# 21st Air Transport Research Society

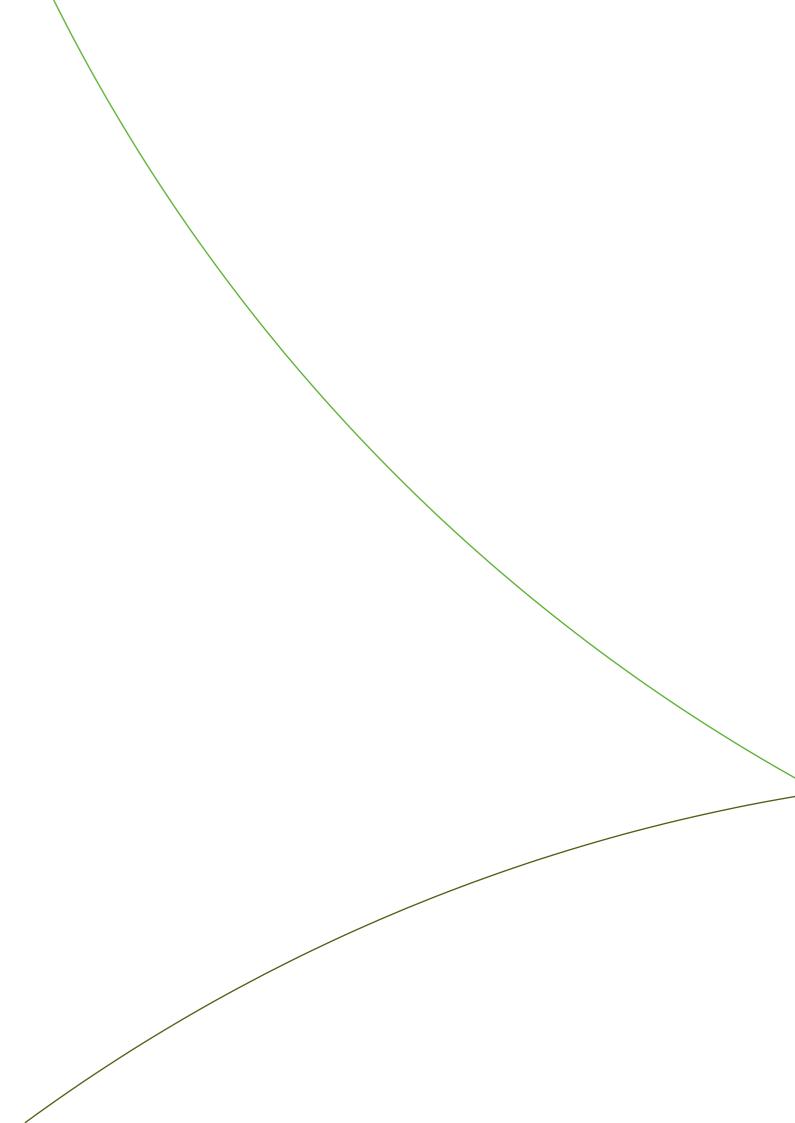
World Conference 2017











#### Made possible by

























# 21st Air TransportResearch Society

**World Conference 2017** 

21st AirTransport Research Society World Conference 2017

# Welcome on behalf of the local organizing committee



In the name of the University of Antwerp, the Faculty of Applied Economics, the Department of Transport and Regional Economics and C-MAT, the Centre for Maritime and Air Transport Management, I am very happy to welcome you in Antwerp. It gives us a feeling of great privilege to have been given the opportunity to organize this ATRS 2017 conference.

Originally a department focusing mainly on maritime and port research, the Departement of Transport and Regional Economics has grown to become a knowledge and education centre for air transport as well. This development was supported by the creation of the Centre for Maritime and Air Transport Management, which provides an international management programme in which the students can choose to specialize in either maritime or air transport. Furthermore, there is an array of research methods that can be applied to both the maritime, as well as air transport sector.

For the ATRS conference, we are very much looking forward to an array of special sessions with interesting discussions between industry participants and participants from academia. Furthermore, the collection of fascinating papers going to be presented at this conference guarantees high quality contributions and a memorable program of the highest scientific standards and practical merit.

We thank everyone who contributed to this conference. We are indebted to our sponsors, colleagues and participants to make this event possible.

May your stay in the cosmopolitan city of Antwerp and your participation in this very special air transport conference be an enjoyable, interesting and unforgettable experience.

Professor Eddy Van de Voorde

Chair of the ATRS 2017 Organizing Committee



Local organizing committee: Prof. dr. Eddy Van de Voorde, Prof. dr. Hilde Meersman (not pictured), dr. Wouter Dewulf, dr. Franziska Kupfer, dr. Evy Onghena

With the help of: Thomas Van Asch, Sven Buyle, Veerle Joris and Kristel De Poorter

### Welcome on behalf of the ATRS



PhD defense, University of Antwerp, 2013

Hartelijk welkom! (Welcome!) It is with great pleasure that I welcome you to the 21st ATRS World Conference in the beautiful city of Antwerp. We are very pleased to offer you a full slate of plenary sessions, panel sessions, and paper presentations on a vast array of topics related to aviation. Moreover, we hope that you will take the opportunity to renew old acquaintances and meet new friends during the lunches and coffee breaks, and at the Welcome Reception and Gala Dinner.

Although Antwerp may be best known for its seaport and for its diamond trading industry, the city has a rich aviation history as well. This history goes back to "The First Flying Week of Antwerp" in 1909, organized by the Aéroclub d'Anvers. Fourteen years later, Antwerp's first airport was established. According to the historical account of the Antwerp International Airport, "An old railway truck was used as the station building, but was later replaced by a wooden chalet."

These days, Antwerp has a small international airport, but more importantly, the University of Antwerp, through its Centre for Maritime & Air Transport Management, has become a worldwide leader in aviation management education. That is why we are especially pleased to be having our conference here this year. I would like to thank the organizers from the University of Antwerp, Prof. Van de Voorde, Prof. Meersman, Dr. Onghena, Dr. Dewulf, and especially, Dr. Kupfer, our main point-of-contact over the past couple of years, for all of their efforts in making this conference happen.

ı	wish vo	112	nroductive	and	aniovah	حا	conference
ı	WISH VO	u a	productive	anu	enjoyar	ne	comerence

Martin Dresner

President, ATRS

# **Keynote Speakers**



Prof. dr. Ken Button, Professor of Public Policy at George Mason University

Prof. dr. Ken Button is Full Professor at the School of Public Policy and Director of the Centre for Transportation Policy, Operations and Logistics at George Mason University. He has published around 80 books and over 400 academic papers and is considered as a world-renowned expert on transportation policy. He has been an advisor to the Secretary General of the OECD and has been involved in various research projects for ICAO, the European Union, Transport Canada, the United Nations Department for Development Support & Management Services and the World Bank. He is also editor of two leading international academic journals and member of several other editorial boards. His area of research is in economics of privatization and regulation, environmental economics, regional economics, transport planning, transportation economics and urban economics.

#### Brian Pearce, Chief Economist and Director at IATA

Brian Pearce is Chief Economist and Director at the International Air Transport Association and visiting Professor at Cranfield University, Department of Air Transport. His specialization is in the economics of air transport, environmental policy, financial markets and macroeconomic forecasting. He is regularly being invited as expert adviser. He has been a member of the expert panel of the UK Airports Commission, member of ANZ's sustainability panel and adviser to ICAO on market based instruments.





Henrik Hololei, Director General for Mobility and Transport at the European Commission

Henrik Hololei is active in the European Commission since 2004, first as Head of Cabinet of Siim Kammas who acted as commissioner and Vice President responsible for, among others, Transport and Mobility, later as Deputy Secretary General and since October 2015 as Director General for Mobility and Transport. He has hold the position of Minister of Economic Affairs of Estonia from 2001 - 2002 and has held various positions involved with European Integration within the Estonian Government.

# Programme Overview

# **Programme Overview**

Wednesday, 5	July - Meetings and Reception
09:00-12:00	ATRS Executive Committee Meeting (by invitation only)
Hof van Liere, Tho	omas Greshamzaal
12:00-12:30	Lunch
12:30-14:00	ATRS Networking Committee Meeting (by invitation only)
Hof van Liere, Tho	nmas Greshamzaal
14:00-15:30	Airport Benchmarking Taskforce Meeting (by invitation only)
Hof van Liere, Tho	omas Greshamzaal
13:00-19:30	Conference Registration (at the University of Antwerp until 17:30 and
	at the reception venue from 18:30 until 19:30)
14:00-17:00	Technical tours to Brussels Airport and Antwerp Airport
	(see information on the conference excursions on p. 32)
16:00-18:00	PhD Student and Junior Faculty Workshop
Room C.101	(workshop registration and conference badge required)
18:30-20:30	Welcome Reception atFelixArchief
FelixArchief	

Thursday, 6 Ju	ly - Plenary Sessions and Concurrent Paper Sessions			
08:30-17:30	Conference Registration			
09:00-12:30	Plenary Sessions			
Room C.204				
09:00-09:15	Welcome Address			
09:15-09:40	Academic Keynote Speech by Prof.Kenneth Button,			
	George Mason University			
09:40-10:20	Industry Keynote Speech by Brian Pearce, IATA			
	and Henrik Hololei, European Commission			
10:20-10:40	Coffee break			
10:40-11:30	Plenary panel: Air Transport Industry Prospects in the Changing World			
	Moderator: Wouter Dewulf, University of Antwerp			
	Panelists: Tae Oum, University of British Columbia			
	Brian Pearce, IATA			
	Henrik Hololei, European Commission			
	Kenneth Button, George Mason University Herman Carpentier, Brussels Airlines			
	François Gillet, Liege Airport			
11:30 - 12:30	ATRS Global Airport Benchmarking Task Force Report and the Excellence Award Session			
12:30-14:00	Lunch			
14:00-15:15	Panel Sessions			
Room C.204 A.	Airport Panel Session: What are the key factors in comparing productivity among airports and how can these factors be captured when benchmarking?			
	Moderator: Gianmaria Martini, University of Bergamo Panelists: Mario Diaz, Houston Airports Perry Miller, Jackson Municipal Airport			

Chunyan Yu, Embry-Riddle Aeronautical University Nicole Adler, Hebrew University of Jerusalem Thomas Woldbye, Copenhagen Airport Cathal Guiomard, Dublin City University Rainer Koelle, Eurocontrol Kurt Daels, Brussels Airport

Room C.003 B. Airline Panel Session: What are the important research issues for the airline industry

and how can industry help researchers undertake projects in these areas?

