

Air Transportation System Conferences 2013

July 8th - 10th 2013

Ecole Nationale de l'Aviation Civile

2nd International Conference on Interdisciplinary Science for Innovative Air Traffic Management (**ISIATM**)

4th International Air Transport and Operations Symposium (**ATOS**)

4th Association of Scientific Development of ATM in Europe (**ASDA**) Seminar

2013 **ComplexWorld** Seminar

Overview and Program

Organised by



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1. Background

From 8th to 10th of July 2013, l'Ecole Nationale de l'Aviation Civile (ENAC) will be pleased to host in Toulouse.

2013 Air transportation System Conferences:

- The 2nd International Conference on Interdisciplinary Science for Innovative Air Traffic Management (**ISIATM**), organised by ENAC and Embry-Riddle Aeronautical University
- The 4th International Air Transport and Operations Symposium (**ATOS**), organised by the Faculty of Aerospace Engineering Delft University of Technology Delft, the Netherlands
- The 4th Association for the Scientific Development of ATM in Europe (**ASDA**) Seminar
- 2013 **ComplexWorld** Seminar

The purpose of the conference series is to bring together scientists (mainly from academia), engineers, and practitioners from around the world to assist in the development of the knowledge base necessary to improve future Air Traffic Management systems around the world.

The program committee welcomes high quality and innovative papers addressing creative and interdisciplinary concepts with special sessions dedicated to applications of Applied Mathematics and Operational Research that could impact future ATM systems. Free Tutorials on Introduction to Operational Air Traffic Control will also be proposed to participants (limited acceptance).

Websites:

http://isiatm.enac.fr/ats_conferences/

<http://www.asda.aero/>

<http://www.lr.tudelft.nl/atos>

<http://www.complexworld.eu/>

<http://isiatm.enac.fr/>

2. Keynote Speakers



PIERRE ANDRIBET
SESAR Contribution Manager
Deputy Director SESAR and Research (DSR)

Pierre Andribet, Deputy Director SESAR and Research, is currently in charge of the EUROCONTROL Contribution to the SESAR Joint Undertaking Programme. Mr. Andribet started his career at EUROCONTROL Brussels in 1997, when he became Head of Unit "Support to States". In 1999 he moved to the EUROCONTROL Experimental Centre (EEC), located in Brétigny-sur-Orge (France), to take over the position of EEC Deputy Director, managing the Research Programme of the EEC Prior to joining EUROCONTROL, Mr. Andribet started his career with the French Ministry of Transport (DGAC/STNA) as Head of division "Systèmes CAUTRA". Later he joined THOMSON-CFS / AIRSYS – ATM Business Unit – where he was first responsible for the ATM Centre Product Line (where he created the first version of the EUROCAT system) and then responsible for European Programmes.

Mr. Andribet graduated from "Ecole Polytechnique" of Paris and "Ecole Nationale de l'Aviation Civile" (ENAC) of Toulouse.



FLORIAN GUILLERMET
SESAR JOINT UNDERTAKING
Deputy Executive Director Operations and Programme

Florian Guillermet is an engineer, graduated from Ecole Polytechnique and the ENAC (Civil Aviation Engineering School in France); he also holds a Master degree in aeronautics and airport management. Florian has been working in the field of Civil Aviation for 15 years. He started his career in the flight planning department of Air France. He then held different managerial positions at the French Air Navigation Service Provider before joining the European Central Flow Management Unit at Eurocontrol. He has been in charge of various operational and IT projects. His experience ranges from ATM systems definition and implementation to network operations management.

He joined the SESAR Joint Undertaking in June 2008 as Chief Programme Officer and is responsible for the definition and execution of the SESAR Programme. Florian was appointed Deputy Executive Director Operations and Programme in January 2012.



PR. PANAGIOTIS TSIOTRAS

Georgia Institute of Technology
Daniel Guggenheim School of Aerospace Engineering
Director of the Dynamics and Control Systems Laboratory

Pr. Panagiotis Tsiotras is the Dean's Professor at the Daniel Guggenheim School of Aerospace Engineering at the Georgia Institute of Technology (Georgia Tech) and the Director of the Dynamics and Control Systems Laboratory in the same department. He is also affiliated with the Center for Robotics and Intelligent Machines (RIM) and the Center for Space Systems at Georgia Tech. His current research interests include optimal and robust control of nonlinear systems, vehicle autonomy, and control theory applications to aerospace and mechanical systems. He holds degrees in Mechanical Engineering, Aerospace Engineering, and Mathematics.

He has served at the Editorial Boards of the AIAA Journal of Guidance Control and Dynamics, the IEEE Transactions on Automatic Control and the IEEE Control Systems Magazine. He is a recipient of the NSF CAREER Award, and the Sigma Xi award for Excellence in Research. He is a Fellow of AIAA and a Senior Member of IEEE.



JOHN-PAUL CLARKE, SC.D.

Georgia Institute of Technology
Daniel Guggenheim School of Aerospace Engineering
Director of the Air Transportation Laboratory at the Georgia
Institute of Technology

John-Paul Clarke is an Associate Professor in the Daniel Guggenheim School of Aerospace Engineering with a courtesy appointment in the H. Milton Stewart School of Industrial and Systems Engineering, and Director of the Air Transportation Laboratory at the Georgia Institute of Technology. His research and teaching in the areas of control, optimization, and system analysis, architecture, and design are motivated by his desire to simultaneously maximize the efficiency and minimize the societal costs (especially on the environment) of the global air transportation system. Dr. Clarke has been recognized globally for his seminal contributions in air traffic management, aircraft operations, and airline operations. His honors include the 1999 AIAA/AAAE/ACC Jay Hollingsworth Speas Airport Award, the 2003 FAA Excellence in Aviation Award, the 2006 National Academy of Engineering Gilbreth Lectureship, and the 2012 AIAA/SAE William Littlewood Lectureship. He is an Associate Fellow of the AIAA, and a member of AGIFORS, INFORMS, and Sigma Xi.



PR JOHN HANSMAN

Massachusetts Institute Of Technology
Professor of Aeronautics & Astronautics

R. John Hansman is a Professor of Aeronautics & Astronautics MIT, where he is the Director of the MIT International Center for Air Transportation. He conducts research in the application of information technology in operational aerospace systems. Dr. Hansman holds 6 patents and has authored over 250 technical publications. He has over 5800 hours of pilot in-command time in airplanes, helicopters and sailplanes including meteorological, production and engineering flight test experience. Professor Hansman chairs the US Federal Aviation Administration Research Engineering & Development Advisory Committee (REDAC) as well as other national and international advisory committees. He is a member of the US National Academy of Engineering (NAE), is a Fellow of the AIAA and has received numerous awards including the AIAA Dryden Lectureship in Aeronautics Research, the ATCA Kiske Air Traffic Award, a Laurel from Aviation Week & Space Technology, and the FAA Excellence in Aviation Award.



PHILIPPE PLANTIN DE HUGUES, PH. D.

