>ICAS2010-P8.2:</b> H.F. Wang, B. Huang, Beijing Aviation Meteorological Institute, China THE EXPERIMENTAL FORECAST FOR AIRPORT TOTAL CLOUD COVER USING THE LINEAR AND NONLINEAR MODULES
<b>ICAS2010-P8.3:</b> M. Groppe, R. Pagliari, D. Harris, Cranfield Univ., Germany MONITORING AIRCRAFT TURN-ROUND PROCESS: APPLYING A QUALITATIVE COGNITIVE MODEL BASED ON FIELD OBSERVATIONS
<b>ICAS2010-P8.4:</b> K. O. Ploetner, TU Munich, Germany PASSENGERS ARE FLYING GREEN!? SIMULATION OF PASSENGER DEMAND FOR FUTURE AIR TRANSPORT CONCEPTS WITH CHANGED BLOCK TIMES
<b>ICAS2010-P8.5:</b> M. Schultz, H. Fricke, TU Dresden, Germany EVALUATION OF IMPROVED AIRPORT EMERGENCY PROCEDURES CONSIDERING PASSENGER BEHAVIOR
<b>9. SAFETY AND SECURITY</b>
<b>ICAS2010-P9.1:</b> L. Brown, Western Michigan Univ., USA COUNTERMEASURES TO MITIGATE EFFECTS OF FATIGUE AMONG FLIGHT ATTENDANTS: TO IMPROVE SAFETY AND PRODUCTIVITY
<b>ICAS2010-P9.2:</b> Y.T. He, W.J. Shu, R.H. Cui, et al, Air Force Engineering Univ., China AN ASSESSMENT MODEL OF AIRCRAFT STRUCTURAL SAFETY BASED ON ROUGH SET THEORY
<b>ICAS2010-P9.3:</b> C. M. Geacar, Politehnica Univ. Bucharest, Romania REDUCING PILOT / ATC COMMUNICATION ERRORS USING VOICE RECOGNITION
<b>ICAS2010-P9.4:</b> L. Brown, Western Michigan Univ., USA IN-FLIGHT SECURITY: CRITICAL IMPROVEMENTS NEEDED
<b>ICAS2010-P9.5:</b> M. Asim, N. Ehsan, K. Rafique, CASE, Pakistan PROBABLE CAUSAL FACTORS IN UAS AIRCRAFT ACCIDENTS BASED ON HUMAN FACTOR CLASSIFICATION AND ANALYSIS METHOD
<b>10. CHALLENGE OF THE ENVIRONMENT</b>
<b>ICAS2010-P10.1:</b> S. Weidner, TU Berlin, Germany IMPACT OF AIRCRAFT PERFORMANCE ON NOISE EMISSIONS UNDER SPECIAL CONSIDERATION OF DIFFERENT TAKEOFF PROFILES

# GENERAL INFORMATION

## LOCATION AND DATES

The 27<sup>th</sup> ICAS Congress will be held at the Acropolis Congress Center Nice, France from Sunday 19 September to Friday 24 September 2010.

## CONFERENCE LANGUAGE

Conference language is English.

## REGISTRATION FEES (EUROPEAN EUR €)

### Category

Member <sup>1</sup> - early registration <sup>2</sup>	740 €
Member - normal registration <sup>3</sup>	885 €
<u>Member - on site<sup>4</sup></u>	<u>975 €</u>
Non-Member - early registration	900 €
Non-Member - normal registration	1090 €
<u>Non-Member - on site</u>	<u>1175 €</u>
Student <sup>5</sup> - early registration	130 €
Student - normal registration	150 €
<u>Student - on site</u>	<u>170 €</u>
Retired Person <sup>6</sup> (member) early reg.	500 €
Retired Person (member) normal reg.	550 €
Retired Person (member) on site	600 €
Accompanying Persons <sup>7</sup>	50 €
Accompanying Children below 16 years	free

### REGISTRATION FEES NOT SUBJECT TO VAT

## CONDITIONS

<sup>1</sup> Members of any ICAS Member Society or ICAS Associate organization.

<sup>2</sup> Early registration means before 15 June.

<sup>3</sup> Normal registration means before 1 August.

<sup>4</sup> On site registration means after 1 August.

<sup>6</sup> Retired above 65 years of age

<sup>7</sup> Any accompanying person must be registered.

## <sup>5</sup>STUDENTS

Students = undergraduate or graduate full time students, who will not have completed doctorate studies by the date of the congress. The student verification section of the registration MUST be completed and signed. Student registrations without this section completed will be returned to the applicant.

### Registration fee includes:

**Full Delegates** – Attendance at the Congress sessions, coffee/tea and water, lunch from Monday to Thursday, Welcome Reception on Sunday, Congress Reception on Monday, Final Programme including short abstracts, Proceedings on CD-ROM, Congress bag, name badge.

**Students** – Same as Full Delegates.

**Retired Persons** – Same as Full Delegates.

**Accompanying Persons** – Attendance at Welcome Reception on Sunday, and Congress Reception on Monday evening, possibility to book organized Social Programme.

## REGISTRATION DESK

The registration desk, situated on the ground floor at the Acropolis Nice, will be open during the following hours:

Sunday 19 September	16:00 - 19:00 hrs
Monday 20 September – Thursday 23 September	08:00 - 17:00 hrs

## REGISTRATION AND PAYMENT

Participants are required to complete the registration form in this programme\*.

3AF is responsible for all aspects concerning registration. The complete registration form must be faxed or mailed directly to 3AF.