Moderator: Christian Hofer, University of Arkansas

Panelists: Jesus Rubio, IATA

Brian Pearce, IATA

Nikolay Mal'tsev, Cyprus Airways

Sveinn Gundmundsson, Toulouse Business School Anming Zhang, University of British Columbia Li Zou. Embry-Riddle Aeronautical University

	Li Zou, Lindiy-Mudie Aeronautical Oniversity
15:15 - 15:30	Break
15:30 - 16:45	Concurrent Paper Session I
16:45 - 17:15	Coffee break
17:15 - 18:30	Concurrent Paper SessionII
17:15 - 18:30	Special Session: How are ATRS Airport Efficiency Rankings Calculated
Room C.103	Moderator: Tae Oum, University of British Columbia
18:30 - 19:30	ATRS Special Interest Groups Meeting
Room B.001	

Friday, 7 July	- Concurrent Paper Sessions
08:30-17:30	Conference Registration
09:00-10:15	Concurrent Paper Session III
10:15-10:45	Coffee break
10:45-12:00	Concurrent Paper Session IV
12:00-13:30	Lunch
12:30-13:30	Meet the Editors Panel Session
Room C.103	
13:30-14:45	Concurrent Paper Session V
14:45-15:00	Break
15:00-16:15	Concurrent Paper Session VI
16:15-16:45	Coffee break
16:45-18:00	Concurrent Paper Session VII
19:00	Gala Dinner at ZOO Antwerp

Saturday, 8 July - Concurrent Paper Sessions and Conference Closing Session					
09:00-12:00	Conference Registration				
09:00-10:15	Concurrent Paper SessionVIII				
10:15-10:45	Coffee break				
10:45-12:00	Concurrent Paper Session IX				
12:00-13:00	ATRS General Assembly				
Room C.003					
14:00-16:00	After Conference Excursion to DiamondLand in the Jewish Quarter				

Last minute changes to the programme will be communicated via the ATRS 2017 Facebook page. Don't forget to like us! 

ATRS2017

# **Concurrent Paper Sessions Overview**

Thursday, 6 July					
15:30 -16:45	Concurrent Paper Session I				
Session 1-A	Room B.001	Air Cargo 1	see p.14		
Session 1-B	Room B.002	Air Transport Policy & Regulation 1	see p.14		
Session 1-C	Room B.003	Airline Economics 1	see p.14		
Session 1-D	Room B.004	Airline Planning and Operations Under Uncertainty 1*	see p.15		
Session 1-E	Room C.002	Airline Strategy, Management and Operations 1	see p.15		
Session 1-F	Room C.101	Airport Economics 1	see p.15		
Session 1-G	Room C.102	Environmental Issues in Air Transport 1	see p.15-16		
17:15 -18:30	Concurrent Paper Session II				
Session 2-A	Room B.001	Airline Planning and Operations Under Uncertainty2*	see p.16		
Session 2-B	Room B.002	Airline Strategy, Management and Operations 2	see p.16		
Session 2-C	Room B.003	Airport Economics 2	see p.16		
Session 2-D	Room B.004	Intermodal and Air Travel Alternatives 1	see p.16-17		
Session 2-E	Room C.002	Aviation Safety & Security1	see p.17		
Session 2-F	Room C.101	Environmental Issues in Air Transport 2	see p.17		
Session 2-G	Room C.102	Operations Research in Air Transport 1	see p.17		

Friday, 7 July					
09:00 -10:15	Concurrent Paper Session III				
Session 3-A	Room B.001	Air Cargo 2	see p.18		
Session 3-B	Room B.002	Air Transport Policy & Regulation 2	see p.18		
Session 3-C	Room B.003	Airline Economics 2	see p.18		
Session 3-D	Room B.004	Airline Strategy, Management and Operations 3	see p.18-19		
Session 3-E	Room C.002	Airport and Airline Performance 1	see p.19		
Session 3-F	Room C.101	Airport Strategy, Management and Operations 1	see p.19		
Session 3-G	Room C.102	Environmental Issues in Air Transport 3	see p.19		
10:45 -12:00 Concurrent Paper Session IV		per Session IV			
Session 4-A	Room B.001	Air Cargo 3	see p.19-20		
Session 4-B	Room B.002	Air Transport Policy & Regulation 3	see p.20		
Session 4-C	Room B.003	Airline Economics 3	see p.20		
Session 4-D	Room B.004	Airport and Airline Performance 2	see p.20		
Session 4-E	Room C.002	Airport Strategy, Management and Operations 2	see p.20-21		
Session 4-F	Room C.101	Aviation & Tourism	see p.21		
Session 4-G	Room C.102	Environmental Issues in Air Transport 4	see p.21		
13:30 -14:45	Concurrent Paper Session V				
Session 5-A	Room B.001	Air Transport Demand 1	see p.21-22		
Session 5-B	Room B.002	Air Transport Policy & Regulation 4	see p.22		

<sup>\*</sup> We thank Bruno Santos, Delft University of Technology, for organizing these special topic sessions.

Session 5-C	Room B.003	Airline Network Development 1	see p.22
Session 5-D	Room B.004	Airport and Airline Performance 3	see p.22
Session 5-E Room C.002		Airport Strategy, Management and Operations 3	see p.22-23
Session 5-F	Room C.101	Human Resources Management in Air Transport	see p.23
Session 5-G	Room C.102	Aviation Case Studies 1	see p.23
15:00 -16:15	Concurrent Pa	per Session VI	
Session 6-A	Room B.001	Air Transport Demand 2	see p.23-24
Session 6-B	Room B.002	Air Transport Policy & Regulation 5	see p.23
Session 6-C	Room B.003	Airline Network Development 2	see p.24
Session 6-D	Room B.004	Airport and Airline Performance 4	see p.24
Session 6-E	Room C.002	Airport Case Studies 1	see p.24-25
Session 6-F	Room C.101	Airport Strategy, Management and Operations 4	see p.25
Session 6-G	Room C.102	Market Outlook and Future Developmentof Air Transport	see p.25
16:45 -18:00	Concurrent Pa	per Session VII	
Session 7-A	Room B.001	Airport Case Studies 2	see p.25-26
Session 7-B	Room B.002	Aviation & Economic Development1	see p.26
Session 7-C	Room B.003	Aviation Case Studies 2	see p.26
Session 7-D	Room B.004	Aviation safety & Security2	see p.26
Session 7-E	Room C.002	Intermodal and Air Travel Alternatives 2	see p.26-27
Session 7-F	Room C.101	Low-Cost Carriers 1	see p.27
Session 7-G	Room C.102	Operations Research in Air Transport 2	see p.27
Saturday, 8	3 July		
09:00 -10:15	Concurrent Pa	per Session VIII	
Session 8-A	Room B.001	Air Traffic Control 1	see p.28
Session 8-B	Room B.002	Aviation & Economic Development2	see p.28
Session 8-C	Room B.003	Aviation Safety & Security3	see p.28
Session 8-D	Room B.004	Low-Cost Carriers 2	see p.28-29
Session 8-E	Room C.002	Marketing in AirTransport	see p.29
Session 8-F	Room C.101	Operations Research in Air Transport 3	see p.29
Session 8-G	Room C.102	Revenue Management & Pricing 1	see p.29
10:45 -12:00	Concurrent Pa	per Session IX	
Session 9-A	Room B.001	Air Traffic Control 2	see p.30
Session 9-B	Room B.002	Aviation & Economic Development3	see p.30
Session 9-C	Room B.003	Aviation Case Studies 3	see p.30
Session 9-D	Room B.004	Aviation Finance	see p.30
Session 9-E Room C.002 Mergers and Alliances in AirTransport		Mergers and Alliances in AirTransport	see p.31
Session 9-F	Room C.101	Operations Research in Air Transport 4	see p.31
Session 9-G	Room C.102	Revenue Management & Pricing 2	see p.31

# Conference Programme

# **Conference Programme**

### 2017 ATRS World Conference Program

Wednesday, 5 July	
9:00-12:00	ATRS Executive Committee Meeting (by invitation only)
Hof van Liere, Thomas Gresham	nzaal
12:00-12:30	Lunch
12:30-14:00	ATRS Networking Committee Meeting (by invitation only)
Hof van Liere, Thomas Gresham	nzaal
14:00-15:30	Airport Benchmarking Taskforce Meeting (by invitation only)
Hof van Liere, Thomas Gresham	nzaal
13:00-19:30	ConferenceRegistration(atUniversityofAntwerpenuntil17:30,and
	at reception venue from 18:30 until19:30)
14:00-17:00	Technical tours to Brussels Airport and Antwerp Airport
16:00-18:00	PhD Student and Junior Faculty Workshop
Room: C.101	(workshop registration and conference badge required)
18:30-20:30	Welcome Reception at FelixArchief
FelixArchief	

Thursday, 6 July	
8:30-17:30	ConferenceRegistration
9:00-9:15	Welcome Address
Room: C.204	Martin Dresner, University of Maryland, ATRS President
	Eddy Van de Voorde, University of Antwerp
	Herman Van Goethem, University of Antwerp
9:15-9:40	Academic Keynote Speech
Room: C.204	Kenneth Button, George MasonUniversity
9:40-10:20	IndustryKeynoteSpeech
Room: C.204	Brian Pearce, IATA
	Henrik Hololei, European Commission
10:20-10:40	Coffee break
10:40-11:30	Panel Debate
Room: C.204	Moderator: Wouter Dewulf, University of Antwerp
	Panelists: Tae Oum, University of British Columbia
	Brian Pearce, IATA
	Henrik Hololei, European Commission
	Kenneth Button, George Mason University
	Herman Carpentier, Brussels Airlines
	François Gillet, Liege Airport
11:30-12:30	ATRS Global Airport Benchmarking Task Force Report and the Excellence Award Presentation
Room: C.204	Moderator: Mario Diaz, Houston Airports
	Presenter: Chunyan Yu, Embry-Riddle Aeronautical University
12:30-14:00	Lunch
14:00-15:15	Airport Panel Session
Room: C.204	Moderator: Gianmaria Martini, University of Bergamo
	Panelists: Mario Diaz, Houston Airports
	Perry Miller, Jackson Municipal Airport
	Chunyan Yu, Embry-Riddle Aeronautical University

Nicole Adler, Hebrew University of Jerusalem
Thomas Woldbye, Copenhagen Airport
Cathal Guiomard, Dublin City University
Rainer Koelle, Eurocontrol
Kurt Daels, Brussels Airport

14:00-15:15
Airline Panel Session

Room: C.003
Moderator: Christian Hofer, University of Arkansas
Panelists: Jesus Rubio, IATA
Brian Pearce, IATA
Nikolay Mal'tsev, Cyprus Airways
Sveinn Gundmundsson, Toulouse Business School

Sveinn Gundmundsson, Toulouse Business Schoo Anming Zhang, University of British Columbia Li Zou, Embry-Riddle Aeronautical University