Bureau d'Enquêtes et d'Analyses (**BEA**) pour la Sécurité de l'Aviation civile
Special Adviser on International Affairs / Senior Safety Investigator

Philippe Plantin de Hugues obtained his Ph.D. in Fluid Mechanics in 1991. In 1992 he worked for a year at the NASA Ames Research Center (USA), then joined the BEA Engineering Department in 1993 as a specialist in acoustic analysis. He has participated in all major international investigations involving France since then, involving over 800 events worldwide. He became the Adviser for European Affairs in 2012. He has been the Chairman of various international working groups and ICAO Panel. He is the recipient of the Russian Transport Medal for his work on a Russian Airbus A-320 accident investigation.

3. Some members of the organisation Committee

3.1. ENAC



PR. DANIEL DELAHAYE

École Nationale de l'Aviation Civile in Toulouse (France)
Head of the Optimization Group of the MAIAA lab

Pr. Daniel Delahaye obtained his engineer degree from the ENAC school and did a master of science in signal processing from the National Polytechnic Institute of Toulouse in 1991. He obtained his Ph.D in Automatic Control from the Aeronautic and Space National School in 1995 and did a post-doc at the Department of Aeronautics and Astronautics at MIT in 1996. He got his tenure in applied mathematics in 2012. He conducts researches on mathematical optimization for airspace design and traffic assignment and has been working on air traffic complexity for more than 12 years with NASA. He is also very active on aircraft trajectory design for strategic, pre-tactical and tactical applications. He collaborates with MIT, Georgia Tech and NASA (USA).



PR. MARCEL MONGEAU

École Nationale de l'Aviation Civile in Toulouse (France)
Professor in Operations Research
Member of the Optimization Group of the MAIAA lab

Marcel Mongeau received his BSc (1985) and MSc (1987) degrees in Mathematics from Université de Montréal, and his PhD (1991) in Combinatorics & Optimization from the University of Waterloo (Canada). He was then a post-doctoral researcher at the Centre de Recherches Mathématiques (Université de Montréal), and at the Institut National de la Recherche en Informatique et en Automatique (Rocquencourt, France). In 1993-94, he was a Research Fellow at the University of Edinburgh. From 1994 to 2011, he was Maître de Conférences at Institut de Mathématiques de Toulouse, Université Paul Sabatier (France), where he received a Habilitation à Diriger des Recherches in 2003. He is currently Professor in Operations Research at École Nationale de l'Aviation Civile in Toulouse (France). His research interests include Global Optimization, Numerical Optimization, and Operations Research with applications to aeronautics.



BRUNO LAMISCARRE

École Nationale de l'Aviation Civile in Toulouse (France)
ENAC Head of Research

Bruno Lamiscarre is graduated from « Ecole Supérieure d'Optique (SupOptique-1980). Since there, he worked first at Onera in several locations Chatillon, Meudon and Toulouse. His last position at ONERA was deputy director at the Long Term Design and Systems Integration Department (DPRS: Département Prospective et Synthèse) in the Systems Scientific Branch and special advisor on Air Transport System.

He has acquired over 16 years in the Physics Scientific Branch a large experience in the domain of sensors within several fields of application: wind tunnel instrumentation, robotics, earth observation, military systems, civil aircraft systems.

Since 1997 he has been involved in the field of Airport related research within the frame of the project called « Airport of the future » as the head of this project and also of its sensors work package. He is currently or recently involved in EU projects in the field of Air Transport System covering UAV, Airports, Automation, Fast time simulation, Security (SAFE project) issues. Since 2007, he was the program manager of IESTA platform development: IESTA is a fast time simulation of the air transport system with particular focus on environmental issues and future ATS concepts.

He joined ENAC (Ecole Nationale d'Aviation Civile), the French civil aviation university, in 2010 and since then he is the head of Research in ENAC



MOHAMED SBIHI, , PH. D.

École Nationale de l'Aviation Civile in Toulouse (France)
Member of the Optimization Group of the MAIAA lab

Mohammed Sbihi received his BSc (2000) degree in Mathematics from Université de Tizi-Ouzou (Algeria), his MSc (2002) degree in Operations Research, Combinatorics and Optimization from Institut National Polytechnique de Grenoble (France), and his PhD (2005) degree in Mathematics from Université de Franche-Comté (France). He was then research and teaching assistant at the Université de Franche-Comté, and at École Nationale Supérieure de Mécanique et des Microtechniques (France). In 2007-08, he was a post-doctoral researcher at École des Mines de Nantes (France). In 2008-09 he was a research engineer at France Telecom R&D (Issy-Les-Moulineaux, France). He is currently an Assistant Professor at École Nationale de l'Aviation Civile in Toulouse (France). His current research interests are focused on optimization and its applications to Air Traffic Management.



GEORGES MYKONIATIS

École Nationale de l'Aviation Civile in Toulouse (France)
Head of Business Development for the ENAC Research

After obtaining his Engineering degree in Physics at the Ecole Nationale Supérieure de Physique de Strasbourg in 1986 and a Master in Physics from Marseille University, He worked 2 years in the oil domain and then 7 years in the applied research in the Navy domain. He moved after to the Air traffic Management Domain making the specifications, then the validation of large Air traffic Systems for Thomson SDC. In 1998, he set up the consulting company NEOSYS providing consultancy and services in the ATM domain. In 2003 he set up the company NeoMetSys with Metron Aviation, for pushing the Collaborative Decision Making concept in Europe. In 2007, he was involved, as a consultant for EUROCONTROL, in the SESAR Work Program Definition and coordination with the SESAR partners. In 2008, He set up the company Nerahida, promoting Collaborative Business Intelligence and strategy; he was involved in several initiatives in Africa (Guinea, Niger, Mali, Senegal, Togo). From 2009 to 2011, he participates to the transition of operational systems for THALES Air Systems in Egypt, Serbia, Croatia, Denmark, Sweden, Ireland. He is involved in project management, business development, and business intelligence since more than 15 years and he joined ENAC in November 2011 to develop the business activity for the Research.

3.2. TU Delft



PR. RICHARD CURRAN

TU Delft
Full professor of Air Transport & Operations (ATO)
Member of the Scientific Committee for SESAR

After obtaining his Mechanical Engineering degree in Belfast he worked for one year for a solar-energy company in Spain. Then he spent a year travelling in India and Nepal. On his return, he carried out his PhD research into ocean-wave energy at Queen's University in Belfast. This was followed by two years of post-doctoral work before moving to Delft, where he worked for eight months with a grant from the Royal Society with Professor Alan Rothwell. After another year in Nepal together with his wife, he got a job with Aerospace Engineering in Belfast as a post-doctoral researcher. Later on he became a member of staff there. In 2008 he was appointed full-time professor of Aerospace Management & Operations, called ATO since 2010. his group focuses on Airlines, Air Traffic Management and airports, together with the associated issues such as noise pollution, emissions, capacity, costs, safety and efficiency. Meanwhile, his group has become one of the biggest Master's programmes, with two full-time professors, one visiting professor from the National Aerospace Laboratory (NLR), 11 full-time academic staff members, 20 PhD candidates and post-doctoral researchers and some 40 Master's students a year