\* An electronic version of the registration form is available on [www.icas2010.com](http://www.icas2010.com) (or [www.icas.org](http://www.icas.org)). When using this form, it is appreciated if the registration form is downloaded and filled in by use of a PC.

*For further information concerning registration & payment, please contact:*

3AF – ASSOCIATION AERONAUTIQUE ET ASTRONAUTIQUE DE FRANCE  
Mr. Fabrice VORILLON  
6, RUE GALILEE  
F – 75016 PARIS  
Telephone: +33 (0)1 56 64 12 38  
Fax: +33 (0)1 56 64 12 31  
e-mail: [fabrice.vorillon@aaaf.asso.fr](mailto:fabrice.vorillon@aaaf.asso.fr)

## METHODS OF PAYMENT

Upon receiving your registration form, 3AF will send you a confirmation. Your receipt will be sent to you by e-mail. Please choose and indicate one of the two methods of payment noted in this section. All payments must be in EURO. If you choose to pay by credit card, the full amount will be charged to your credit card prior to the congress date. Cheques are not accepted.

### *Bank Transfer:*

Bank name: Société Générale Agence AG  
Address: 43-45 Av Kléber, 75784, Paris-France  
Account N°: 0330000037260771 18  
IBAN: FR76 3000 3033 0000 0372 6077 118  
SWIFT: SOGEFRPP

### *Credit Card:*

Visa, Master Card and American Express are accepted. For those paying by credit card, the total cost for registration and technical tours will be charged to your credit card.

## TOUR RESERVATIONS

3AF in collaboration with Voyages C. Mathez has arranged a pre-congress tour as well as a number of tours for accompanying persons listed on the following pages. Participants who wish to book these tours should complete the accompanying person's programme or/and the post congress tour registration online at <http://www.matheztravel.com/icas2010accommodation/> section "Tours". Tour reservations will be confirmed when tour charges are paid in full. Otherwise please contact Voyages C. Mathez directly at: [icas2010tours@matheztravel.com](mailto:icas2010tours@matheztravel.com)

## HOTEL RESERVATIONS

Voyages C. Mathez has reserved blocks of rooms at the hotels listed on the following pages from Saturday 18, September to Saturday 25, September (6 nights) where rates have been especially negotiated for ICAS 2010 delegates. Bookings will be taken on a first-come, first-served basis. If the hotel of your request is fully booked, an alternative reservation will be made at another hotel. Those who wish to book the accommodation via Voyages C. Mathez should complete the hotel reservation form online at [www.icas2010.com/accommodation](http://www.icas2010.com/accommodation).

You can find the location of the hotels in the map included on page 47. Hotel reservations can only be confirmed upon receipt of a deposit (room rate for the 1<sup>st</sup> night for the stay of 1 night and a 2 night deposit for a stay of 2 nights or more).

To secure a hotel reservation, please make your reservations before 4<sup>th</sup> August 2010. For reservations and payments received later than 4<sup>th</sup> August, all necessary efforts will also be done to procure a hotel room for you. Please contact Voyages C. Mathez at: [icas2010accommodation@matheztravel.com](mailto:icas2010accommodation@matheztravel.com).

## **CANCELLATION OF REGISTRATION, ETC.**

After you have received the confirmation notice & the invoice from 3AF, cancellation is subject to the following charges. Notification of cancellation must be made in writing to 3AF.

### **Registration fee**

Cancellations must be reported in writing to 3AF. It must be received by **1 August 2010** in which case registration fees will be refunded except for a cancellation fee of EUR 100. In case the cancellation is received after 1 August 2010, no refund would be given. This includes also the costs of the congress banquet.

### **Accompanying Persons Programme & Post Congress tours**

Up to 14 days prior to the tour date: No Charge. Up to 5 days prior to the tour date: 50 % of the tour fare. On the day of tour or No Show: 100% of tour fare.

### **Hotel Reservations**

Changes in reservations and cancellations must be reported in writing only to Voyages C. Mathez. After receiving the reservation confirmation, the guest automatically becomes the binding contract partner of the hotel. In the event of an early departure or a No Show, the hotel is entitled to charge the entire reserved period. For cancellations later than **4<sup>th</sup> August, 2010**, the deposit will not be refunded unless the room is taken by another guest. **If you don't show up**, the total amount of nights reserved will be charged.

## **CONGRESS PROCEEDINGS**

The ICAS 2010 Congress proceedings are available on CD-ROM, which are included in the registration fee where indicated. Additional CD-ROM can be ordered with the registration form at a cost of 120 EUR.

## **INSURANCE**

Participants are advised to take out their own travel insurance and to extend any private policies for personal possessions they may be bringing with them. The Congress organizers do not cover participants against travel, cancellations or bookings or loss/theft of belongings.

## **PASSPORT AND VISA**

In France, everyone must have a valid identity card or passport. It is the responsibility of each delegate to obtain all the necessary documents, including visa if necessary. Participants requiring visa should apply to a French consular office or diplomatic mission in their respective country well in advance to departure. Participants are advised to contact their local travel agencies or airline companies for assistance. Details and an application form for Schengen Visa in several languages can be found on:

<http://www.diplomatie.gouv.fr>

“English“

“Going to France“

If you need any assistance for visa acquisition (like a special invitation letter from 3AF) after you have contacted your local travel agencies or airline companies, please feel free to contact the ICAS 2010 Local Organizing Committee (L.O.C.) Office. You are strongly advised to do this not later than 30 June 2010.