15:15-15:30 Break

#### Concurrent Session I (Thursday, July 6, 15:30-16:45)

Concurrent	Sessi	ion I (T	hursday, July 6, 15:30-16:45)
15:30-16:45	1-A		Air Cargo 1
Room: B.001		Chair:	Eddy Van de Voorde, University of Antwerp
		107	A Gravity Model for Air Cargo (Eric Pels, VU University; Howard Riddiough, Schiphol Group; Anton van den Berg, Schiphol Group)
		123	A Spatial Analysis of Integrated Carriers Air Transport Networks in Asia (Davide Scotti, University of Bergamo; Paolo Malighetti, University of Bergamo; Gianmaria Martini, University of Bergamo; Renato Redondi, University of Bergamo)
		179	Global Air Cargo Flows Estimation Based on O/D Trade Data (Lars Meijs, Delft University of Technology; Bruno Santos, Delft University of Technology)
15:30-16:45	1-B		Air Transport Policy & Regulation 1
Room: B.002		Chair:	Benny Mantin, University of Luxembourg
		17	How to Evaluate the Openness of Air Service Agreements? The Case of China's ASAs (Xingwu Zheng, Civil Aviation University of China)
		97	Bilateral Air Service Policy and Airlines Competition under Mixed Oligopolistic Single International Market (Yi Zhang, Civil Aviation University of China; Xingwu Zheng, Civil Aviation University of China)
		126	Do Bumped Passengers Exhibit Loss Aversion? Evidence from the US Airline Industry (Hideki Fukui, Ehime University; Koki Nagata, University of Maryland)
		324	Bankruptcy in International vs Domestic Markets: Evidence from the Airline Industry (Benny Mantin, University of Luxembourg; Sebastian Bock, University of Applied Sciences Bremen; Hans-Martin Niemeier, University of Applied Sciences Bremen; Peter Forsyth, Monash University)
15:30-16:45	1-C		Airline Economics 1
Room: B.003		Chair:	Nicola Volta, Cranfield University
		29	Rival's Presence and Factors of Market Power in the Airline Industry (Ryohei Yamamoto, Kobe University)
		185	What Kind of Competition Matters? Aggregate Look at U.S. Airfares (Volodymyr Bilotkach, Newcastle University)
		213	Modelling the Potential for Aviation Liberalization in Central Asia - Market Analysis and Implications for the One-Belt-One-Road Initiative (Xiaowen Fu, University of Sydney; Kun Wang, University of British Columbia; Achim Czerny, Hong Kong Polytechnic University; Guowei Hua, Beijing Jiaotong University; Zheng Lei, University of Surrey)
		100	Do Airlines Pass through Cost Changes to Passengers? (Nicola Volta, Cranfield University; Davide Scotti, University of Bergamo)

15:30-16:45 Room: B.004	1-D	Chair:	Airline Planning and Operations Under Uncertainty 1 Milan Janic, Delft University of Technology
		34	A Multistage Stochastic Programming Model for Air Cargo Assignment under Capacity Uncertainty (Felipe Delgado, Pontifical Catholic University of Chile; Richado Trincado, Pontifical Catholic University of Chile; Bernardo Pagnoncelli, Adolfo Ibáñez University)
		47	Creation of Robust Operation Itineraries for a Freighter Airline (Sebastian Gebhardt, Pontifical Catholic University of Chile; Felipe Delgado, Pontifical Catholic University of Chile; Gustavo Angulo, Pontifical Catholic University of Chile)
		235	Analyzing Airline Scheduling Processes Based on Real Data (Marius Radde, German Aerospace Center (DLR); Klaus Luetjens, German Aerospace Center (DLR))
		21	Modelling Resilience of an Airline Freight/Cargo Transport Network (Milan Janic, Delft University of Technology)
15:30-16:45 Room: C.002	1-E	Chair:	Airline Strategy, Management and Operations 1 Ian Douglas, University of New South Wales
		153	Empirical Analysis of the Market Competition Structure between FSC and LCC - The Case of Thailand and Australia (Jun Mizutani, Kobe University; Nattan Luanghiran, Kobe University; Navatasn Kongsamutr, Kasetsart University)
		368	Full Service and Low-Cost Airlines: Are Business Practices Converging Overtime (Bijan Vasigh, Embry-Riddle Aeronautical University; Farshid Azadian, Embry-Riddle Aeronautical University)
		373	Business Model Convergence - Long Haul LCC Connectivity (Ian Douglas, University of New South Wales; David Tan, University of New South Wales)
15:30-16:45	1-F		Airport Economics 1
Room: C.101		Chair:	Gianmaria Martini, University of Bergamo
		71	International Hub: Congestion Pricing and Capacity Investment (Ming Hsin Lin, Osaka University of Economics)
		156	Air Traffic Development in ASEAN: An Airport Capacity Analysis (Estelle Malavolti, ENAC (TSE); Isabelle Laplace, ENAC (Sustainable Development Program))
		175	How to Mix Per-flight and Per-passenger Based Airport Charges: The Competition Case (Achim Czerny, Hong Kong Polytechnic University; Simon Cowan, University of Oxford; Anming Zhang, University of British Columbia)
		127	Persistent and Transient Inefficiency in Airport Cost Function (Gianmaria Martini, University of Bergamo; Davide Scotti, University of Bergamo; Domenico Viola, University of Bari)
15:30-16:45	1-G		Environmental Issues in Air Transport 1
Room: C.102		Chair:	Sveinn Gudmundsson, Toulouse Business School
		1	Eco-Labels in the Aviation Industry - Instrument for Behavioral Change? (Stefan Baumeister, University of Jyväskylä; Alex Hoffendahl, University of California, Los Angeles)
		150	Knowledge, Attitudes and Intentions: A Cross-Cultural Analysis Concerning Environmental Impacts of Aviation and Mitigation Strategies for Air Passengers (Jin-Long Lu, National Kaohsiung Marine University; Wen-Chun Tseng, University of SouthAustralia)
		238	ICAO's New GMBM CORSIA: A Critical Discussion of the Scheme's Environmental Effectiveness and Competitive Impacts (Janina Scheelhaase, German Aerospace Center (DLR); Sven Maertens, German Aerospace Center (DLR); Wolfgang Grimme, German Aerospace Center (DLR))

356 An Analysis of the Effectiveness of Airport Charges to Reduce Nox Emissions (Gustavo Alonso, Polytechnic University of Madrid; Arturo Benito, Polytechnic University of Madrid)

10:15-10:45 Coffee break

Concurrent	t Sess	sion II (1	Thursday, July 6, 17:15-18:30)
17:15-18:30	2-A		Airline Planning and Operations Under Uncertainty 2
Room: B.001		Chair:	Bruno Santos, Delft University of Technology
		38	An Approach to Deduce Unknown Passenger Characteristics from Known Passenger Data (Steffen Wenzel, German Aerospace Center (DLR); Erik Grunewald, German Aerospace Center (DLR); Daniel Frontzek, Hamburg University of Technology; Peter Biesslich, German Aerospace Center (DLR); Klaus Luetjens, German Aerospace Center (DLR))
		190	Robust Crew Scheduling - Addressing the Crew Pairing Problem (David Antunes, University of Coimbra; Vikrant Vaze, Thayer School of Engineering, Dartmouth; Antonio Antunes, University of Coimbra)
		133	Dynamic Decision Support Tool for Crew Recovery in Disrupted Operations (Niek J.M. Hoeben, Delft University of Technology; Bruno Santos, Delft University of Technology)
		62	Sequential Approach for Solving the Dynamic Aircraft Recovery Problem (Jeroen Vink, Delft University of Technology; Bruno Santos, Delft University of Technology; Wim Verhagen, Delft University of Technology; Ivo Medeiros, Embraer; Ricardo Filho, Embraer)
17:15-18:30 Room: B.002	2-B	Chair:	Airline Strategy, Management and Operations 2 Wouter Dewulf, University of Antwerp
		183	A Fuzzy-based DEA Method to Evaluate Efficiency of Airlines: Implication to South-East and Central Europe (Jovana Kuljanin, University of Belgrade; Milica Kalic, University of Belgrade; Leonardo Caggiani, Polytechnic University of Bari; Michele Ottomanelli, Polytechnic University of Bari)
		206	The Perception of Organizational Trust and Job Satisfaction of Flight Attendants: A Model of Improving the Well-being of Human Service Employees (Noriko Okabe, Yokohama National University)
		232	Vertical Alliance of FSC and LCC Based on the Network Analysis (Young-In Kim, Inha University; Yonghwa Park, Inha University)
17:15-18:30	2-C		Airport Economics 2
Room: B.003		Chair:	Yap Yin Choo, British Columbia Institute of Technology
		40	A System Dynamics Model of the Airport-Airline Financial Interaction (Luis Saias Oliveira, IST, University of Lisbon; Vasco Reis, IST, University of Lisbon; Rosario Macario, IST, University of Lisbon)
		73	Identifying Niche Markets for Ten Asian Aviation Hubs (Yu-Chun Chang, National Taiwan Ocean University; Wei-Hao Lee, National Taiwan Ocean University; Chia-Jui Hsu, Taoyuan AirportCorporation)
		345	The Impacts of the Disproportionate Burden of Regulatory Costs on the UK's Smaller Airports (Basil O'Fee, Northpoint Aviation Services; Christopher Cain, Northpoint Aviation Services)
		130	Impacts of Airline's Market Structure and Airport Congestion on Airport's Market Power (Yap Yin Choo, British Columbia Institute of Technology; Kun Wang, University of British Columbia; Leonardo Corbo, Catholic University of
17:15-18:30	2-D	Ch. :	Intermodal and Air Travel Alternatives 1
Room: B.004		Chair:	Shinya Hanaoka, Tokyo Institute of Technology
		108	Accessibility to Italian Remote Regions: Comparison Among Different Transport Alternatives (Paolo Beria, Politecnico di Milano; Antonio Laurino, Politecnico di Milano; Paolo Beria, Politecnico di Milano; Andrea Debernardi, METAsrl)

		294	Modelling Mode Choice Behaviour in the Context of Air-HSR Intermodality in China (Fangqing Song, University of Leeds)
		165	Impact of High-speed Rail Entry on Airport and Access Mode Choice Behavior in China (Shinya Hanaoka, Tokyo Institute of Technology; Jiawen Jiang, Tokyo Institute of Technology; Daisuke Fukuda, Tokyo Institute of Technology)
17:15-18:30	2-E		Aviation Safety & Security 1
Room: C.002		Chair:	Yeong-Heok Lee, Korea Aerospace University
		219	Strategy of Improving the UAVs Pilot License and Training Policy in ROK (Yongseok Kim, Korea Transportation Safety Authority; Sungwon Choi, Korea Transportation Safety Authority)
		245	An Innovative Approach for Achieving DO178C Certification of an Intelligent System Implementing Sense-and-Avoid Function in UAVs (John Pyrgies, University of Namur; Daniel-Frederic Gigan, Centre d'excellence Drones (CED); Rob Haelterman, Royal Military Academy)
		308	Drone Legal Campaign (Giovano Palma, Ministry of Transport; Itala Giovana Pereira Cavalli, Ministry of Transport; Marco Antonio Lopes Porto, Ministry of Transport; Shamash da Frota Vicentini, Ministry of Transport; Thiago Pereira Pedroso, Ministry of Transport)
17:15-18:30	2-F		Environmental Issues in Air Transport 2
Room: C.101		Chair:	Cherie Lu, Chang Jung Christian University
		<del>85</del>	Nanoparticles Emission from Aircraft in Area Adjacent to the Airport (Remigiusz Jasinski, Poznan University of Technology; Jacek Pielecha, Poznan University of Technology; Jarosław Markowski, Poznan University of Technology)
		<del>180</del>	Exhaust Emissions Model Verification for a Small Aircraft during Flight (Jaroslaw Markowski, Poznan University of Technology; Pielecha Jacek, Poznan University of Technology; Remigiusz Jasinski, Poznan University of Technology)
		337	Updating of Aircraft Noise Management Policy in Brazil: A Demand to Achieve Noise Management Conflicts (Tania Cristina De Menezes Caldas, Federal University of Rio de Janeiro; Jules Ghislain Slama, Federal University of Rio de Janeiro)
		160	The Evaluation of Environmental Benefits and Costs for the Use of Biofuels in Commercial Flights (Cherie Lu, Chang Jung Christian University)
17:15-18:30	2-G	Chair	Operations Research in Air Transport 1
Room: C.102		<del>Chair:</del> 9	Xiaowen Fu, University of Sydney  A New Approach to Estimate the Confidence Intervals for DEA Efficiency
		9	Scores with Application for the Asia-Pacific Airlines (Thanh Ngo, Massey University)
		201	An Iterative Approach for the Airport Management Problem (Luis Cadarso, Rey Juan Carlos University; Alejandra Taborda Londoño, Polytechnic University of Madrid (UPM); Angel Gracia, Polytechnic University of Madrid (UPM))
		330	Impact of Multi-criteria Trajectory Optimization on Airline and Network Efficiency (Judith Rosenow, Technical University of Dresden; Hartmut Fricke, Technical University of Dresden)
		55	An improved Cellular Automata Model for Passenger Boarding (Xinhui Ren, Civil Aviation University of China; Hong Jiang, Civil Aviation University of China)
18:30-19:30			ATRS Special Interest Groups Meeting
Room: B.001			Moderator: Sveinn Gudmundsson, Toulouse Business School