PR. JACCO HOERSTRA

TU Delft

Founder/board member of the Association for Scientific Development of Air Traffic Control (ASDA)

Jacco Hoekstra received his MSc. degree, as well as a private pilot's license, from the Faculty of Aerospace Engineering of the Delft University of Technology. He specialised and graduated in the area of Control & Simulation. After a brief excursion to the Informatics & Telecommunications business, Jacco Hoekstra joined NLR in 1991 to start working at the Flight Simulation and Handling Qualities department to conduct a wide variety of flight simulation experiments, both civil and military. He moved to the Human Factors department, where he worked on Human Machine Interfaces and Air Traffic Management. His research for his PhD consisted of investigating the safety and feasibility of airborne separation assurance in a large project for NASA, a concept which became known as 'Free Flight'. He obtained a doctoral degree from the faculty Technology, Policy and Management, working in the Safety Science group. Subsequently, he became head of the Civil Human Factors group, the Training & Concept validation Department, the Human Factors & Flight Simulation department and the Air transport Division, one of the three divisions of NLR, where 140 researchers perform air transport research in 5 departments. In this function he was also part of the management team of NLR. In 2007, professor Hoekstra has been appointed as the Dean of the Aerospace faculty of the Delft University of Technology. This high-ranked faculty is the largest aerospace engineering faculty of the western world. It has a high number of full professors on many areas and unique research facilities, such as wind tunnels, aircraft, flight simulators and many laboratories. Since 2013 he is chairholder CNS/ATM (Communication, Navigation, Surveillance / Air Traffic Management) in the Aerospace Engineering faculty of Delft University in the department Control & Operations. He also founder/board member of the Association for Scientific Development of Air Traffic Control (ASDA) consisting of 22 universities and research institutes. In his spare time he enjoys reading, skiing, the French Riviera, scuba diving, hiking and sailing with his three sons and wife.



DR KURT KLEIN

ASDA Board Chair Man

DLR Institute of Flight Guidance

Mr. Kurt Klein gained his diploma on Electrical Engineering from the University of Technology in Braunschweig in 1975 and joined the German Aerospace Center, DLR in the same year. He has a long track record in scientific and applied research work in the areas RF-Techniques for aircraft navigation, telemetry, aircraft recorder analysis and transcription system for accident investigation, avionics, A-SMGCS (Advanced Surface Movement Guidance and Control Systems for Airports), air traffic management concept validation, and ATM test facilities.

In 2000 Kurt Klein joined the management team of the DLR Institute of Flight Guidance as department head and acted as interim director for 2.5 years. He took over the vice director position of the Institute and became also the head of the department "Administrative Support & AT-One" within the institute in 2008. He is now responsible for the research business management of the DLR Institute of Flight Guidance.

From 2006 on he is also one director of AT-One, the strategic research alliance on ATM with NLR.

Kurt Klein, as representative of DLR, was one of the founders of the "Association for the Scientific Development of ATM in Europe", ASDA in 2007 and is now the chairman of the board.

3.3. Embry-Riddle



PR. JOHN A WISE
Embry-Riddle Aeronautical University
Principal Scientist Wise Group LLC

Dr. Wise has over 30 years of experience the practice and project management of human factors engineering and information system design for aviation & aerospace systems. He contributed to the design of the F/A-18, F-15E, and the AV8B. He also was involved in the design and evaluation of state-of-the-art person-system interfaces such as sensor fusion and head & eye aimed sensors. He assisted in the development of a world-class human factors research and academic program at Embry-Riddle Aeronautical University. He has lead interdisciplinary teams on research projects sponsored by: NASA, NOAA, FAA, NATO, Eurocontrol, DGAC, Centre d'Etudes de la Navigation Aerienne, and various other corporate sponsors. He worked on several revolutionary avionics, advanced ATM concepts, and other aviation systems. He served as an Air Force T-38 instructor pilot for four years. He holds a commercial flight certificate with an instrument rating and held a CFI/A for 16 years. He has been on the faculty at University of Pittsburgh, Embry-Riddle Aeronautical University, and the Ecole Nationale De l'Aviation Civile. Dr. Wise has published over 100 technical papers and nine books addressing human factors relevant issues.



SOUMIA ICHOUA
Embry-Riddle Aeronautical University
Director of Research at the College of Business
Associate Professor of Business (Operations Research)

Her research interests lie in the application of dynamic-stochastic optimization techniques and parallel algorithms to humanitarian and commercial supply chain networks, logistics, industrial scheduling, air traffic management and distribution systems management. Dr Ichoua has been supervising several undergraduate and graduate students in projects related to these fields. Some of her research papers have been published in leading journals in the field of transportation and Operations Research including Transportation Science, European Journal of Operational Research, and Computers and Operations Research. Dr. Ichoua is a Core Fulbright U.S. Scholar. She is also a an Associate Faculty Member at the Department of Operations & Decision Systems in Laval University, Canada and an associate member of the Interuniversity Research Centre on Enterprise Networks, Logistics and Transportation (CIRRELT), Canada.

3.4. ComplexWorld



DAVID PEREZ
Innaxis Foundation & Research Institute
Director

David Pérez is Director at Innaxis, leading a team of highly qualified experts across a number of disciplines in the aerospace and IT fields. David has a background as an Aerospace Engineer and, having worked for different air transport stakeholders, from airports to airlines, from the supply industry to aircraft manufacturers, follows closely initiatives for the progress of air transport, including international for a and participates in several innovation committees. David currently split his time between Brussels, the US and Innaxis offices in Madrid.

4. Air Transportation System Conferences 2013 Program

4.1. General Program

Monday 8th, July 2013					
8:00	Opening and Registration Amphitheatre M. Bellonte				
9:15	Welcome		M. Houalla, B. Lamiscarre		
9:45	Plenary Session		M. Florian Guillermet (SESAR JU)		
10:15	Coffee break				
10:45	Plenary Session John Hansman (MIT) "Crashing a Large UAV in the Mexican Desert"				
	ISIATM		ATOS		ASDA
	Amphitheatre M.Bellonte	C016	Amphitheatre D.Costes	C008	Amphitheatre H.Boucher
	Track 1	Track 2	Track 1	Track 2	
11:30	ISIATM Session 1.1 Modelling and Simulation I	ISATM Session 1.2 Ergonomics I	ATOS Session 1.1 Value optimization		Airport of the Future I
12:30	Lunch				
13:30					Airport of the Future II
	Amphitheatre M.Bellonte	C016	Amphitheatre D.Costes		
	Track 1	Track 2	Track 1		
14:00	ISATM Session 2.1 Trajectory Based Operations I	ATC simulator Training	ATOS Session 2.1 Airport Landside		
15:30	Coffee break				
	Amphitheatre M.Bellonte	C016	Amphitheatre D.Costes	C008	Amphitheatre H.Boucher
	Track 1	Track 2	Track 1	Track 2	
16:00	ISATM Session 2.2 Terminal Manœuvre Area I	ISATM Session 2.3 Human factors I	ATOS Session 2.2 Future Scenarios	ATOS Session 2.3 Risk Assessment	Future ATM
17:30	Wrap up - Cocktail				
19:00	End of the Day				