The ICAS 2010 L.O.C. Office 3AF – ASSOCIATION AERONAUTIQUE ET ASTRONAUTIQUE DE FRANCE Mr. Fabrice VORILLON 6, RUE GALILEE F – 75016 PARIS Telephone: +33 (0)1 56 64 12 38; Fax: +33 (0)1 56 64 12 31 E-mail: <a href="mailto:fabrice.vorillon@aaaf.asso.fr">fabrice.vorillon@aaaf.asso.fr</a>
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## USEFUL HINTS

### CONGRESS CENTER NICE

Located in Southern Europe in the south eastern region of France, Nice is a privileged crossroads between the Alps, Provence, Corsica and Italy. The city occupies an exceptional natural site in the heart of the French Riviera. It stretches over a coastal plain southward into the Mediterranean and bounded from East to West by a succession of hills. In the background, rise the first peaks of the Alpine foothills, some reaching over 9000 ft above sea level, only 31 miles (from the coast) as the crow flies...

### AIR TRAVEL AND ACCESS TO THE VENUE PASS

#### By taxi from the Airport

The Nice Côte d'Azur airport is located at about 8 km distance from the conference venue. The costs for a taxi taking you to the Acropolis venue are about 30 EUR and it takes approximately 20 minutes.

#### Public transport from the Airport

*Approximately 30 min, 4 EUR:*

Bus no. 98, direction: "Gare Routiere" until "Cathedrale / Vieille Ville" stop, there you hop on bus no. 16 direction: "Ariane / General Saramito" until the "Risso/ Palais" stop, which is within 2 minutes walking distance from the venue.

#### By rail

Travel fast and comfortably to Nice with the French railways (SNCF) from different locations. From the station, you have the possibility of taking the tramway at the "Gare Thiers" stop, direction "Pont Michel" and get off at the "Palais des Expositions" stop. The conference venue is opposite to the stop.

## OTHER INFORMATION

### Currency

The currency used in France is European EURO (EUR, €). Notes are available in units of EUR 5, 10, 20, 50, 100, 200, and coins in units of Cent 1, 2, 5, 10, 20, 50 and EUR 1 and 2.

Traveller's checks and currencies from most countries can be exchanged for European EUR at major banks and hotels. Only European EUR is accepted at regular stores and restaurants.

### Electricity

220-230 volts AC, 50-60 Hz

### Business Hours

Bank Mo - Fri 10:00–13:00 / 14:00–17:00 Closed on Saturday afternoon, Sundays and holidays.

Shops 10:00–19:30 (typical time); Restaurants 11:00–23:00 (typical time).

### Mobile phones

For the use of mobile phones in Nice, France, they must be designed for the GSM frequency-bands 900 MHz or 1800 MHz.

### Credit Cards

International credit cards such as Master Card, Visa, American Express and Diners Club are widely accepted at hotels, department stores, large shops and restaurants.

### Tax and Tipping

In France there is the custom of paying 10 percent of the amount of the bill as tipping in restaurants.

A 19,6% sales tax applies to almost all consumer goods sold in France.

### Climate

Nice has the advantage of an exceptional micro-climate which has contributed to its worldwide renown for almost 200 years. Although the city opens onto the sea, Nice is protected from the wind by the surrounding hills and the Estérel Mountains to the west, and the north-western barrier of the Mercantour Alps. The sea breezes give a mild climate in winter and reduce the heat in the summer.

# SOCIAL PROGRAMME

**Sunday 19 September**

**Welcome Reception**

**18:30 - 19:30 hrs**

(included in registration fee)

Delegates and Accompanying Persons are invited to attend the Welcome Reception at the Foyer of Hall 2 on the second floor of the Acropolis Convention Centre.

**Monday 20 September**

**Congress Reception**

**19:30 – 21:30 hrs**

(included in registration fee)

Delegates and Accompanying Persons are invited to attend the Congress Reception, the venue is yet to be defined. Please visit the website in the coming months for more information.

**Tuesday 21 September**

**Student Party**

**19:00 – open end (official frame until 21:00)**

**10 € per person**

Students are invited to attend a special student party, the venue is yet to be defined. This party is arranged for students to promote the international friendship among future aeronautical scientists and engineers.

**Thursday 23 September**

**Congress Banquet**

**19:30 – 23:00 hrs**

**90 € per person**

The Congress Banquet will be held in Monaco's Top Cars Collection. Transport will be provided to and from the venue. Buses will leave from the Acropolis Convention Centre. The banquet will serve a three course dinner including beverage until 23:00. Guests must present purchased tickets for entry.

Full-table booking is possible – 10 persons table ticket is available at a cost of **900 €/ full table**.

## PRE-CONGRESS TOUR

**(subject to minimum numbers of participants, English speaking guides)**

**Saturday 18 September**

**Full Day Tour – Sainte Marguerite Island**

**09:00 – 18:00 hrs**

**98 € per person**

*This rate includes: the visit of the island with 2 professional private guides, the round trip boat transfers, the round trip transfer by private coach, highway and parking fees and the entrance fees at the Fort Royal and the lunch.*

*Minimum number of participants per bus: 40 persons*

*Maximum number of participants per bus: 50 persons*

**The Île Sainte-Marguerite** is the largest of the Lérins Islands, about half a mile off shore from the French Riviera town of Cannes. The island is approximately 3km in length (East to West) and 900m across. The island is most famous for its fortress prison (the *Fort Royal*), in which the so-called Man in the Iron Mask was held in the 17th century. A fifteen-minute boat ride from Cannes, the Île de Sainte-Marguerite is low in profile and heavily wooded with umbrella pines and eucalyptus. Both islands (with the Île Saint-Honorat) are looked after by the Office national des forêts, and are a popular tourist attraction of natural interest.