Friday	7-Jul		
		on III (I	Friday, July 7, 9:00-10:15)
9:00-10:15	3-A	ו) ווו ווט	Air Cargo 2
Room: B.001	J-A	Chair:	Peter Morrell, Cranfield University
		49	Strategies of Air Cargo Carriers in a Changing Business Environment (Wouter Dewulf, University of Antwerp)
		131	Does Cargo Matter? A Comparison of Delays of Pure Passenger and Combination Carriers (Anne Lange, TU Darmstadt)
		256	Is Your Belly Empty? - The Analysis of the Transition from Full Freighters to Belly Cargo for KLM (Miguel Mujica Mota, Amsterdam University of Applied Sciences; Abdel el Makhlouf, Amsterdam University of Applied Sciences; Geert Boosten, Amsterdam University of Applied Sciences; Bernard Van Dijk, Amsterdam University of Applied Sciences; Ettienne Hunt, Amsterdam University of Applied Sciences)
		59	The Allocation of Fuel Costs between Passengers and Cargo on Long- Haul Passenger Flights (Peter Morrell, Cranfield University)
9:00-10:15	3-B		Air Transport Policy & Regulation 2
Room: B.002		Chair:	Xingwu Zheng, Civil Aviation University China
		95	Fifth Freedom Traffic Rights: Formidable Threat or Theoretical Concern? (Jae Woon Lee, Embry-Riddle Aeronautical University-Asia; Will Horton, Centre For Aviation)
		252	The Optimal Market Concentration for Minimal Airline Delays and Airfare (Chih-Peng Chu, National Dong Hwa University; Che-Yu Chen, National Dong Hwa University; Che-Ming Chen, National Dong Hwa University; Chia-Ching Liang, National Dong Hwa University)
		295	Do Open Skies Lead to Subsidies? (William Morrison, Wilfrid Laurier University)
9:00-10:15 Room: B.003	3-C	Chair:	Airline Economics 2 Anming Zhang, University of British Columbia
		149	Empirical Evidence on the Level of Transaction Costs in the Airline Ticket Distribution Context (Md Mahbubul Hakim, University of Sydney; Rico Merkert, University ofSydney)
		250	The Analysis of Impact of Larger Aircraft A380 on Frequency of Flights (Isabelle Laplace, Ecole Nationale de l'Aviation Civile; Aliya Ussinova, TSE; Chantal Roucolle, ENAC/DEVI)
		289	Impact of Airline Business Models, Market Segments and Regions on Aircraft Cabin Configurations (Oluwaferanmi Oguntona, Munich Aerospace; Kay Ploetner, Bauhaus Luftfahrt e.V.; Marcia Urban, Bauhaus Luftfahrt e.V.; Raoul Rothfeld, Bauhaus Luftfahrt e.V.; Mirko Hornung, Bauhaus Luftfahrt e.V.)
		48	Effect of High-Speed Rail (HSR) Speed on Airline Demand and Price Empirical Evidence from a Natural Experiment in China (Qiong Zhang, Anhui Normal University; Anming Zhang, University of British Columbia; Wenyi Xia, University of British Columbia; Kun Wang, University of British Columbia)
9:00-10:15	3-D		Airline Strategy, Management and Operations 3
Room: B.004		Chair:	Evy Onghena, University of Antwerp
		159	Business Model Innovation in Aviation: An Application Case of the Business Model Navigator to the Airline Industry (Marcia Urban, Bauhaus Luftfahrt e.V.; Kay Olaf Ploetner, Bauhaus Luftfahrt e.V.; Alexander Vencken, BMI Lab AG)
		202	Exploring Airlines Organisational Culture: A Content Analysis of Mission and Vision Statements (Bo Lin, Whitireia; Kan Wai Hong Tsui, Massey University)

		332	Liberalisation, Low-cost competition and Hub Premiums: Assessing Price Impacts in the China - ASEAN Aviation Market (Zheng Lei, University of Surrey; Ruowei Chen, COMAC)
9:00-10:15	3-E		Airport and Airline Performance 1
Room: C.002	3-L	Chair:	Koki Nagata, University of Maryland
KUUIII. C.UU2			
		67	Sense Making from Corporate Discourse: A Study of Airline Annual Reports and How Airline Analysts Evaluate Them (Louis Thwaites, Concordia University)
		110	Airlines Operation Impacts on Airports Efficiency - The Low-Cost Case Study (Tiago Rosa, University of Beira Interior; Maria E. Baltazar, University of Beira Interior; Jorge Silva, University of Beira Interior)
		112	Multi-Criteria Decision Analysis to Assess Airlines Performances and Efficiency (Miguel Miranda, University of Beira Interior; Tiago Rosa, University of Beira Interior (UBI); Maria E. Baltazar, University of Beira Interior; Jorge Silva, University of Beira Interior)
		122	Understanding Consumer Preferences with Airline Scheduling (Sukru Nenem, University of Westminster; Anne Graham, University of Westminster)
9:00-10:15	3-F		Airport Strategy, Management and Operations 1
Room: C.101		Chair:	Balram Bheodari, Atlanta Airport
		167	Airport and City Center Rivalry (Hanxiang Zhang, Hong Kong Polytechnic University; Achim Czerny, Hong Kong Polytechnic University)
		335	Airport Market Power and the Impacts on Business Development (Dimitrios Dimitriou, Democritus University of Thrace)
		354	Airport Service Quality (ASQ) from Twitter (Luis Martin-Domingo, Ozyegin University; Juan Carlos Martin, University of Las Palmas de Gran Canaria; Glen Mandsberg, SureSMS Aps)
9:00-10:15	3-G		Environmental Issues in Air Transport 3
Room: C.102		Chair:	Frederic Dobruszkes, Brussels Free University
		19	Is the Aggregate Fuel-Conservation Effect of a Higher Fuel Price Felt at the Aircraft-Model Level? (Chrystyane Abreu, CEFET/RJ /UFRJ)
		268	Air Traffic Assignment to Reduce Population Noise Exposure: An Approach Incorporating Human Mobility Patterns (Emir Ganic, University of Belgrade)
		361	Is Airline Merging Good for Local Airport Environmental Conditions? (Jasenka Rakas, University of California, Berkeley; Naya Olmer, University of California, Berkeley; Aleksandar Bauranov, Urbanova; Debdas Sen, TCG Digital)
		116	Wrong Maps Affecting Political Decision-making Process: The Case of Aircraft Noise in Brussels, Belgium (Frederic Dobruszkes, Brussels Free University (ULB); Didier Peeters, Brussels Free University (ULB))
10:15-10:45		-	Coffee break
. 5. 15 15. 15			- CO. CO D. Suit

10:45-12:00	4-A		Air Cargo 3
Room: B.001		Chair:	Tae Seung Kim, Inha University
		138	Profitability Studies of Delivery Logistics Supported by Unmanned A

Concurrent Session IV (Friday, July 7, 10:45-12:00)

138 Profitability Studies of Delivery Logistics Supported by Unmanned Aerial Systems (Florian Heinitz, Erfurt University of Applied Sciences)
 291 Air Cargo Carries Performance and Efficiency Analysis Using a MCDA Methodology (Duarte Cachola, University of Beira Interior/University of Lisbon; Maria E. Baltazar, University of Beira Interior/University of Lisbon; Vasco Reis, University of Lisbon; Jorge Silva, University of Beira Interior/University of Lisbon)

		353	Route Choice Decision Factors in Air Cargo Transport Market: The Case between Northeast Asia and EU (Kichan Park, Inha University; Tae Seung Kim, Inha University; Jae Hong Park, Inha University)
		352	Price Elasticity Change of the Demand for Air Cargo before and after the Financial Crisis: The Case in Incheon Airport(ICN) (Tae Seung Kim, Inha University; Mina Chae, Inha University)
10:45-12:00	4-B		Air Transport Policy & Regulation 3
Room: B.002		Chair:	Mikio Takebayashi, Kobe University
		173	A Congestion Policy Game (Hao Lang, Hong Kong Polytechnic University; Achim Czerny, Hong Kong Polytechnic University)
		210	Implications of Korean Air Transport Industry after Ten Years of LCCs Market Participation (Jinseo Park, Korea Transportation Institute; Je-Chul Kim, Korea Transportation Institute; Sun Wook Park, Korea Transportation Institute; Yeon Myung Kim, The Korea Transport Institute)
		239	The Impacts and Relationship between Governance Structure, Regulation, and Airport Investment (Jody Kositsky, C-MAT, University of Antwerp; Franziska Kupfer, C-MAT, University of Antwerp)
		86	Managing the Reliever Gateway Airports with High Speed Rail Network (Mikio Takebayashi, Kobe University)
10:45-12:00	4-C		Airline Economics 3
Room: B.003		Chair:	Chikage Miyoshi, Cranfield University
		263	Is Multimarket Contact an Antitrust Concern: A Study of China's Airline Market? (Yahua Zhang, University of Southern Queensland)
		279	The Purpose of Airline Philanthropy (Deborah Ancell, University of Westminster)
		184	The Impact of Fleet Commonality on Airline Cost Structures (Andy Foster, Cranfield University; Chikage Miyoshi, Cranfield University; Carlos Vietes)
10:45-12:00	4-D		Airport and Airline Performance 2
Room: B.004		Chair:	Renato Redondi, University of Bergamo
		39	Bootstrapped DEA of Airport Management Performance before and after Concessions in Brazil (Elton Fernandes, Federal University of Rio de Janeiro; Ricardo Rodrigues Pacheco, Federal University of Rio de Janeiro)
		282	Passenger Boarding: Model and Operations (Michael Schultz, German Aerospace Center (DLR))
		351	Research on the transition of aviation network structure in Japan (Kazuyuki Takada, Tokyo Denki University; Masayuki Shimizu, Tokyo Denki University; Hiroyuki Fukushima, Tokyo Denki University)
		139	The Turnaround Game: Real Efficiency Levels for Carriers and Airports in Europe (Chiara Morlotti, University of Pavia; Paolo Malighetti, University of Bergamo; Renato Redondi, University of Bergamo; Stefano Paleari, University of Bergamo)
10:45-12:00 Room: C.002	4-E	Chair:	Airport Strategy, Management and Operations 2 Volodymyr Bilotkach, Newcastle University
		60	Modelling Regional Accessibility towards Airports UsingDiscrete Choice Models: An Application to the Apulian Airport System (Angela Stefania Bergantino, University of Bari Aldo Moro; Capurso Mauro, University of Leeds)
		152	Study on the Effected Factors and Behavior Characteristics of Passengers Travel Behavior Based on Tianjin Binhai International Airport (Hong Jiang, Civil Aviation University of China; Xinhui Ren, Civil Aviation University of China)