Tuesday 9th, July 2013

Amphitheatre M. Bellonte

8:30	Plenary Session	Pierre Andribet (Eurocontrol) "Are we doing the right Research ? Are we doing the Research right ?"		
9:15	Plenary Session	Dr Panagiotis Tsiotras (Georgia Tech) "Optimal Aircraft Trajectory Generation During On-Board Emergencies"		
10:00	Coffee break			

ISIATM		ATOS		ComplexWorld
Amphitheatre M.Bellonte	C016	Amphitheatre D.Costes	C008	
Track 1	Track 2	Track 1	Track 2	
10:30 ISATM Session 3.1 Trajectory Based Operations II	ISATM Session 3.2 Airspace Design	ATOS Session 3.1 Flight Planning	ATOS Session 3.2 Air Traffic Control	

12:00 Lunch

Amphitheatre M. Bellonte

13:15	Plenary Session	Georges Mykoniatis: Session dedicated to Sponsor		
14:00	Plenary Session	Dr John-Paul Clarke (Georgia Tech) "NowGen – Achieving the Projected Benefits of the Next Generation Air Transport System in the Near Term"		
	Amphitheatre M.Bellonte	C016	Amphitheatre D.Costes	C008
	Track 1	Track 2	Track 1	Track 2
14:45	ISATM Session 4.1 Risk Assessment	ISATM Session 4.3 Ergonomics II	ATOS Session 4.1 Trajectory Based Operations	ATOS Session 4.3 Maintenance
				Amphitheatre H.Boucher
				CW Session I

15:45 Coffee break and Posters session

	Amphitheatre M.Bellonte	C016	Amphitheatre D.Costes	C008	Amphitheatre H.Boucher
	Track 1	Track 2	Track 1	Track 2	
16:45	ISATM Session 4.2 Terminal Manœuvre Area II	ISATM Session 4.4 Human Factors II	ATOS Session 4.2 Noise		CW Session 2

17:45 Wrap up
19:30 Gala Diner

Wednesday 10th, July 2013

Amphitheatre M. Bellonte

	ISIATM		ATOS		ComplexWorld
	Amphitheatre M.Bellonte Track 1	C016 Track 2	Amphitheatre D.Costes Track 1		
9:15	ISATM Session 5.1 Risk Assessment II	ISATM Session 5.3 Human factors III	ATOS Session 5.1 ATM Performance		
10:15	Coffee break				
	Amphitheatre M.Bellonte Track 1	C016 Track 2	Amphitheatre D.Costes Track 1	C008 Track 2	Amphitheatre H.Boucher
10:45	ISATM Session 5.2 Trajectory Based Operations III	ISATM Session 5.4 Modelling and Simulation II	ATOS Session 5.2 Future Concepts		
	Amphitheatre M. Bellonte				
11:45	Plenary Session	Mr Plantin De Hugues(BEA) "Oceanic Tracking and Triggered Transmission of Flight Data"			
12:30	Closure Session				
12:45	Lunch				
14:00					Workshop
	Social events:				
14:30	Airbus A380 Chain Tour Toulouse Space Museum				Resilience and Robustness in ATM
18:00					Closure

Thursday 11th, July 2013

8:30		Tutorial
15:00		Closure

4.2. 2nd International Conference on Interdisciplinary Science for Innovative Air Traffic Management (ISIATM) Program

Monday 8th. July 2013			
ISIATM			
08:00	Opening and Registration		
09:15	Welcome	M. Houalla and B. Lamiscarre	
09:45	Plenary Session	M. Florian Guillermet (SESAR JU)	
10:15	Coffee		
10:45	Plenary Session	John Hansman (MIT)	"Crashing a Large UAV in the Mexican Desert"
11:30	TRACK 1		TRACK 2
	<i>ISATM Session 1.1</i>		<i>ISATM Session 1.2</i>
	Modelling and Simulation I		Ergonomics I
	Functional Principal Component Analysis of aircraft trajectories	Florence Nicol	From the Visualization of Aeronautical Data to Association Rules: an Automatic Approach Gwenael Bothorel, Mathieu Serrurier and Christophe Hurter
	On the Probabilistic Modeling of Runway Inter-departure Times	Ioannis Simaiakis and Hamsa Balakrishnan	A Model for the Workload Measurement of Radar Controller Yuan Leping, Sun Ruishan, Jin Huibin and Li Jingqiang
12:30	Lunch		
14:00	<i>ISATM Session 2.1</i>		
	Trajectory based operations		ATC simulator Training
	Non-time indexed modelling for en-route flight planning with speed – fuel consumption trade-off	Ali Akgunduz, Brigitte Jaumard, Golbarg Moeini	
	Strategic De-confliction of Aircraft Trajectories	Supatcha Chaimatanan, Daniel Delahaye, Marcel Mongeau	
	Multiobjective Optimization for the Pre-tactical Phase of Air Traffic Control	Gaetan Marceau-Caron, Pierre Savéant and Marc Schoenauer	
15:30	Coffee		
16:00	<i>ISATM Session 2.2</i>		<i>ISATM Session 2.3</i>
	Terminal Maneuver Area I		Human Factors I
	Arrival trajectory control by split and merge concept at metering point	Masato Fujita	Preliminary assessment of Passenger experience in a future Personal Air Transport System Patrick Le Blaye and Bruno Berberian
	A Dynamic Programming Approach to the Control of Runway Configurations and Arrival and Departure Service Rates	Alexandre Jacquillat	Real-Time Pilot Support System for Airborne Self-Separation Vittorio Di Vito, Salvatore Luongo, Giulia Torrano, Luca Garbarino, Federico Corrado and Edoardo Filippone
			Interdisciplinary Collaboration to Improve Air Traffic Management Safety Clifford Noble, Brenda Jacobs and Daniel Rund
17:30	Wrap up - Cocktail		
19:00	End of the Day		

Tuesday 9th. July 2013

ISIATM

08:30 Plenary Session Pierre Andribet (Eurocontrol) "Are we doing the right research, are we doing the research right"

09:15 Plenary Session Panagiotis Tsiotras (Georgia Tech) "Optimal Aircraft Trajectory Generation During On-Board Emergencies"

10:00 Coffee

TRACK 1

TRACK 2

10:30 ISATM Session 3.1

ISATM Session 3.2

Trajectory based operations II

Airspace Design

Optimal Control – A new Approach to Automation in Air traffic Control
Matthias Poppe

ADS-B Ground Station Optimal Site Selection based on GIS
Xiaoyun Shen, Siyuan Zhang, Di Wan and Weidong Jiao

Optimal Control Approaches for Aircraft Conflict Avoidance using Speed Regulation: A Numerical Study
Loïc Cellier, Sonia Cafieri, Frédéric Messine

SSR Surveillance Network covering problem with obstacle effect consideration
Jing Guan, Zhigang Su, Jianxun Tang and Hongying Wu

Flight Trajectory Optimization Tool with Dynamic Programming Developed for Future Air Transportation System
Akinori Harada, Yuto Miyamoto, Navinda Wickramasinghe and Yoshikazu Miyazawa