The historic *Fort Royal* now houses a youth hostel and a Museum of the Sea, featuring items recovered from ancient Roman and Saracen shipwrecks. Visitors are also able to view a number of former prison cells (including that occupied by the Man in the Iron Mask) and a Roman cistern room.

Close to the *Fort Royal* is a small cemetery for French soldiers who died there when it was used for convalescence during the Crimean War, and alongside it is a cemetery for North African soldiers killed on the Allied side during World War II.

## ACCOMPANYING PERSONS PROGRAMME

(subject to minimum numbers of participants, English speaking guides)

Monday 20 September

Half Day Tour (14:00 – 18:00)

Eze Village

25 € per person

**PLEASE NOTE THIS TOUR IS QUITE DEMANDING – TO REACH EZE VILLAGE A WALK UP A STEEP HILL IS REQUIRED**

*This rate includes: 1 professional private guide, the round trip transfer by private coach, the visit of the village, the exotic garden and the perfume factory and the corresponding entrance fees.*

*Minimum number of participants per bus: 40 persons; Maximum number of participants per bus: 50 persons*

### **Discover one of the most beautiful perched village of the French Riviera !**

The tour begins via the scenic middle Corniche to reach the spectacularly situated medieval village of Eze, perched dizzily over the sea. Eze is a spectacular isolated village: it clings like an eagle's nest, to a rock spike towering 427 m over the sea. Following the way to the Château and discover plenty of authentic alleys, tiny squares and a barocco church: the Chapel of the white penitents...

The streets are narrow, sometimes stepped and steep and at times running beneath the carefully restored houses that are now smart boutiques and artist's studios.

At every corner there are flowers, shrubs, fountains and unfettered breathtaking views of the sea and mountains... After visiting the village, you will discover the exotic garden: after WWII, a group of men take on their back some bags filled with ground and carry stones towards the ruins of the castle where some sections of wall still remain. It is there that René Gianton, the mayor of the time, with the assistance of Jean Gastaud founder of Monaco Exotic garden, decided to create an exotic garden. Before leaving Eze, you will have the opportunity to visit the Fragonard perfume factory.

Monday 20 September

Half Day Tour (14:00 – 18:00)

Fondation Maeght and Saint Paul de Vence village

35 € per person

*This rate includes: 1 professional private guide, the round trip transfer by private coach, the visit of the village & the foundation, the corresponding entrance fees*

*Minimum number of participants per bus: 40 persons; Maximum number of participants per bus: 50 persons*

Built on its rocky outcrop and surrounded by its ramparts erected on the orders of François 1er, St Paul is certainly one of the most beautiful villages in Provence. From the ramparts, wonderful views over the surrounding hills, the Côte d'Azur and of course the sea.

The beauty of the surrounding area, quality of life and exceptional light has inspired numerous famous artists, painters, writers and poets, some of whom took up residence in the village.

We propose you first to visit the Fondation Maeght (1 hour duration)... **a unique site dedicated to art**

The Marguerite and Aimé Maeght Foundation is a unique example of a private European Foundation. Inaugurated on July 28th 1964 by André Malraux, then Minister of Cultural Affairs, this architectural ensemble was entirely conceived and financed by Aimé and Marguerite Maeght to present modern and contemporary art in all its forms.

A true museum in nature, the Maeght Foundation is an exceptional site that contains one of the most important collections in Europe, with paintings, sculptures; drawings and graphic works from the 20th century: Bonnard, Braque, Calder, Chagall, Giacometti, Léger, Miró...

More than 200 000 visitors come each year to the Maeght Foundation, which has put on over 100 monographic or thematic exhibitions since its opening. Writers, poets, philosophers, art historians are invited every year to the Maeght Foundation to give thematic conferences about the exhibitions.

Designated as being of public interest, the Maeght Foundation is autonomous. It is not linked to the National Museum Administration and receives no funding from the State.

**After this visit**, the guide will drive you to the **Saint Paul** perched village where you will walk around the narrow and truly picturesque streets of the village, from the Porte Royale to the Porte Sud via pedestrian areas and you will admire magnificent stone façades from the XVI<sup>e</sup> and XVIII<sup>e</sup> centuries.

**Tuesday 21 September Full Day Tour (9:00 - 18:00)**

**Nice Baroque walking tour & Nice Belle Epoque panoramic tour 65 € per person**

*This rate includes: 1 professional private guide, the pedestrian & the panoramic visits, lunch & local products taste and Russian Cathedral entrance fees*

*Minimum number of participants: 40*

Discover with a private guide the secrets of the old town of Nice with a pedestrian tour. You will fully appreciate the privileged as well as "singling out" atmosphere of this Nice old town neighbourhood. The beautiful old Nice was born between the hill of the "Castle" and the "Ponchettes" pier (a row of buildings converted into art galleries). It was built under the direction of the Dukes of Savoy and has remained today almost exactly as Alexandre Dumas had described it over a century ago "an almost Italian town resting on its hills with its sculpted or painted houses and its "Madonnas" at the corner of the streets".

***While the visit, take a seat to taste famous local products of Nice!***

In smooth shaded streets of the old town you will discover a fabulous explosion of colors, fragrances and flavors, especially the famous Socca, a cake flour roasted chickpeas that you must try, and Tourte aux Blettes (Swiss chard pie) and a glass of wine country: a very typical sound of Nice soul ....

***Then, have a lunch in a typical and local restaurant of the old Nice!***

You just have to open the door and come to taste the niçoise and provençal specialties which make the culinary reputation of the Southeast of France.