		162	What Factors Matter for the Development of an Airport? Gaining an Insight into Strategic Management Practices at Polish Regional Airports (Sonia Huderek-Glapska, Poznan University of Economics and Business; Hanna Nowak, Poznan University of Economics and Business)
		171	DEA Efficiency in Spanish Airports: A Time Evolution Analysis (Ane Ripoll-Zarraga, Universitat Autònoma de Barcelona; Cecilio Mar- Molinero, Autonomous University of Barcelona)
10:45-12:00	4-F		Aviation & Tourism
Room: C.101		Chair:	Anne Graham, University of Westminster
		32	A Study on Service Quality and Customer Satisfaction of the Cross-Strait Flights between Kaohsiung and the Mainland China (Chi-Ruey Jeng, Shu-Te University)
		120	Market Characteristic and Route Performance of Charter Service from China to Southeast Asia (Chuntao Wu, Sichuan University; Lei Peng, Air China)
		305	Computable General Equilibrium Estimates of the Impact of Air Transport Policies on the Egyptian Tourism Sector (Eric Tchouamou Njoya, University of Huddersfield)
		106	Who Flies the British to the Sun? (Anne Graham, University of Westminster; Nigel Dennis, University of Westminster)
10:45-12:00	4-G		Environmental Issues in Air Transport 4
Room: C.102		Chair:	Robert Windle, University of Maryland
		140	Environmental Effects of Airport Connectivity on Local Communities (Maria Nadia Postorino, Mediterranea University of Reggio Calabria; Luca Mantecchini, University of Bologna)
		188	The Social Dimension of Airline CSR: A Global Comparison (Robert Mayer, Cranfield University)
		193	AIM2015: Validation and Initial Results from an Open-Source Aviation Systems Model (Lynnette Dray, University College London; Philip Krammer, University College London; Khan Doyme, University College London; Bojun Wang, University College London; Kinan Al Zayat, University College London; Aidan O'Sullivan, University College London; Andreas Schafer, University College London)
12:00-13:30			Lunch
12:30-13:30 Room: C.103			Meet the Editors Panel Session Panelists: Tae Oum (EIC, Transport Policy)
			Rico Merkert (Co-EIC, Journal of Air Transport Management)
			Gianmaria Martini (VP-Publications for ATRS Special Issues, Notes Editor Journal of Air Transport Management)
			Sveinn Gudmundsson (Co-EIC, Journal of Air Transport Management and AE, Transportation Research Part E)
			Andreas Papatheodorou (EIC, Journal of Air Transport Studies)
C	Coo	: \/ /5	widov July 7 13:20 14:45\

#### Concurrent Session V (Friday, July 7, 13:30-14:45)

Air Transport Demand 1 13:30-14:45 Room: B.001

Chair: Davide Scotti, University of Bergamo

> ${\bf Modelling\ Airport\ Choice\ Behavior:\ A\ Case\ Study\ on\ the\ Major\ Brazilian}$ Multi-Airport System (Taina Possas Abreu, Aeronautical Institute of Technology; Anderson Ribeiro Correia, Aeronautical Institute of Technology; Giovanna Miceli Ronzani Borille, Aeronautical Institute of Technology)

	195	A Methodology for Forecasting Passengers in Airport Networks Based on the Segregation of Primary and Secondary Demand (Leandro Silva, Ministry of Transport, Ports and Civil Aviation; Rubem Oliveira de Paula, Ministry of Transport, Ports and Civil Aviation; Rodrigo Cruz, Ministry of Transport, Ports and Civil Aviation; Marcelo Vilela, Ministry of Transport, Ports and Civil Aviation)
	218	The Congestion Spillover Effects of Hong Kong International Airport to Nearby Airports (Tommy King Yin Cheung, Hang Seng Management College; Anming Zhang, University of British Columbia; Wai Hung Wong, Hang Seng Management College; Edmund Wu, Hang Seng Management College)
	360	Market Stimulation of New Airline Routes (Howard Riddiough, Amsterdam Airport Schiphol; Thijs Bonnekamp, Amsterdam Airport Schiphol)
13:30-14:45	5-B	Air Transport Policy & Regulation 4
Room: B.002	Chair:	Achim Czerny, Hong Kong Polytechnic University
	28	Study on Competitiveness Assessment Indicators for Global Aviation Training Organizations (Kwang Eui Yoo, Korea Aerospace University; Yong-Ki Yi, Korea Aerospace University)
	178	Measuring the Competitiveness of Canadian National Airports under Various Regulatory and Ownership Structures: A Scenario Analysis Approach (Isabelle Dostaler, Concordia University; Shannon Lloyd, Concordia University; Aaron L. Nsakanda, Carleton University; Ritu Raj Kaur Virk, Concordia University)
	231	Air Transport Liberalization Readiness: A Theoretical Framework to Foster Implementation and its Application to Developing Markets (Jonathan Steinbach, Zeppelin University Friedrichshafen)
	234	Consumer Protection Measures in the Airline Industry: From Regulation and Litigation to 'Core Principles' (Steven Truxal, City, University of London)
13:30-14:45	5-C	Airline Network Development 1
Room: B.003	Chair:	William Morrison, Wilfrid Laurier University
	45	UK Regional Connectivity on the North Atlantic: Hub-Bypassing or Just Changing Hubs? (Frances Kremarik, University of Westminster; Nigel Dennis, University of Westminster; Anne Graham, University of Westminster)
	225	Measuring the Airlines Networks (Chantal Roucolle, Ecole National de l'Aviation Civile; Chantal Roucolle, ENAC/DEVI; Miguel Urdanoz, TBS; Tatiana Seregina, ENAC/TBS)
10.00.11.15	366	Price Competition of Airports in Transit Markets and its Effect on the Airline's Network (Yusuke Teraji, Tezukayama University)
13:30-14:45 5 Room: B.004	5-D Chair:	Airport and Airline Performance 3 Florian Heinitz, Erfurt University of Applied Sciences
NOOIII. B.004	53	World Cities in Air Transport Systems (Hidenobu Matsumoto, Kobe University; Koji Domae, Kobe University)
	147	An Analysis of Airport Efficiency in Japan: The Impact of domestic Low- Cost Carriers Entry (Koji Adachi, Kobe University; Kenichi Shoji, Kobe University)
	249	Cost Performance of Transport Infrastructure Projects before and after the 2008 Global Financial Crisis: Has the Crisis Affected the Conditions of Project Performance? (Eleni Moschouli, University of Antwerp; Raden Murwantara, University of Antwerp; Thierry Vanelslander, University of Antwerp; Koen Verhoest, University of Antwerp)
	5-E Chaire	Airport Strategy, Management and Operations 3
Room: C.002	Chair: 89 U	Frankie O'Connell, Cranfield University  sing Ambient Scent in Airport Security Screening and the Effect on Shopping Mood (Patrick Bohl, Corvinus University of Budapest; Halil Yildirim, Corvinus University of Budapest)

14:45-15:00			Break
		342	Characteristics of Air Passenger Behavior Changes due to Runway Closure of Haneda Airport Caused by KAL 2708 Engine Fire Incident (Kota Miyauchi, Tokyo Denki University; Kazuyuki Takada, Tokyo Denki University; Makoto Fujiu, Kanazawa University; Takahiro Murano, Tokyo Denki University)
		<del>338</del>	Analysis of Changes in Travel Behavior with the Hokkaido Shinkansen- Opening and the Influence on Aviation Market (Kosuke Koike, Kanazawa University; Fujiu Makoto, Kanazawa University; Shoichiro Nakayama, Kanazawa University; Jun-Ichi Takayama, Kanazawa University)
		303	Changing Governance and Regulation of Airports - A Comparison of Austria, Denmark, France, Italy, Hungary, Portugal and Spain (Hans-Martin Niemeier, University of Applied Sciences Bremen; Peter Forsyth, Monash University; Juergen Mueller, Berlin School of Economics)
		121	Measuring and Evaluating on Service Range of International Aviation Routes between Off-Shore-Island Holiday Airports and Main City Airports (Suiling Li, National Penghu University of Science and Technology)
13:30-14:45 Room: C.102	5-G	Chair:	Aviation Case Studies 1 Hans-Martin Niemeier, University of Applied Sciences Bremen
10.00.44.45		230	Patterns of Correlation between Aviation, Education, and Economic Activity in Developing Economies (Wali Mughni, Aviation Institute of Management)
		166	Impact of Automation on Capacity of the Air Traffic Control System Capacity (Zoran Jaksic, Croatia ATC Control ltd., Zagreb, Croatiaf; Doris Novak, University of Zagreb; Milan Janic, Delft University of Technology)
		24	The Airlines Possible Actions in Resolving Flight Attendants Job Burnout (Whei-Li Lu, Chinese Culture University)
		11	How Job Demands and Job Resources Affect Maintenance Crew's Job Passion (Shu-Chuan Chen, Aletheia University)
13:30-14:45 Room: C.101	5-F	Chair:	Human Resources Management in Air Transport Christian Bontemps, ENAC
		135	Commercial Revenues: An Analysis of Parking Provision at Large European Airports (Mark Friesen, QUINTA Consulting; WilfredSebastian Manuela Jr., Asian Institute of Management)
		347	The Strategic Role of Smaller Airports in the UK (Christopher Cain, Northpoint Aviation Services Limited; Basil O'Fee, Northpoint Aviation Services)
			Leon, Appalachian State University; Nizam Uddin, University of Central Florida)

Concurrent 9	Seccion VI	/Eriday	July 7	15.00	16.15)