An Optimized Deployment Method of Radar Network Based on Spatial Discrete Model
Shuqin Hu, Zhi Tao, Dongjie Shi and Jing Guan

12:00 Lunch

13:15 Plenary Session Georges Mykoniatis: (ENAC) Session dedicated to Sponsor
John-Paul Clarke (Georgia Tech) "NowGen – Achieving the Projected Benefits of the Next Generation Air Transport System in the Near Term"

14:00 Plenary Session

14:45 ISATM Session 4.1

ISATM Session 4.3

Risk Assessment I

Ergonomics II

Stationary Point Process, Palm measure and collision risk
Ludovic d'Estampes and Pascal Lezaud

Development of a Collision Avoidance Display to Support Pilots' Self-Separation in a Free Flight Environment
Yakubu Ibrahim, Peter Higgins and Peter Bruce

On the Relation Between Air Traffic Capacity, Separation and Safety
Luís Campos and Joaquim Marques

A Training Support Tool for Controller Trainees by Visualizing Trade-offs in Air Traffic Control Tasks
Daisuke Karikawa, Hisae Aoyama, Makoto Takahashi, Kazuo Furuta and Masaharu Kitamura

15:45 Coffee and Posters Session

16:45 ISATM Session 4.2

ISATM Session 4.4

Terminal Maneuver Area II

Human Factors II

On Wake Vortex Separation Distances Theory Compared With Regulations
Luís Campos and Joaquim Marques

Organizational Psychology Issues in Future ATM
Suzanne A. Wise-Jones and John A. Wise

Optimisation of take-off runway sequences for Airport-CDM
Roland Deroo

ATC activities, working memory performance, alertness and psychosocial job characteristics-: Investigation across the shift in a test flight control centre.
Pauline Maruque, Claudine Mélan, Nadine Cascino and Edith Galy

17:45 Wrap -up

19:30 Gala dinner

Wednesday 10th. July 2013			
ISIATM			
TRACK 1		TRACK 2	
09:15	ISATM Session 5.1	ISATM Session 5.3	
	Risk Assessment II Robust Dynamic Delaunay Triangulation Technology for Moving Points Zhigang Su, Zheng Wang and Renbiao Wu Framework for Airspace Planning and Design Based on Conflict Risk Assessment Fedja Netjasov and Obrad Babic	Human Factors III Air Traffic Controllers' Fatigue and Work Performances Shannakay Watson Fenfei Guo, Thea Feyereisen, Kevin Conner, Emmanuel Letsu-Dake, Rui Wang and Qinhua Zhao User-Centered Development and Evaluation of Helicopter EGPWS Mandarin Alerts	
10:15	Coffee		
10:45	ISATM Session 5.2	ISATM Session 5.4	
	Trajectory Based Operations III Generating optimal aircraft trajectories with respect to weather conditions Brunilde Girardet Design of Fly-around of Dangerous/Forbidden Zones with Using Digital "Safety Map" Nikolay Grevtsov and Andrey Dymchenko	Modelling and Simulation II Inference of a random environment from random process realizations: Formalism and application to trajectory prediction Cécile Ichard and Christophe Baehr Multi-scale Tracking for Maneuver Target using Single Sensor Tao Zhang, Zhe Zhang, Renbiao Wu	
11:45	Plenary Session	Plantin De Hugues (BEA)	"Oceanic Tracking and Triggered Transmission of Flight Data"
12:30	Closure Session		
12:45	Lunch		
14:30	Social events: Airbus A380 Chain Tour Toulouse Space Museum		

Chairman Per ISATM Session

ISATM			
Session	Date	Schedule	Chairman
1.1 Modelling and Simulation I	8/07	11H30-12H30	Tao Zhang
1.2 Ergonomics I	8/07	11H30-12H30	Peter Higgins
2.1 Trajectory based operations I	8/07	14H00-15H30	Nikolay Grevtsov
2.2 Terminal manoeuvre area I	8/07	16H-17H30	Didier Dohy
2.3 Human factors I	8/07	16H-17H30	John Wise
3.1 Trajectory based operations II	9/07	10H30-12H00	Fedja Netjasov
3.2 Airspace design	9/07	10H30-12H00	Sun Ruishan
4.1 Risk assessment I	9/07	14H45-15H45	Soumia Ichoua
4.2 Terminal manoeuvre area II	9/07	16H45-17H45	Masato Fujita
4.3 Ergonomics II	9/07	14H45-15H45	Christophe Hurter
4.4 Human factors II	9/07	16H45-17H45	Hamsa Balakrishnan
5.1 Risk assessment II	10/07	9H15-10H15	Luis Campos
5.2 Trajectory based operations III	10/07	10H45-11H45	Brigitte Jaumard
5.3 Human factors III	10/07	9H15-10H15	David Ison
5.4 Modelling and Simulation II	10/07	10H45-11H45	Daniel Delahaye

4.3. Poster Session

Air Traffic Management Principle Based Development of an Airport Arrival Delay Prediction Model

David Ison, Katherine Moran, Linda Weiland and Ian McAndrew

A PHD Filter for Air Traffic Flow Intensity Estimation

Tao Zhang, Zhe Zhang and Renbiao Wu

The Uniform Model for Conflict Prediction and Airspace Safety Assessment for Free Flight: An Electromagnetic Approach

Zhe Zhang, Tao Zhang, Xiaoliang Wang, Wanwei Wang and Renbiao Wu

Air Traffic Flow Management Problem Under Weather Disruption

Soumia Ichoua

Ability requirements in ATM – From where do we come?

Hinnerk Eissfeldt, Per Ekelof, Peter Maschke and Katja Knappe

Customised information on adverse weather situations for aviation stakeholders

Thomas Gerz, Caroline Forster, Arnold Tafferner and Felix Keis

Fleet Prioritization a Concept Evaluation

Carlos Castro and Todd Waller

A Modified Simulated Annealing Optimisation Method Based on Discrete Model of SSR Surveillance Network Configuration and Deployment

Jungai Tian

Research of the risk management system based brain storming for air traffic control

Geng Zengxian, Zhao Yifei, Meng Linghang and Han Hongrong

The theory of planned behavior in civil aviation majors: a model for developing non-technical skills training of ATC, pilot and maintenance

Du Xing, Qin Rui and Huang Yanxiao

E-Learning Opportunities For Air Traffic Controllers

Esra Turhan and Ugur Turhan

Back-to-the-future: Temporal zooming over 4D trajectories for effective air traffic control

John Wise, K. Krishnan and Steve Kertesz

A unified system for the optimization of the observation and measuring of tephra clouds