***After lunch, take the bus to discover another era of Nice, Nice Belle Epoque!***

Escorted by your private guide, you will discover the major monuments in Nice linked to "the Belle Epoque".

**Wednesday 22 September Half Day Tour (9:00 - 13:30)**

**55 € per person**

**Nice, the Chagall Museum and Wine tasting**

*This rate includes: 1 professional private guide, private coach disposal, visits, Chagall entrance fees and wine tasting*

*Minimum number of participants per bus: 40 persons; Maximum number of participants per bus: 50 persons*

**Nice Belle Époque**

Escorted by your private guide, you will discover the major monuments in Nice linked to "the Belle Époque". (Part of the tour will be done by coach). The tour starts in the **Mont Boron** area which possesses several outstanding villas. Amongst the elegant houses overlooking the sea, you'll find the surprising "**Chateau de l'Anglais**" with its Oriental's inspiration, pink facade and crenellated tower. Then, you'll proceed to the **hill of Cimiez** where the English aristocrat built luxury residences like the **Regina Palace** and Grand Hotel Victoria.

Nearby, in the park of **Château Valrose**, former home of Baron Van der Wies, you'll see an amazing wooden outhouse (little hut) from Siberia. You will have the opportunity to discover the **Chagall Museum in Cimiez**.

The Musée du Message Biblique Marc-Chagall (Marc Chagall Museum of Biblical Themes) stands out among Nice France museums as one of the most interesting on the French Riviera. It contains seventeen superbly displayed large canvases depicting biblical scenes and themes from the Old Testament in bright, joyous colors. The Chagall Museum also holds sculptures, stained glass windows, mosaics, tapestries, preparatory sketches, engravings, and lithographs from this important 20<sup>th</sup>-century artist.

**Wednesday 22 September Half Day Tour (14:00 - 18.00)**

**45 € per person**

**Villas Belle Époque of Saint Jean Cap Ferrat Kerylos & Ephrussi de Rothschild**

*This rate includes: 1 professional private guide, private coach disposal, visits, tea time*

*Minimum number of participants per bus: 40 persons; Maximum number of participants per bus: 50 persons*

**Fall into the Belle Époque Follies...!**

Go to the peninsula of St Jean Cap Ferrat, where the dense vegetation conceals the elegant house of the rich and famous, and hosts two "Belle Époque" villas.

**Kerylos Villas**

First you will visit a reconstitution of an ancient Greek villa: the Villa Kerylos

Kerylos, whose name means sea swallow, is an architectural dream that came true. Erected on the 'Baie des Fourmis' in Beaulieu, the villa is an absolutely unique reconstitution of the dwellings of ancient Greece, a striking image of refinement and beauty.

**Ephrussi de Rothschild Villas**

Afterwards, you will go to another splendid sample of the famous Belle Époque style: the Villa Ephrussi de Rothschild, inspired by the Italian Renaissance.

You will then share the passion of Ephrussi de Rothschild for her seven wonderful gardens overlooking the sea. Enjoy the unique panorama over the French Riviera from the patios, waterfalls and ornamental lakes.

**Thursday 23 September Half Day Tour (09:00 – 14:00)**

**41 € per person**

**Grasse & its International Perfume Museum**

*This rate includes: 1 professional private guide, private coach disposal, visits, entrance fees,*

*Minimum number of participants per bus: 40 persons; Maximum number of participants per bus: 50 persons*

**Grasse**

Ideally located between the Mediterranean Sea and the Alps Massif, **Grasse** has always been famous for its mild climate. Classified as a City of Arts, Grasse offers a mix of Genovese and Provençal inspiration, making it a unique medieval site: narrow streets, small places with Scents and Flavours markets, churches and Cathedral....

In Grasse, the World Capital of Perfumes, are cultivated the most refined raw material like the "Centifolia" Rose and the Jasmine of Grasse. Those who come to Grasse discover with amazement its perfumed streets....

**International Museum of Perfume**

Created in 1989, this museum is unique in the world, situated in the heart of Grasse, the capital of luxury perfume. This museum is an interactive site. The specialised guide will show you through the museum and makes you discover all fragrances and curiosities in the museum. The museum offers a perspective through the history of the perfume: raw materials, fabrication, industry, innovation, negotiation, design, customs and use: objet d'art, decorative art, textile, unique objects...

***After the museum visit, a visit of the old city will be organized and free time for lunch.***

**Perfumer's Country House**

The Perfumer's Country House is a conservatory for perfume plants, which are traditionally cultivated in Grasse. This botanic garden of 2 hectares offers an olfactory discovery of the centifolia rose fields, jasmine, orange blossom, violets...Between the old canal and the stone lake, you will also visit some contemporary art.

**Friday 24 September**

**Full Day Tour (09:30 – 18:00)**

**60 € per person**

**Menton & Monaco**

*This rate includes: 1 professional private guide, the round trip transfer by private coach, visit of Menton, lunch including beverage, and visit of Monaco*

*Minimum number of participants per bus: 40 persons; Maximum number of participants per bus: 50 persons*

**Menton**

Its privileged location between sea and mountains and its mild climate earned the most Italian of our cities to be known as the Pearl of France in the 19th century. The particularity of the city is to have a microclimate that allowed from the 15th century developing the cultivation of olive trees and citrus. These two activities have grown to constitute the backbone of the economy of the city until the 19th century; Menton became the city of Lemon. Now, Menton cultivates flowers for shipment to the perfume factories in Grasse. But it is the beautiful gardens created in the 19th century, famous for their tropical plants, which constitute the most original heritage of Menton.