Concurrent	Sessic	n VI (I	-riday, July /, 15:00-16:15)	
15:00-16:15	6-A		Air Transport Demand 2	
Room: B.001		Chair: Martin Dresner, University of Maryland		
		83	A Gravity Model for Estimating Passenger Origin-Destination Flows between Countries Worldwide (Marc Gelhausen, German Aerospace Center (DLR); Peter Berster, German Aerospace Center (DLR))	
		182	Factors Influencing European Passenger Demand for Air Transport (Ulrike Kluge, Bauhaus Luftfahrt e.V.; Annika Paul, Bauhaus Luftfahrt e.V.; Andrew Cook, University of Westminster; Samuel Cristobal, Innaxis Research Institute)	

		117	The Impact of Outsourcing Regional Flights on Network Airlines' Demand (Martin Dresner, University of Maryland; Zuozheng Wang, University of Maryland)
15:00-16:15	6-B		Air Transport Policy & Regulation 5
Room: B.002		Chair:	Tobias Grosche, Worms University of Applied Sciences
		242	Avoiding Regulatory Capture (Cathal Guiomard, Dublin City University Business School)
		315	The Environmental Costs of Peru's Domestic Air Transport: An Appraisal (Enzo Defilippi, Universidad del Pacifico)
		98	Consumer Surplus Analysis of Air Transport to and from Germany (Tobias Grosche, Worms University of Applied Sciences; Richard Klophaus, Worms University of Applied Sciences)
15:00-16:15	6-C		Airline Network Development 2
Room: B.003		Chair:	Richard Klophaus, Worms University of Applied Sciences
		54	Air Transport Geography in East Asia (Koji Domae, Kobe University; Hidenobu Matsumoto, Kobe University)
		137	Manage with Care: The Frailty of Self-Connections in the European Airport Network (Renato Redondi, University of Bergamo; Paolo Malighetti, University of Bergamo; Mattia Cattaneo, University of Bergamo; Stefano Paleari, University of Bergamo)
		72	Network Vulnerability Analysis of Star Alliance, Oneworld and Skyteam (Richard Klophaus, Worms University of Applied Sciences; Oriol Lordan, Polytechnic University of Catalonia/BarcelonaTech (UPC))
15:00-16:15	6-D		Airport and Airline Performance 4
Room: B.004		Chair:	Tae Oum, University of British Columbia
		92	Estimation Viability of French Airports and Low-Cost Carriers Terminal in France (Seock-Jin Hong, University of North Texas; Minjun Jeon, University of North Texas)
		290	Airport Competitiveness with Respect to Air Freight: A Typology (Thomas Van Asch, University of Antwerp; Wouter Dewulf, University of Antwerp; Franziska Kupfer, University of Antwerp; Evy Onghena, University of Antwerp)
		304	The Airport Benchmarking Issues: The Key Performance Area of Safety (Paulo Marchao, University of Beira Interior; Maria E. Baltazar, University of Beira Interior; Tiago Rosa, University of Beira Interior; Jorge Silva, University of Beira Interior/University of Lisbon)
		371	The Effects of Airline Competition and Market Structure on Airport Efficiency (Tae Oum, University of British Columbia; Xiaowen Fu, University of Sydney)
15:00-16:15	6-E		Airport Case Studies 1
Room: C.002		Chair:	Perry Miller, Jackson Municipal Airport Authority
		309	Passengers with Reduced Mobility: Identifying Needs and Experiences at Airports (Genovefa Kefalidou, University of Nottingham; Sonja Loewa, Hamburg University of Technology (TUHH); Mantel Rebekka, Hamburg University of Technology (TUHH); Nikos Frangakis, Institute of Communication and Computer Systems (ICCS); Christine de Lille, Delft University of Technology; Mirabelle D'Cruz, University of Nottingham; SarahSharples, University of Nottingham)
		344	Market Power at Seattle-Tacoma Airport: The Case of Alaska Airlines and Delta Air Lines (Tamilla Curtis, Embry-Riddle Aeronautical University; Wilfred Sebastian Manuela Jr., Asian Institute of Management; Dawna L. Rhoades, Embry-Riddle Aeronautical University)
		363	Modeling Travelers' Ground Access Mode Choice of Dubai International Airport, United Arab Emirates (Khaula Alkaabi, United Arab Emirates University)

		224	Cooperation between Airports: A Social Network Analysis of European Airports (Katrien De Langhe, University of Antwerp; Katja Bringmann, University of Antwerp; Franziska Kupfer, University of Antwerp; Christa Sys, University of Antwerp; Eddy Van de Voorde, University of Antwerp; Thierry Vanelslander, University of Antwerp)
15:00-16:15 Room: C.101	6-F	Chair:	Airport Strategy, Management and Operations 4 Chunyan Yu, Embry-Riddle Aeronautical University
		189	Factors Behind Airport Direct Connections (Jinn-Tsai Wong, National Chiao Tung University; Wei-Hsun Chen, National Chiao Tung University; Yu-Chen Wang, National Chiao Tung University)
		226	The Impact of LCC on Airport Non-Aeronautical Activities such as Retail, Car Parking and Property: An Empirical Study in the UK (Muneki Yokomi, Osaka University of Commerce)
		288	Standard Numbering System for Airport Projects: Issues and Needs towards Smart Airport Construction Management (Youngsoo Jung, Myongji University; Seunghee Kang, Myongji University; Sungrae Kim, Myongji University; Ikhaeng Lee, Myongji University; Namhyun Cho, Incheon International Airport Corporation; Changweon Lee, Incheon International Airport Corporation; Justin S. Jung, Embry-Riddle Aeronautical University (Admitted))
		278	Taxi-Delays: A Comparison Between the United States and Europe (Nathalie Kuhn, Embry-Riddle Aeronautical University; Chunyan Yu, Embry-Riddle Aeronautical University)
15:00-16:15 Room: C.102	6-G	Chair:	Market Outlook and Future Development of Air Transport Hilde Meersman, University of Antwerp
		52	On the Income Elasticity of Passenger Demand for Chinese Regional Airports: Before and After Location Reform (Jinmei Ge, China Academy of Civil Aviation Science and Technology; Jinjin Yao, China Academy of Civil Aviation Science and Technology; Xianfeng Qi, China Academy of Civil Aviation Science and Technology)
		22	Benefits of Deploying a Fully Functional ADS-B Network in Northern Canada and Pacific (Sidharth Ahuja, University of Calgary; Alexandre de Barros, University of Calgary)
		158	Potential of Aircraft On-Demand Sharing Model for Large Commercial Aircraft (Kay Olaf Ploetner, Bauhaus Luftfahrt e.V.; Marcia Urban, Bauhaus Luftfahrt e.V.; Mirko Hornung, Bauhaus Luftfahrt e.V.)
		186	Connected Grid Flight Network Modelling within the Scope of Demand Optimization in a National and International Scale: The Case of Eskişehir Hasan Polatkan Airport (Triant Flouris, Hellenic American University; Ayse Kucuk-Yilmaz, Anadolu University)

#### Concurrent Session VII (Friday, July 7, 16:45-18:00)

16:45-18:00 7-A Airport Case Studies 2

16:15-16:45

Room: B.001 Chair: Andreas Wittmer, University of St. Gallen

Coffee break

- 25 Analysis of Influences on Check-in Waiting Times at Hamburg Airport (Peter Biesslich, German Aerospace Center (DLR); Bjoern Schwetge, Hamburg University of Technology (TUHH); Kathrin Beyer, Hamburg Airport; Klaus Luetjens, German Aerospace Center (DLR))
- Airport Privatization Challenges in the MENA Region Case Study PMIA in the Kingdom of Saudi Arabia (Mohammed Chaouk, Cranfield University; Chikage Miyoshi, Cranfield University; Romano Pagliari, Cranfield University)

		198 8	Airlines Strategies with the Arrival of Istanbul New Airport (Ozge Peksatici, Ozyegin University; Hatice Kucukonal, Ozyegin University)  A Model for Measuring Airport Competitiveness: The Case of Zurich Airport (Andreas Wittmer, University of St. Gallen; Bettino Fletscher, University of St. Gallen; Erik Linden, University of St. Gallen)
16:45-18:00	7-B		Aviation & Economic Development 1
Room: B.002		Chair:	Nicole Adler, Hebrew University of Jerusalem
		285	Panel Data Analysis of Air Cargo Traffic in European Regional Airports (Pak Lam Lo, University of Pavia; Gianmaria Martini, University of Bergamo; Davide Scotti, University of Bergamo; Eric Njoya, University of Huddersfield; Marina Efthymiou, Dublin City University)
		43	Backward Linkage of Air Transport Sector in ASEAN Countries: Prospect of Economic Impacts by ASEAN Single Aviation Market (Tomoki Ishikura, Tokyo Metropolitan University)
		101	Landing an Airport: Dealing with a Frontier Area (Marielle Prins, Prins Development Consultants)
		367	Air Transport & Regional Development: The Case of South West Europe (Susana Freiria, Universidade de Coimbra; Nicole Adler, Hebrew University of Jerusalem; Antonio Antunes, University of Coimbra)
16:45-18:00	7-C	- ·	Aviation Case Studies 2
Room: B.003		Chair:	Seock-Jin Hong, University of North Texas
		103	Access Mode Choice to Low-Cost Airports: The Case of Orio al Serio Airport (Sebastian Birolini, University of Bergamo; Renato Redondi, University of Bergamo; Paolo Malighetti, University of Bergamo; Paolo De Forza, SACBO S.p.A.)
		163	Modeling Airport Choice with the Use of AHP and MILP (Simona Sinko, University of Maribor; Gregor Sipek, University of Maribor; Tomaz Kramberger, University of Maribor)
		272	Social Network Analysis in Asia-Pacific Airline Market: A Case of the Air Asia Group and the Value Alliance (Katsuhiko Yonezaki, Institute of Transportation Economics Japan; Akeyoshi Matsuzaki, Institute of Transportation Economics Japan)
		271	The Impact of Delays on Customers Satisfaction: An Empirical Analysis of the British Airways On-Time Performance at Heathrow Airport (Marina Efthymiou, Dublin City University; Papatheodorou Andreas, University of Aegean; Eric Njoya, University of Huddersfield; Pak Lam Lo, University of Pavia; Daniel Randall)
16:45-18:00	7-D		Aviation Safety & Security 2
Room: B.004		Chair:	Alexandre de Barros, University of Calgary
		5	Drones and the Necessity for Enacting a Proportionate Rules (Milad Sadeghi, University of Tehran; Farhad Azimi, Islamic Azad University, Meshkinshahr Branch)
		87	The Gaps between Work Procedures and How Work is Performed in Reality as an Indicator for Safety (Steffen Kaspers, Amsterdam University of Applied Sciences; Nektarios Karanikas, Amsterdam University of Applied Sciences; Alfred Roelen, Netherlands Aerospace Centre; Selma Piric, Amsterdam University of Applied Sciences; Robbert Van Aalst, Amsterdam University of Applied Sciences; Robert Jan De Boer, Amsterdam University of Applied Sciences)
		<del>196</del>	The Cabin Crew Pre-flight Briefing (Joanne Freeman, Cranfield University; Saryani Asmayawati, Cranfield University)
16:45-18:00	7-E	GI .	Intermodal and Air Travel Alternatives 2
Room: C.002		Chair:	Michael Williams, Embry-Riddle Aeronautical University
		155	Analysis of European Airports Access and Egress TravelTimes (Raoul Rothfeld, Bauhaus Luftfahrt e.V.; Anna Straubinger, Bauhaus Luftfahrt e.V.; Annika Paul, Bauhaus Luftfahrt e.V.; Kay Olaf Ploetner, Bauhaus Luftfahrt e.V.)