George Bogdosand Konstantinos Konstantinides

Analysis of Critical States and Risks for Human Errors in Aviation

Jin Huibin, Yuan Leping and Zhao Qing

4.4. 4th International Air Transport and Operations Symposium (ATOS) Program

Monday 8th. July 2013			
ATOS			
08:00	Opening and Registration		
09:15	Welcome	M. Houalla and B. Lamiscarre	
09:45	Plenary Session	M. Florian Guillermet (SESAR JU)	
10:15	Coffee		
10:45	Plenary Session	John Hansman (MIT)	"Crashing a Large UAV in the Mexican Desert"
	TRACK 1	TRACK 2	
11:30	ATOS Session 1.1		
	Value Optimization		
	Capturing Non-Economic Value Within System Design	Colin Quinn, Danielle Soban, Mark Price and Christine Fanthorpe	
	Analysis of the potential value for aircraft electric taxi devices	Marc Enthoven, Paul Roling and Ricky Curran	
12:30	Lunch		
14:00	ATOS Session 2.1		
	Airport Landside		
	Multimodal, Efficient Transportation in Airports and Collaborative Decision Making	Aude Marzuoli, Isabelle Laplace and Eric Feron	
	A Simulation Evolutionary Approach for the allocation of Check-In Desks in Airport Terminals	Miguel Mujica Mota and Catya Zúñiga	
	Microscopic Process Modelling for Efficient Aircraft Turnaround Management	Michael Schultz	
	Aircraft Taxiing Strategy Optimization	Mohd Izuddin Md Ithnan, Wouter W.A. Beelaerts van Blokland and Gabriel Lodewijks	
15:30	Coffee		
16:00	ATOS Session 2.2	ATOS Session 2.3	
	Future Scenarios	Risk Assessment	
	Cargomap: An Air Cargo Technology road map through the EU seventh	Roland Gurály, Adriaan De Graaff, Paul Roling, Stephan Horn and	An overview of the development of NLR third party risk model and its
	Future incentive and compensation of airline demand reductions during	Jorgen von der Brelie	An Improved Understanding of En-route Wake Turbulence Risk
	Are airport capacity constraints a serious problem for future growth?	Marc Gelhausen	Risk Assessment: the EURECA Project
			Yuk Shan Cheung and Leo De Haij
			Mike Hoogstraten
			Valentina Cedrini, Giuseppe Fraioli, Luca Messano,
17:30	Wrap up - Cocktail		
19:00	End of the Day		

Tuesday 9th. July 2013

ATOS

08:30	Plenary Session	Pierre Andribet (Eurocontrol)	"Are we doing the right research, are we doing the research right"
09:15	Plenary Session	Panagiotis Tsiotras (Georgia Tech)	"Optimal Aircraft Trajectory Generation During On-Board Emergencies"

10:00 **Coffee**

TRACK 1		TRACK 2	
10:30	ATOS Session 3.1	ATOS Session 3.2	
Flight planning		Air Traffic Control	
An Approach for a weather-dependent climate-optimized Fight Planning	Sigrun Matthes, Volker Grewe and Project Team	Applications of automated stochastic optimization for a fast-time ATM simulation environment	Alexander Scharnweber and Christoph Bösel
Combining Simulation and Optimization for solving the Stochastic Aircraft Recovery Problem	Pol Arias, Daniel Guimarans and Miguel A. Mujica	Decision Support System (DSS) for daily airspace sectorisation	Milan Jovanović
Design of a multi-objective flight timing optimisation tool for schedule de-peaking using the concept of selective connectivity	Ricky Curran	Sustainable Development of Air Traffic Control: moving from complexity to efficiency	Vladimir Grigorov and Paula Rachel Mark

12:00 **Lunch**

13:15	Plenary Session	Georges Mykoniatis: (ENAC)	Session dedicated to Sponsor
14:00	Plenary Session	John-Paul Clarke (Georgia Tech)	"NowGen- Achieving the Projected Benefits of the Next Generation Air Transport System in the Near Term"

ATOS Session 4.1		ATOS Session 4.3	
Trajectory based operations		Maintenance	
Big Data Aggregation Method for Trajectory-based Emission Calculation and Analysis	Balazs Kerulo and Roland Guraly	Automated Methods for Virtual Maintainability & Aerospace Maintenance Planning	Roisin Mcconnell, Joe Butterfield, Karen Rafferty, Mark Price and Bartho Schulte
Usability testing results of a joint cognitive system for 4D trajectory management	Anneloes Maij, Rolf Klomp and Annemiek Van Drunen	The IMPROVE Method, Removing Waste by Improving Information Quality in Engineering	Bastiaan de Vrught, Joost Schut, Wim Verhagen and Richard Curran

15:45 **Coffee and Posters Session**

ATOS Session 4.2	
Noise	
Noise Minimal Approaches on Parallel Runways	Maximilian Richter, Matthias Bittner, Matthias Rieck and Florian Holzapfel
Improved Noise Modelling of new Approach Procedures using ASOP and Radar Data – a Case Study	Andreas Kanstein, Tobias Bauer, Holger

17:45 **Wrap-up**

19:30 **Gala dinner**

Wednesday 10th. July 2013

ATOS

TRACK 1

09:15 *ATOS Session 5.1*

ATM performance

Prioritisation in Air Traffic Flow management: Design of a Flow management Tool using a Petri-Net Approach
Hugo de Jonge, René van Hout, Ron Seljée and Dries Visser

Comparison of position data based ATC performance measures
Heiko Udluft, Tamas Kolos Lakatos, John Hansman and Richard Curran

10:15 **Coffee**

10:45 *ATOS Session 5.2*

Future concepts

The Ahead project: a new aircraft concept with hybrid engines
Adriaan de Graaff and Arvind G. Rao

Preliminary Evaluation of the Environmental Impact Related to Aircraft Take-Off and Landings Supported with Ground-Based (MAGLEV) Power
Mark Voskuil, Daniel Rohacs and Rommert-Jan Schoustra

11:45 **Plenary Session** Plantin De Hugues (BEA) "Oceanic Tracking and Triggered Transmission of Flight Data"

12:30 **Closure Session**

12:45 **Lunch**

14:30 **Social events:**
Airbus A380 Chain Tour
Toulouse Space Museum

Chairman Per ATOS Session

ATOS			
Session	Date	Schedule	Chairman
1.1 Value optimization	8/07	11H30-12H30	Danielle Soban, Ricky Curran
2.1 Airport Landside	8/07	14H00-15H30	Michael Schultz, Paul Roling
2.2 Future scenarios	8/07	16H-17H30	Ad de Graaf, Paul Roling
2.3 Risk assessment II	8/07	16H-17H30	Mike Hoogstraten, Alexei Sharpanskykh
3.1 Flight planning	9/07	10H30-12H00	Miguel A. Mujica, Heiko Udluft
3.2 Air Traffic Control	9/07	10H30-12H00	Milan Jovanović, Soufiane Bouarfa
4.1 Trajectory based operations	9/07	14H45-15H45	Anneloes Maij, Heiko Udluft
4.2 Noise	9/07	16H45-17H45	Mark Price, Ricky Curran
4.3 Maintenance	9/07	14H45-15H45	Maximilian Richter, Soufiane Bourfa
5.1 ATM performance	10/07	9H15-10H15	Hugo de Jonge, Alexei Sharpanskykh
5.2 Future concepts	10/07	10H45-11H45	Ad de Graaf, Soufiane Bouarfa

4.5. 4th Association of Scientific Development of ATM in Europe
(ASDA) Seminar Program