After the visit, have a **lunch at the restaurant la "Chaumière"** with a good location overlooking the city of Monaco and the Mediterranean Sea.

Then, go discover the Principality of Monaco, so mythical and worldwide renowned city for its casino built in the 19th century.

## TECHNICAL TOURS FRIDAY 24 SEPTEMBER

Technical Tours are available to Delegates but are not included in the registration fees – number of participants is limited – reservations will be taken on a first-come, first served basis. Please note tickets will be bought up extremely quickly!!!

The following technical tours have been arranged by the Local Organizing Committee. The tours include coach transfers and lunch.

Please indicate your preference in the registration form and settle the technical tour fee. Also, please note that for the technical tours we shall require your biodata upon registration. DASSAULT Aviation Flight test center and EUROCOPTER **reserve the right to turn down participants that do not satisfy security requirements.**

### Technical Tour A

Istres and Marignane 08:30 – 18:00 hrs

Cost: 50 EUR

DASSAULT Aviation Flight Test Centre and EUROCOPTER

**NOTE:** There is a maximal amount of 100 tickets available for tour A

### Technical Tour B

Toulouse 08:00 – 18:00 hrs

Cost: TBD

**AIRBUS (A380 Assembly Hall) & THALES Aerospace (Flight Management and Cockpit)**

Participants will visit the Airbus A380 Assembly Hall and the THALES Aerospace Flight Management and Cockpit in Toulouse.

**IMPORTANT NOTE:** At the time for printing of this programme the possibilities to offer this tour at a reasonable cost are still being investigated.

Please check the website for the latest information before you download and fill out the registration form.

**REGISTRATION FORM**  
**27th Congress of the International Council of the Aeronautical Sciences**  
19 – 24 September 2010, Nice, France

**PLEASE RETURN TO:** 3AF – ASSOCIATION AERONAUTIQUE  
ET ASTRONAUTIQUE DE FRANCE  
Mr. Fabrice VORILLON  
6, RUE GALILEE  
F - 75016 PARIS  
Telephone: +33 (0)1 56 64 12 38  
Fax: +33 (0)1 56 64 12 31  
e-mail: [fabrice.vorillon@aaaf.asso.fr](mailto:fabrice.vorillon@aaaf.asso.fr)

Please download this form from <http://www.ICAS.org> or [www.ICAS2010.org](http://www.ICAS2010.org)  
**and type or print clearly in Block Capitals.**

**Personal Details**

Family Name: \_\_\_\_\_ First/Given Name: \_\_\_\_\_  
Title:  Prof.  Dr.  Mr.  Ms.  Other: \_\_\_\_\_ Position: \_\_\_\_\_  
Organisation: \_\_\_\_\_  
Department: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
City: \_\_\_\_\_  
Post/Zip Code: \_\_\_\_\_ Country: \_\_\_\_\_  
Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_  
ICAS Member Society/Associate (if applicable): \_\_\_\_\_  
Authors – please note your paper(s) ID number \_\_\_\_\_  
Session chairmen – please note your session number \_\_\_\_\_  
Mobile Phone No and/or hotel staying at (only applicable to authors/session chairs): \_\_\_\_\_

**Students**

I verify that this delegate is a full-time student studying at: \_\_\_\_\_  
Institution: \_\_\_\_\_ Department of: \_\_\_\_\_  
Signed: \_\_\_\_\_ Date: \_\_\_\_\_  
Name: \_\_\_\_\_ Position: \_\_\_\_\_  
Student registration No: \_\_\_\_\_

**Accompanying Person(s)**

(1) \_\_\_\_\_ (2) \_\_\_\_\_ (3) \_\_\_\_\_

**REGISTRATION FEES INCLUDE**

FULL DELEGATES: Attendance at the Congress sessions, coffee / tea, lunch each day, Welcome Reception on Sunday, Congress Reception on Monday, proceedings on CD-ROM, Congress bag, name badge.

STUDENT AND RETIRED PERSONS – Same as Full Delegates

ACCOMPANYING PERSONS: Attendance at Welcome Reception on Sunday, Congress Reception on Monday evening.

### (1) REGISTRATION FEES (European EUR)

Type	Number	Before June 15	Before August 01	on-site	Total (EUR)
Member*	_____	740	885	975	_____
Non-Member*	_____	900	1090	1175	_____
Student*	_____	130	150	170	_____
Retired (> 65)	_____	500	550	600	_____
Acc. Person(s)*	_____	50	50	50	_____
Extra CD-ROM	_____	120	120	120	_____

(\*) Please refer to General Information Conditions

**Sub total** \_\_\_\_\_

**REGISTRATION FEES NOT SUBJECT TO VAT**

### (2) CONGRESS FUNCTIONS

Date	Function	Cost	No. of Tickets	Total (EUR)
Sun 19 Sept.	Welcome Reception	Incl. for delegates, students & accompanying persons		
Mon 20 Sept.	Congress Reception	Incl. for delegates, students		
Tue 21 Sept.	Student Party	10 EUR	x _____ =	_____
	Extra Ticket	15 EUR	x _____ =	_____
Thu 23 Sept.	Congress Banquet	90 EUR	x _____ =	_____
	Full-Table-Choice	900 EUR (= 10 persons)		_____

**Sub-total** \_\_\_\_\_

### (3) TECHNICAL TOURS FRIDAY 24 SEPT.

(PLEASE CHECK LATEST INFORMATION ON THE WEBSITE BEFORE YOU FILL THIS PART)

**Subject to availability** -please fill in

**A:** 50 EUR \_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_ Total (EUR)

#### COMPULSORY INFORMATION for the TECHNICAL TOUR TICKET

Passport N° \_\_\_\_\_ Nationality \_\_\_\_\_

Date of Birth \_\_\_\_\_ Place of Birth \_\_\_\_\_

Date of Issue \_\_\_\_\_ Date of expiry \_\_\_\_\_

### (4) PRE CONGRESS & ACCOMPANYING PERSONS TOURS

Please book online at [www.icas2010.com/tours](http://www.icas2010.com/tours) or contact directly [icas2010tours@matheztravel.com](mailto:icas2010tours@matheztravel.com)

### SUMMARY OF PAYMENT

**Total Payment Enclosed** (1) + (2) + (3) = EUR \_\_\_\_\_

Methods of Payment: All payments should be made in European EUR.