		372	Potential High Speed Rail Competition in Australia (Sergej Bukovac, University of New South Wales)
		364	Airport Rail Links - How North America Match to Europe and Asia in Capacity and Efficiency (Michael Williams, Embry-Riddle Aeronautical University)
16:45-18:00	7-F		Low-Cost Carriers 1
Room: C.101		Chair:	Li Zou, Embry-Riddle Aeronautical University
		161	The Market Impacts of Self-Connect and Low-Cost Connect Using a Generalized Travel Cost Approach (Renato Redondi, University of Bergamo; Paolo Malighetti, University of Bergamo; Guillaume Burghouwt, SEO Amsterdam Economics; Rogier Lieshout, SEO Amsterdam Economics)
		<del>284</del>	A Study on the Strategies of Full Service Airlines Competing with Low- Cost Carriers in Taiwan Market (Ching-Yi Yu, Kainan University; Chiu-Hua Chang, Kainan University)
		287	Passengers' Perceptions and Satisfaction towards Service Quality of Full-service Carrier of a Low-Cost-Carrier Airlines Group (Teguhl. Maulana, University of Indonesia; Taufiq Nur, University of Indonesia; Alvi Muhayat Syah, University of Indonesia)
		348	The Determinant of Market Entry: A Comparative Study of Low-cost Airlines in the US (Li Zou, Embry-Riddle Aeronautical University; Chunyan Yu, Embry-Riddle Aeronautical University)
16:45-18:00	7-G		Operations Research in Air Transport 2
Room: C.102		Chair:	Sung-Yeoul Oh, The Korea Transport Institute
		58	Europe's Next Step in Total Airport Management Research (Florian Piekert, German Aerospace Center (DLR); Olivier Delain, Aeroporte de Paris; Ester Martín, INECO; Alan Marsden, EUROCONTROL)
		192	A New Framework for Optimizing Flight-to-Gate Reassignment at Airports in Cases of Schedule Disruptions (Moschoula Pternea, University of Maryland; Ali Haghani, University of Maryland)
		<del>251</del>	Cascading Failures in Air Transport Networks (Jose M Sallan, Polytechnic
			University of Catalonia; Joel Cumelles, Polytechnic University of
			Catalonia; Oriol Lordan, Polytechnic University of Catalonia)
		70	Structural Equivalence Analysis on the Latin America Airports Network (Sung-Yeoul Oh, The Korea Transport Institute)
19:00		-	Galadinner (ZOO Antwerp)
			Keynote speech by Kris Peeters, Deputy prime minister and minister of employment, economy and consumer affairs, in charge of foreign trade

### Saturday, 8 July

Concurrent	Session	VIII	(Saturday, July 8, 9:00-10:15)
9:00-10:15	8-A		Air Traffic Control 1
Room: B.001	C	chair:	Frank Fichert, Worms University of AppliedSciences
		65	Air Navigation Services: A Market Structure Analysis (Sven Buyle, University of Antwerp; Evy Onghena, University of Antwerp; Wouter Dewulf, University of Antwerp; Franziska Kupfer, University of Antwerp)
		143	Measuring Cost and Production Functions in Air Navigation Service Provision - A European Perspective (Nicole Adler, Hebrew University of Jerusalem; Thomas Blondiau, Transport & Mobility Leuven; Eef Delhaye, Transport & Mobility Leuven; Adit Kivel, Hebrew University of Jerusalem)
		243	Introducing More Competition into ATM: Possible Institutional Designs - Qualitative Assessment (Eef Delhaye, Transport & Mobility Leuven; Thomas Blondiau, Transport & Mobility Leuven)
		91	Improving ATM Performance in Europe by Coordinated Capacity Ordering and Trajectory Pricing: An Institutional Framework (Frank Fichert, Worms University of Applied Sciences; Radosav Jovanovic, University of Belgrade; Nikola Ivanov, University of Belgrade; Arne Strauss, University of Warwick; Stefano Starita, University of Warwick)
9:00-10:15	8-B		Aviation& EconomicDevelopment2
Room: B.002	C	Chair:	Kazuyuki Takada, Tokyo Denki University
		13	Economic Importance of Air Transport and Airport Activities in Belgium (Saskia Vennix, National Bank of Belgium)
		41	Well-being and Airport Activities: The Empirical Analysisof Australia and New Zealand (Kan Wai Hong Tsui, Massey University; Xiaowen Fu, University of Sydney; David Tan, University of New South Wales; Breno Sampaio, Federal University of Pernambuco)
		292	Gross Value Added for Tourist Regional Airports (Maria Sartzetaki, Democritus University of Thrace; Dimitrios Dimitriou, Democritus University of Thrace)
		331	The Role of Airports for Regional Economic Development: Evidence from Poland (Andrzej Cieslik, University of Warsaw)
9:00-10:15	8-C		Aviation Safety & Security 3
Room: B.003	C	chair:	Cathal Guiomard, Dublin City University Business School
		244	Cyber-Threat Analysis of a UAV Traffic Management System for Urban Airspace (Vasily Sidorov, Nanyang Technological University; Wee Keong Ng, Nanyang Technological University; Kwok Yan Lam, Nanyang Technological University; Mohamed Faisal Bin Mohamed Salleh, Air Traffic Management Research Institute)
		265	Development of a Statistical Model to Predict Australian Flight Students' Valuation of Aviation Safety (Steven Leib, University of South Australia; Nickolai Isaksen, University of South Australia; Michael Chiu, University of South Australia)
		266	Simulation of Airport Evacuation Strategies for Passengers with Reduced Mobility (Claudia Guerrinha, University of Beira Interior; Sara Zorro, CERIS, University of Beira Interior; Jorge Silva, University of Beira Interior)
9:00-10:15	8-D	N ·	Low-Cost Carriers 2
Room: B.004	C	Chair:	Dieter Wilken, German Aerospace Center(DLR)
		15	Air-Rail Cooperation and Multiple-Airports System: The Case of HSR Ticket Reimbursement (Wenyi Xia, University of British Columbia; Anming Zhang, University of British Columbia; Kun Wang, University of British Columbia; Changmin Jiang, University of Manitoba)

10:15-10:45		-	Coffee break
		36 F	rom Silver to Platinum: The Impact of Frequent-Flier Tier Levels on Demand (Christiaan Behrens, SEO Amsterdam Economics/VU University; Jos van Ommeren, VU University)
		358 F	Economics; Rogier Lieshout, SEO Amsterdam Economics) from flight providers to retailers: Dynamic Offer Management in airline distribution (Sebastian Stabenow, University of Antwerp; Sascha Albers University of Antwerp; Jost Daft, Deutsche Lufthansa AG)
		257 F	are Differences between the Gulf Carriers and Incumbents: Are the Incumbents Closing the Price Gap? (Rogier Lieshout, SEO Amsterdam
			in the Global Aviation Market (Bojun Wang, University College London (UCL); Aidan O'Sullivan, University College London (UCL); Lynnette Dray University College London (UCL); Kinan Al Zayat, University College London (UCL))
Room: C.102		Chair: 248	Christiaan Behrens, Vrije Universiteit Amsterdam Modelling the Pass-Through of Airline Operating Costs on Average Fare
9:00-10:15	8-G	Chaire	Revenue Management & Pricing 1 Christiaan Pohrons, Vijie Universiteit Amsterdam
		221	Global Developments in the Level of Airline Timetable Synchronization (Valentijn Van Spijker, SEO Amsterdam Economics; Guillaume Burghouwt, SEO Amsterdam Economics)
		365	An Integrated Model for Flight Frequency Determination, Fleet Assignment and Aircraft Routing (Ali Ghafoori, Sharif University of Technology; Yousef Shafahi, Sharif University of Technology)
			Approach for Aircraft C-Check Scheduling (Qichen Deng, Delft University of Technology; Bruno Santos, Delft University of Technology; Richard Curran, Delft University of Technology)
Room: C.101		Chair: 64	Guillaume Burghouwt, SEO AmsterdamEconomics  An Inspection Intervals Usage Parameters Based Dynamic Programmin
9:00-10:15	8-F	Claration	Operations Research in Air Transport 3
		341	Airline Sponsorships and Sports - An Exploratory Review of Major Airlin Engagement (Blaise Waguespack, Embry-Riddle Aeronautical University Scott Ambrose, Embry-Riddle Aeronautical University)
		261	Loyalty (Programs) Across Borders: A Boundary Discontinuity Approach (Gerben de Jong, Vrije Universiteit Amsterdam; Christiaan Behrens, Vrije Universiteit Amsterdam; Jos van Ommeren, Vrije Universiteit Amsterdam)
		82	Passengers' Willingness to Pay for Ancillary Services in the Context of Cabin Automation (Romain Fagoaga, Cranfield University; Chikage Miyoshi, Cranfield University; Berkcan Uyan, Cranfield University)
Room: C.002		Chair:	Blaise Waguespack, Embry-Riddle Aeronautical University
9:00-10:15	8-E		Center (DLR); Peter Berster, German Aerospace Center (DLR); Marc C. Gelhausen, German Aerospace Center (DLR)) Marketing in Air Transport
		88	The Second Wave of Network Extensions of Low Cost Carriers in Europe: Background and Trends (Dieter Wilken, German Aerospace
		72	Foreign Airlines: Case Study on Incheon International Airport (HyeKyur Ha, Korea Aerospace University; Baek-Jae Kim, Qatar Airways; Kwang-Eui Yoo, Korea Aerospace University; Se-Yeon Jung, The Korea Transpo Institute)
		42	Hang Seng Management College; Anming Zhang, University of British Columbia; Jeremy Chu, Hang Seng Management College)  Passengers' Perceptions and Choice Behavior of National, Low-cost and
		187	Do Low-Cost Carriers Still Focus Their Business at Secondary Airports? (Wai Hung Wong, Hang Seng Management College; Tommy Cheung,