Monday 8th. July 2013		
ASDA		
08:00	Opening and Registration	
09:15	Welcome	M. Houalla and B. Lamiscarre
09:45	Plenary Session	M. Florian Guillermet (SESAR JU)
10:15	Coffee	
10:45	Plenary Session	John Hansman (MIT) "Crashing a Large UAV in the Mexican Desert"
ASDA Session 1		
Airport of the Future		
11:30	ASDA Opening - Kurt Klein (ASDA)	
11:35	Technical Implementations needed for the Airport of the Future - Paolo Sorid (SEA Milan Airports)	
12:00	Surface Management Services Integration: an Eye to the Future - Fabio Maria Donello (SICTA)	
12:30	Lunch	
13:30	Innovation Challenges for Airports of the Future - Christoph Schneider (Munich Airport)	
14:00	Modeling & Evaluation ATM Procedures in Human-in-the-loop Simulations on the Example of the Hamburg Airport Operations - Thomas Graupl (Univ Salzburg)	
15:30	Coffee	
ASDA Session 2		
Future ATM		
16:00	Efficient Speed Advisories for Multi-Stage Metering Arrival Management - Jesper Bronsvort (Air Services Australia)	
16:30	Integrating Adverse Weather, Climate Protection and Disruptive Events in an Advisory for Future Air Traffic Management - Thomas Gerz (DLR)	
17:00	Aircraft Sequencing Problem Using Two-Stage Particle Swarm Optimization-Carlo Alfredo Persiani (ENAV)	
17:30	Wrap up - Cocktail	
19:00	End of the Day	

4.6. 2013 ComplexWorld Seminar Program

Tuesday 9th. July 2013		
ComplexWorld		
08:30	Plenary Session	Pierre Andribet (Eurocontrol) "Are we doing the right research, are we doing the research right"
09:15	Plenary Session	Panagiotis Tsiotras (Georgia Tech) "Optimal Aircraft Trajectory Generation During On-Board Emergencies"
10:00	Coffee	
12:00	Lunch	
13:15	Plenary Session	Georges Mykoniatis: (ENAC) Session dedicated to Sponsor
14:00	Plenary Session	John-Paul Clarke (Georgia Tech) "NowGen- Achieving the Projected Benefits of the Next Generation Air Transport System in the Near Term"
	CW Session 4.1	CW Session 4.3
14:45	Modeling Safety Culture as a Socially Emergent Complex Systems Phenomenon: a Case Study in Aircraft Maintenance	Colin Mols et al. (VU Univ. and TUDelft)
	Exploratory analysis of safety data and their interrelation with flight trajectories and network metrics	Monechi et al. (Deep Blue and U's at Sapienza, Palermo and Pisa)
15:45	Coffee and Posters Session	
	CW Session 4.2	
16:45	Comparing Modelling Approaches in Aviation Safety	T. Bosse and N. Mogles (VU Univ.)
17:15	Complex World Wiki presentation, by Innaxis	
17:45	Wrap -up	
19:30	Gala dinner	
Wednesday 10th. July 2013		
ComplexWorld		
	Workshop	
14:00	Resilience and Robustness in ATM	
18:00	Closure	
Thursday 11th. July 2013		
ComplexWorld		
	Tutorial	
08:30	Resilience and Robustness in ATM	
15:00	Closure	

5. Sponsors

5.1. M3 SYSTEMS

M3 Systems is a SME specialized in the field of Air Traffic Management and space applications based on GNSS systems (GPS, SBAS, GLONASS, GALILEO...), providing expertise and consultancy services in ATFCM (Air Traffic Flow and Capacity Management), ATC (Air Traffic Control) and Airport Operations. Highly qualified engineers and consultants make up its work team.

Since its foundation in 1999, M3 Systems applies its know-how in following areas :

- Space applications: use of EGNOS (SBAS) integrity in multiple domains such as airport inspection on-board unit, in-land waterways, automated transport of persons, energy networks management, fret transport tracking, civil security and support to emergency services.
- Satellite radionavigation and on-board systems: development of solutions for critical applications, contribution to the definition of innovative and modular architectures of receivers and on-board systems.
- Air traffic management: expertise in the airport domain encompassing safety of ground movements, innovative landing procedures, Air Traffic Control and capacity and flow management.
- System engineering : methodology and tool to support system life cycle from early phases of user needs capture and operational concept definition down to validation and certification of innovative services.

M3 Systems provides its services to major stakeholders of the European transport segment such as the European Commission, ESA, CNES, EUROCONTROL, FABEC, DSN or the aviation industry. They all recognise M3 Systems expertise and entrust M3 Systems with key projects.

The main objective of the company is to provide its customers with a coherent system approach, from the operational concept definition to the design of solutions.

M3 Systems has recognised expertise typically addresses the early stages of the development cycle, namely ATM concept definition and validation (feasibility studies, proof-of-concept).

M3 Systems offers added-value at the interface between operational staff / system users and engineers / system designers in order to develop solutions matching the users' needs / expectations / requirements.

5.2. THALES

World leader in ATM, Thales offers integrated gate-to-gate solutions, from pre-flight to landing, ensuring airport safety, efficient traffic handling operations, data sharing on aircraft and seamless handover operations between territories. Thales has the largest installed base of solutions and technologies in more than 170 countries with over 130 TopSky-ATM Solutions, 7,000 nav aids, 600 radars, and 1,600 ADS-B stations and multilateration equipment.

Thales is the largest industrial contributor to the Single European Sky ATM Research (SESAR) program in Europe and is a key technology partner in the US NextGen program.

6. List of Attendees

Name	Last name	Affiliation	Country
Odunsi	Adebola	International School Of Aviation	Nigeria
	Adegboyega		
Anubalu	Aloysius Ubah	Checkport Security Agency Nigeria Limited	Nigeria
Pierre	Andribet	EUROCONTROL	France
Alexandros	Angelopoulos		France
Manuel	Astaburuaga	ISDEFE	Spain
Fernandez			
Sebastien	Aubry	ONERA	France
Hamsa	Balakrishnan	Massachusetts Institute of Technology	United States of America
Henk	Blom	NLR and Delft Univ. of Techn.	Netherlands
Gwenael	Bothorel	DSNA	France
Soufiane	Bouarfa	TU Delft	Netherlands
Mohamed	Bouhlel	ONERA	France
Amine			
Marc	Bourgois	EUROCONTROL Experimental Centre	France
Clement	Bouttier	ENAC	France
Luis Manuel	Braga Da Costa	Lisbon Technnical University	Portugal
	Campos		
Romaric	Breil	ENAC	France
Yohann	Brenier	ENAC	France
Muriel	Brunet	ONERA	France
Joe	Butterfield	Queens University Belfast	United Kingdom
Sonia	Cafieri	ENAC	France
Valentina	Cedrini	SICTA	Italy
Loic	Cellier	ENAC	France
Supatcha	Chaimatanan	ENAC	France
Yuk Shan	Cheung	National Aerospace Laboratory NLR	Netherlands
Rémi	Christien	ENAC	France
John-Paul	Clarke	Georgia Tech	USA
Richard	Curran	TU-Delft	Netherlands
Robert	de Boer	Amsterdam Univ. of Applied Sciences	Netherlands
Adriaan	de Graaff	AD Cuenta	Netherlands
Plantin	De Hugues	BEA	France
Hugo	de Jonge	NLR/TUD	Netherlands
Daniel	Delahaye	ENAC	France
Roland	Deroo	DGAC/STAC	France
Ludovic	d'Estampes	ENAC	France