**Bank Transfer** Payment can be made by bank transfer into Bank Name: Société Générale Agence AG , Address: 43-45 Av Klèber, 75784, Paris-France, account number: 30003-03300-0037260771-18, (IBAN FR76 3000 3033 0000 0372 6077 118), SWIFT: SOGEFRPP.

Please, fill in purpose for bank transfer "Participants Name".

**Credit Cards** Visa, Master Card and American Express are accepted. Hereby I authorize 3AF to charge my credit card.

Card No: \_\_\_\_\_ Expiry Date (MM/YY) \_\_\_\_\_/\_\_\_\_\_

Card Holder: \_\_\_\_\_ CID (last 3 digits on back of card): \_\_\_\_\_

Signature: \_\_\_\_\_

*Note: Cancellations must be reported in writing to 3AF before 1 August 2010 in which case registration fee will be refunded except for a cancellation fee of 100 EUR. Cancellations received after 1 August will not be refunded. Cheques are not accepted.*

# HOTEL RESERVATIONS

ICAS 2010 Conference organizers have arranged some block bookings for their delegates. In order to benefit from the negotiated rates, some special deposit conditions have to be respected.

## INDIVIDUAL BOOKING CONDITIONS

For a 1 night stay, you have to pay a deposit of 1 night at the confirmation of the booking  
For a 2 nights stay or more, you have to pay a deposit of 2 nights at the confirmation of the booking

**NO HOTEL RESERVATION WILL BE CONSIDERED IF RECEIVED WITHOUT A CORRESPONDING DEPOSIT.**

**CANCELLATION POLICY: PLEASE CHECK THE WEBSITE**

## RATES MENTIONED ONLINE INCLUDE BREAKFAST

CITY TAX IN SUPPLEMENT TO BE PAID PER DAY AND PER PERSON (2008 basis)

\* 1.20 € for a 4\*\*\*\* Hotel; \* 0.90 € for a 3\*\*\* Hotel; \* 0.70 € for a 2\*\* Hotel; \* 0.50 € for a 1\* Hotel

## CHOICE OF PRE-SELECTED HOTELS

Please note you will find rates and more accommodation information online at:

[www.icas2010.com/accommodation](http://www.icas2010.com/accommodation)

### FIRST CLASS HOTELS:

#### ELLINGTON

The Ellington hotel is a brand new 4 stars hotel in Nice since December 2006. It is located right in the city centre, close by the Massena Square. You will find privacy and elegance for this charming hotel which proposes a 1950's style decoration and a jazzy atmosphere, and an exclusive lounge offering a refined decor for relaxing moments ...The rooms are elegant, and offer voluptuousness and comfort. They are equipped with Flat Screen TV, Satellite, Refreshment Tray, Air -conditioning. Free High speed Internet Access in the lobby. *Walking distance to the Congress center: 30 minutes*

#### LE MERIDIEN

At Number One Promenade des Anglais, Le Méridien Hotel stands in the heart of the city facing the Mediterranean Sea and a stone's throw from the Old Town. Le Méridien offers spacious and elegant rooms decorated in shades of blue and yellow, and combine Mediterranean style with contemporary touches.

*Walking distance from Acropolis Congress Center: 20 minutes*

#### MERCURE NOTRE DAME

The recently renovated 4-star Mercure Nice Centre Notre Dame hotel is located in the heart of Nice, at few steps from the train station and 15 minutes from the Old Town & beaches. Enjoy the spacious indoor garden. The rooms are modern, spacious, well equipped and elegantly decorated.

*Walking distance to the Acropolis Congress Centre: 20 minutes or 10 minutes by the tramway*

#### NH NICE (EX SOFITEL)

Perfectly located at few steps away from the Congress Center and close to the old Nice, NH Nice has been 100% renovated in 2009 into a modern style. Rooms are nicely decorated, comfortable and spacious. Excellent value for money!

*Walking Distance from the Acropolis Congress Center: 5 minutes*

### SUPERIOR HOTELS:

#### ALBA

Hotel Alba in Nice on the French Riviera, charming 3 star design. This hotel is located in the heart of the city centre, near TGV train station, Promenade des Anglais and beaches, Old city centre and Acropolis convention centre.

*Walking distance to Acropolis congress center : 25 minutes*

#### APOGIA

The Apogia hotel is ideally located nearby the Acropolis convention centre. This modern hotel offers comfortable and convenient rooms for this category.

*Walking distance to the Acropolis Congress Centre: 10 minutes*

#### MALMAISON (LA)

This comfortable and sunny 3 stars hotel is located in a residential area, 200 meters walking distance from the "Promenade des Anglais" and the beach and the old town. It has been completely renovated in order to offer you modern and quality rooms.