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Imen	Dhief	ENAC	France
Didier	Dohy	Dkub Consulting	France
Fabio Maria	Donello	SICTA	Italy
Andrey	Dymchenko	TsAGI	Russia
Thea	Feyereisen	Honeywell	United States of America
Edoardo	Filippone	CIRA - Italian Aerospace Research Center	Italy
Pablo	Fleurquin	IFISC (UIB-CSIC)	Spain
Masato	Fujita	Electronic Navigation Research Institute/JAPAN	Japan
Marc	Gelhausen	German Aerospace Center (DLR)	Germany
Thomas	Gerz	German Aerospace Center (DLR)	Germany
Brunilde	Girardet	ENAC	France
Alexandre	Gondran	ENAC	France
Mathy	Gonon	ENAC	France
Jean-Baptiste	Gotteland	ENAC	France
Thomas	Graupl	University of Salzburg	Austria
Nikolay	Grevtsov	Central Aerohydrodynamic Institute	Russia
Jing	Guan	Sino-European Institute of Aviation Engineering, CAUC	China
Fenfei	Guo	Honeywell	China
Laureline	Guys	ENAC	France
John	Hansman	MIT	USA
Akinori	Harada	Kyushu University	Japan
Thomas	Hauf	Leibniz Universitaet Hannover	Germany
Inti	Hebrard Capdeville	ENAC	France
Andreas	Heidt	FAU - Erlangen/Nuremberg	Germany
Peter	Higgins	Swinburne University of Technology	Australia
Jacco	Hoekstra	TU Delft	Netherlands
Mike	Hoogstraten	EUROCONTROL	Netherlands
Abubakr	Ibrahim	Bokra Investment Company	Sudan
Cecile	Ichard	Meteo-France	France
Soumia	Ichoua	Embry-Riddle Aeronautical University	United States of America
David	Ison	Embry Riddle Aeronautical University	United States of America
Alexandre	Jacquillat	Massachusetts Institute of Technology	United States of America
Brigitte	Jaumard	Concordia University, Montreal	Canada
Ferrer	Jerome	ALTYS Technologies	France
Huibin	Jin	Civil Aviation University of China	China
Li	Jingqiang	Civil Aviation University of China	China
Milan	Jovanovic	SMATSA	Republic of Serbia

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Andreas	Kanstein	Telespazio VEGA	Germany
Daisuke	Karikawa	Electronic Navigation Research Institute	Japan
Karl-Heinz	Keller	DLR / AT-One	Germany
Kurt	Klein	DLR, AT-One	Germany
Andrej	Kocsis	Slot Consulting Ltd.	Hungary
Bruno	Lamiscarre	ENAC	France
Isabelle	LaPlace	ENAC	France
Olayinka Folashade	Lawal	DST TRAVELS LTD	Nigeria
Patrick	Le Blaye	ONERA	France
Thibault	Lehouillier	Ecole Polytechnique Montreal	Canada
Pascal	Lezaud	ENAC	France
Paula	Lopez	Innaxis	Spain
Salvatore	Luongo	CIRA, Italian Aerospace Research Center	Italy
Anneloes	Maj	National Aerospace Laboratory NLR	Netherlands
Catherine	Mancel	ENAC	France
Gaetan	Marceau Caron	Thales Air Systems	France
Paula	Mark	TTCOA	Trinidad and Tobago
Pauline	Maruque	CNRS CLLE	France
Roisin	McConnell	Queens University Belfast	United Kingdom
Nataliya	Mogles	VU University Amsterdam	Netherlands
Bernardo	Monechi	Sapienza University of Rome	Italy
Marcel	Mongeau	ENAC	France
Heinson Angie	Muchang	Stellonbosch University Cape town	South Africa
Georges	Mykoniatis	ENAC	France
Fedja	Netjasov	University of Belgrade	Republic of Serbia
Bang Giang	Nguyen	ENAC	France
Florence	Nicol	ENAC	France
Cliff	Noble	USAFR, Retired	United States of America
Tomas Eric	Nordlander	SINTEF ICT	Norway
Damian	Nussbaumer	Civil Aviation Safety Officer	Switzerland
Gilles	Perbost	ENAC	France
David	Perez	Innaxis	Spain
Matthias	Poppe	Deutsche Flugsicherung	Germany
Mark	Price	Queens University Belfast	United Kingdom
Karine	Puechmorel	ENAC	France
Stephane	Puechmorel	ENAC	France
Colin	Quinn	Queens University Belfast	United Kingdom
Martina	Ragosta	IRIT UPS - Deep Blue s.r.l.	Italy
Carlos	Regidor	ISDEFE	Spain

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Maximilian	Richter	TU Munich	Germany
Damian	Rivas	University of Seville	Spain
Olga	Rodionova	ENAC	France
Daniel	Rohacs	REA-TECH Ltd	Hungary
Paul	Roling	TU Delft	Netherlands
Sun	Ruishan	Civil Aviation University of China	China
Manuela	Sauer	Leibniz Universitaet Hannover	Germany
Mohammed	Sbihi	ENAC	France
Dirk	Schaefer	EUROCONTROL	France
Alexander	Scharnweber	DLR	Germany
Patrick	Schittekat	SINTEF ICT	Norway
Christoph	Schneider	Munich Airport	Germany
Michael	Schultz	TU Dresden	Germany
Dirk	Schulze Kissing	DLR	Germany
Marina	Sergeeva	ENAC	France
Alexei	Sharpanskykh	TU Delft	Netherlands
Xiaoyun	Shen	Civil Aviation University of China	China
Danielle	Soban	Queens University Belfast	United Kingdom
Michel	Soler	ENAC	France
Tambet	Treimuth	ENAC	France
Panagiotis	Tsiotras	Georgia Tech	USA
Heiko	Udluft	TU Delft	Netherlands
Hector	Ureta	Innaxis	Spain
Claudio	Vaccaro	SICTA	Italy
Erik	van der Elzen	Delft University of Technology	Netherlands
Annemiek	van Drunen	Thales Research, Netherlands	Netherlands
Frans	van Schaik	NLR	Netherlands
Francois	Vernieres	AEROSPACE VALLEY	France
Andrija	Vidsavljevic	ENAC	France
Jorgen	von der Brelie	TU Clausthal / Lufthansa	Germany
Ning	Wang	ENAC	France
Shannakay	Watson	Embry-Riddle Aeronautical University	United States of America
John	Wise	The Wise Group LLC	United States of America
Tao	Zhang	Civil Aviation University of China	China
Zhe	Zhang	Civil Aviation University of China	China
Jun	Zhou	ENAC	France
Catya	Zuniga	ENAC	France