*Walking distance to the Acropolis Congress Centre: 25 minutes*

### **NAUTICA BEST WESTERN**

The 3\*\*\* hotel Nautica is located near the Acropolis Congress Center, and the harbor. The comfortable rooms ensure your wellbeing and the hotel offers the ideal mix between business and pleasure with its bar, restaurant and private car park.  
*Walking distance to the Acropolis Congress Centre: 5/10 minutes*

### **NOVOTEL NICE CENTRE**

The Novotel Nice Centre is a 3 star hotel close to Acropolis convention centre and the exhibition centre: an ideal location for a congress stay. The hotel recently renovated features modern, zen style and air conditioned rooms. Satisfying buffet breakfast and swimming pool with panoramic views. *Walking distance to the Acropolis Congress Centre: 5 minutes*

### **UNIVERS**

Situated just 6 kilometers from the Nice airport and 1 kilometer to the Nice railway station, the standard 3 star Univers hotel Nice is located in the Nice city centre, in an ideal area. Within 10 minutes walk from the Promenade des Anglais and the main shopping area, this hotel proposes 71 comfortable rooms with fully equipped facilities. *Walking distance to Acropolis Congress Center : 25 minutes*

### **STANDARD HOTELS:**

#### **ALL SEASONS VIEUX PORT**

This 3 stars hotel is located near the harbor of Nice, close to old city with its flowers market and restaurants. It has been completely renovated in 2008 into a contemporary and modern style. Rooms are spacious, colored and original.  
*Walking distance to the congress center: 10 minutes*

#### **MERCURE MARCHE AUX FLEURS**

Beachfront and Delightful 3\*\*\* charming hotel, located in the heart of Nice overlooking the stunning Baie des Anges and at few steps from the old town centre, the flower market, the Opera House and the Place Massena. Warm welcoming, small but comfortable rooms with very charming and cozy decoration.  
*Walking distance to the Acropolis Congress Centre: 20 minutes*

#### **RELAIS D'ACROPOLIS**

Located at 15 minutes walking distance from the renowned Place Masséna, this 3 stars hotel was entirely renovated at the beginning of 2003. The rooms are functional, the bathrooms are decorated in a typically Provençal style .  
*In front of the Acropolis Congress Centre*

#### **VILLA LA TOUR**

The small hotel grants the entire charm of Southern France and offers a fascinating location, in the heart of Nice. Enjoy a romantic view over Nice from our small, but nice roof-garden. The 16 individually equipped rooms offer up-to-date facilities.  
*Walking distance from Acropolis Congress Centre: 10/15 minutes.*

### **TOURIST HOTELS**

#### **CITEA NICE ACROPOLIS**

The residence hotel Citéa Nice Acropolis, located at less than 5 minutes from the Convention Centre Acropolis, is a new hotel.  
*Distance from the Acropolis Congress Center: 2 minutes*

#### **IMPERIAL**

Located at less than 10 minutes walking distance from the Acropolis Congress Center, this hotel seems to be from the outside a manor from the end of the XIXth century. Surrounded with an agreeable garden, it offers you a quiet and warm atmosphere. The rooms offers a basic level of comfort. *Distance from the Acropolis Congress Center : 10 minutes*

#### **KYRIAD NICE CENTRE PORT**

Very close to the old city this hotel, situated within 5 min walk from the harbor, offers you simple comfort rooms .  
*Walking distance to the Acropolis Congress Centre: 10 minutes*

# MAP OF PRE-RESERVED HOTELS:



# ICAS 2010 SPONSORS



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Thales is a global technology leader for the Aerospace, Space, Defence, Security and Transportation markets. The company employs 68,000 people in 50 countries. With its 25,000 engineers and researchers, Thales has a unique capability to design, develop and deploy equipment, systems and services that meet the most complex security requirements. Thales has an exceptional international footprint, with operations around the world working with customers as local partners.



Dassault Aviation is a major world player in the aeronautical industry, involved in the civilian and military fields. The company's leadership status is driven by expertise in emerging and strategic technologies, trend-setting design capabilities, lean and flexible production facilities, a highly skilled and committed workforce, and a broad portfolio of civilian and military products. World leader for the top-of-the-range business jets and only manufacturer of business jets in Europe with the Falcon family, Dassault Aviation also produces the Rafale, first omnirole fighter in the world, operational in the French Navy and Air Force. The French authorities appointed Dassault Aviation as prime contractor of nEUROn, an European UCAV demonstrator programme.



Airbus is a leading aircraft manufacturer whose customer focus, commercial know-how, technological leadership and manufacturing efficiency have propelled it to the forefront of the industry. With revenues of over 27 billion euros in 2008, Airbus today consistently captures about half of all commercial airliner orders. The company also continues to broaden its scope and product range by applying its expertise to the military market. Headquartered in Toulouse, France, Airbus is owned by EADS. It is a truly global enterprise of some 52,000 employees, with fully-owned subsidiaries in the United States, China, Japan and in the Middle East, spare parts centres in Hamburg, Frankfurt, Washington, Beijing and Singapore, training centres in Toulouse, Miami, Hamburg and Beijing and more than 150 field service offices around the world. Airbus also relies on industrial co-operation and partnerships with major companies all over the world, and a network of some 1,500 suppliers in 30 countries.

## ICAS 2010

### INFORMATION CONTACTS:

ICAS Web Site: [www.icas.org](http://www.icas.org)

or ICAS Secretariat E-mail: [secrexec@icas.org](mailto:secrexec@icas.org)

3AF ICAS 2010 Web Site: [www.icas2010.org](http://www.icas2010.org)

or 3AF E-mail: [lisa.gabaldi@aaaf.asso.fr](mailto:lisa.gabaldi@aaaf.asso.fr)