Concurrent	Sess	ion IX (	Saturday, July 8, 10:45-12:00)
10:45-12:00	9-A		Air Traffic Control 2
Room: B.001		Chair:	Christian Hofer, University of Arkansas
		37	Generating Simplified Airspace Structures by Developing Efficient Methodologies (Michael Husemann, RWTH Aachen University; Eike Stumpf, RWTH Aachen University)
		74	Studies of Flight Optimization and Air Traffic Controllers' Workloads (Z.W. Zhong, Nanyang Technological University; W.Y.Sun, Nanyang Technological University)
		277	A Yield Management Policy to Reduce European Air Traffic Congestion (Lorenzo Castelli, University of Trieste; Tatjana Bolic, University of Trieste; Desiree Rigonat, University of Trieste; Efrem Venturuzzo, University of Trieste)
		286	Patterns of ATC Capacity Insufficiencies in Europe: An Exploratory Analysis (Radosav Jovanovic, University of Belgrade; Nikola Ivanov, University of Belgrade; Frank Fichert, Worms University of Applied Sciences; Arne Strauss, University of Warwick; Stefano Starita, University of Warwick)
10:45-12:00	9-B		Aviation& EconomicDevelopment3
Room: B.002		Chair:	Álvaro Costa, University of Porto
		136	ASEAN Aviation Integration: Opportunities and Challenges (John F. O'Connell, Cranfield University; Wilfred Sebastian Manuela Jr., Asian Institute of Management)
		<del>275</del>	Development of the Propensity to Fly by Age, Sex and Purpose at Schiphol Airport between 1991 and 2016 (Hugo Gordijn, KiM Institute for Transport Policy Analysis)
		298	Economic Impact of the Deregulation of Air Transport in Azores (Álvaro Costa, University of Porto; Carlos Cruz, University of Lisbon; Joao Cabral, University of the Azores)
		241	Analysis of Airport Service Level Nearby the Cruise Port (Koji Matsuta, Kanazawa University; Makoto Fujiu, Kanazawa University; Junichi Takayama, Kanazawa University; Shoichiro Nakayama, Kanazawa University)
10:45-12:00	9-C		Aviation Case Studies 3
Room: B.003		Chair:	Franziska Kupfer, University of Antwerp
		6	A Study on Influential Factors of Aircraft Rent Fluctuations (Wei-Ting Chen, Institute for Information Industry)
		84	Flights in Japan: Willingness to Pay for Ancillary Service Related to Cabin Design (Berkcan Uyan, Cranfield University; Chikage Miyoshi, Cranfield University)
		93	Empirical Study of Per-Passenger and Per-Flight Airport Charges (Naoshi Doi, Sapporo Gakuin University)
10:45-12:00 Room: B.004	9-D	Chair:	Aviation Finance Sunder Raghavan, Embry-Riddle Aeronautical University
		236	A Comparative Analysis of Operating Cost between Future Jet Engine and Battery-Electric Aircraft (Mohamad Kinan Al Zayat, University College London; Andreas Schafer, University CollegeLondon)
		370	A Short Update on the Financial Health of the U.S. Airlines (Richard Gritta, University of Portland)
		307	Corporate Governance in US Airlines: Before and after Sarbanes Oxley Act (Hari Adhikari, Embry-Riddle Aeronautical University; Vedapuri Raghavan, Embry Riddle Aeronautical University)
		350	Modeling Uncertainty in an Aircraft Lease (Sunder Raghavan, Embry-Riddle Aeronautical University; Jayathi Ragahvan, Embry-Riddle Aeronautical University)

10:45-12:00	9-E		Mergers and Alliances in Air Transport
Room: C.002		Chair:	Deborah Ancell, University of Westminster
		27	Airline Code-Sharing and Capacity Utilization: To What Extent Do Airlines Help Fill Each Other's Planes? (Javad Gorjidooz, Embry-Riddle Aeronautical University; Jules Yimga, Embry-Riddle Aeronautical University)
		30	A Comparative Analysis of Price Effects of Two Airline Mergers in China (Hangjun Yang, University of International Business and Economics; Wenliang Ma, University of International Business and Economics; Qiang Wang, University of International Business and Economics; Yahua Zhang, University of Southern Queensland)
		68	What Drives Airlines to Make a Cross-Border Investment? - Firm-Level Factors and Institutional Factors (Nobuaki Endo, Tokyo University of Marine Science and Technology; Toshiya Ozaki, Rikkyo University)
		113	Airline Mergers and Consolidation: The Impact on Hubs, Airline Networks and Travelers in the US and the UK (Nigel Dennis, University of Westminster; David Pitfield, Loughborough University/University of Westminster)
10:45-12:00	9-F		Operations Research in Air Transport 4
Room: C.101		Chair:	Florian Piekert, German Aerospace Center (DLR)
		233	An Optimization Approach for Airport Slot Allocation Under IATA Guidelines (Antunes Ribeiro Nuno, University of Coimbra; Alexandre Jacquillat, Carnegie Mellon; Joao Pita, University of Coimbra; Antonio Antunes, University of Coimbra; Amedeo R. Odoni, Massachusetts Institute of Technology)
		300	Interdependence and Integration among Components of the Airline Scheduling Process: A State-of-the-Art Review (Divyam Aggarwal, Indian Institute of Technology Roorkee; Dhish Kumar Saxena, Indian Institute of Technology Roorkee; Michael Emmerich, Leiden University)
		302	Arriving Flow Management in a 4D Environment Using Greedy Algorithm Regarding Airline Business Model and Airport Concentration (Daniel Alberto Pamplona, Aeronautical Institute of Technology; João Luiz de Castro Fortes, Aeronautical Institute of Technology; Vitor Filincowsky Ribeiro, University of Brasilia; Li Weigang, University of Brasilia; Claudio Jorge Pinto Alves, Aeronautical Institute of Technology)
10:45-12:00	9-G	<b>.</b>	Revenue Management & Pricing 2
Room: C.102		Chair:	Rico Merkert, University of Sydney
		316	Revenue Potential of Flexible Cabin Elements for Airlines under Consideration of Revenue Management and Operations (Klaus Luetjens German Aerospace Center (DLR); Alexander Happe, Hamburg University of Applied Sciences)
		369	Dynamic Booking Forecasting for Airline Revenue Management (Thom van Ostaijen, Delft University of Technology; Bruno Santos, Delft University of Technology; Mihaela Mitici, Delft University of Technology
		148	How to Manage Seasonality in Service Industries? - The Case of Price and Capacity Management in Airlines (Rico Merkert, University of Sydney; Tony Webber, University of Sydney)
12:00-13:00			ATRS General Assembly
Room: C.003			
14:00-16:00			OptionalexcursiontoDiamondLand

### **Conference Excursions**

#### **Technical Tour to Brussels Airport**

Date Wednesday, 5 July

Time 14:00 - 17:00

Meeting place FelixArchief, Oude Leeuwenrui 29

**Registration required** 

Transport from the University of Antwerp to Brussels Airport by bus provided.







#### **Technical Tour to Antwerp Airport**

Date Wednesday, 5 July

Time **14:00 - 17:00** 

Meeting place FelixArchief, Oude Leeuwenrui 29

#### **Registration required**

Transport from the University of Antwerp to Antwerp Airport by bus provided.



#### After Conference Excursion to DiamondLand in the Jewish Quarter

Date Saturday, 8 July

Time 14:00 - 16:00

Meeting place Registration desk ATRS

Learn more about the rich history of diamonds and Antwerp and watch a live demonstration of diamond polishing.

In the heart of the famous diamond district, at a walking distance from the renowned Diamond Bourse, lies the largest diamond showroom in Antwerp: DiamondLand.

In more than a thousand square meters of space, the expert guides of DiamondLand will tell you about the rich history of Antwerp and the relationship it had with diamonds for more than 400 years. You will see their diamond polishers and goldsmiths at work right in front of you and see legendary diamonds and learn about diamond valuation, also known as the 4 C's.

Once you have a good knowledge about diamonds you will see the world's most fascinating diamond rings, diamond necklaces, diamond bracelets, diamond pendants and a large collection of rough and polished unset diamonds in all shapes and sizes.



www.diamondland.be





# **Reception and Gala Dinner**

#### Reception

Date Wednesday, 5 July

Time 18:30 - 20:30

Venue FelixArchief, Oude Leeuwenrui 29 - Godefriduskaai 30

Not far from the university lays Het Eilandje, a vibrant part of the city surrounded by old docks and warehouses. One of the largest former warehouses is The Felix build for the Compagnie Générale de Chemin de Fer. It was used for the storage of coffee, cereals, cheese, wine and tobacco. In 1985 the building came out of use. After decades of vacancy, The Felix was saved from demolition because of its majestic indoor street that connects Het Eilandje with the historic city. Today it is the home of the City Archive.

#### **Gala Dinner**

Date Friday, 7 July

Time 19:00 - ...

Venue Marble Hall, ZOO Antwerp, Koningin Astridplein 20-26

#### **Registration Required**

In the heart of Antwerp you will find one of the most interesting attractions Antwerp has to offer: Antwerp Zoo. It is the oldest animal park in the country, and one of the oldest in the world, established on 21 July 1843. The Zoo has grown from 1 hectare to a spectacular place to visit of about 11 hectares. To see all the animals in one visit is really a challenge. Together with its sister park Planckendael,



Antwerp Zoo houses over 7,000 animals of about 950 species.

The gala dinner will be held in the Marble Hall, the historical heart of the meeting complex of the Antwerp Zoo: a splendid space dominated by 20 impressive marble columns that rest upon bronze socles and propup a high ceiling of pure Art Nouveau style. The

Belle Époque atmosphere still lingers here. The Winter Garden, a late 19th-century architectural highlight where you can see hundreds of butterflies flutter during the spring and summer seasons, will also be exclusively open for the conference delegates during dinner.

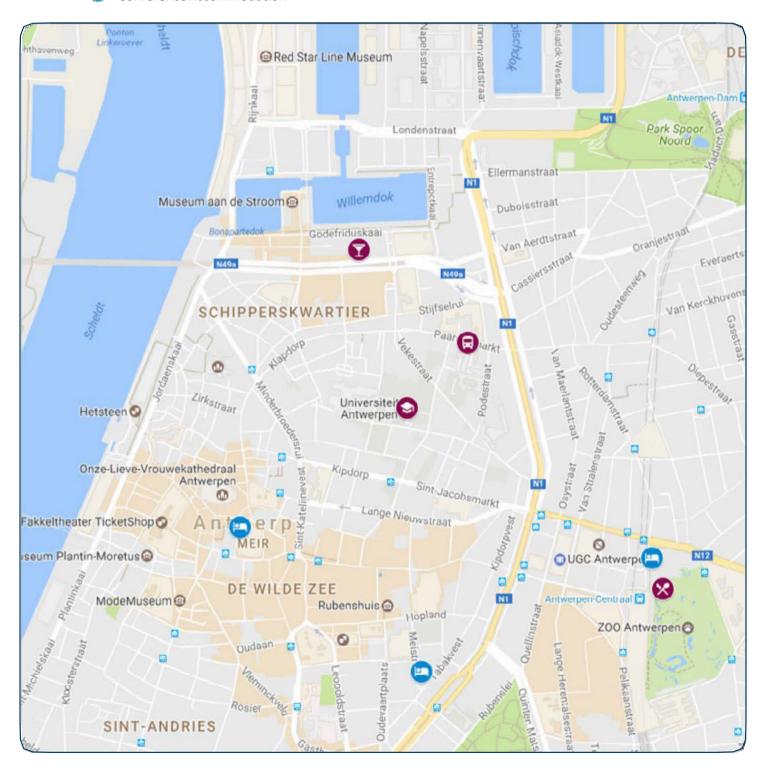




# **ATRS 2017 Location Map**

- University of Antwerp
- FelixArchief (Welcome Reception)
- **Solution ZOO** Antwerp (Gala Dinner)
- Meeting Point Bus Technical Tours
- Conference Accommodation

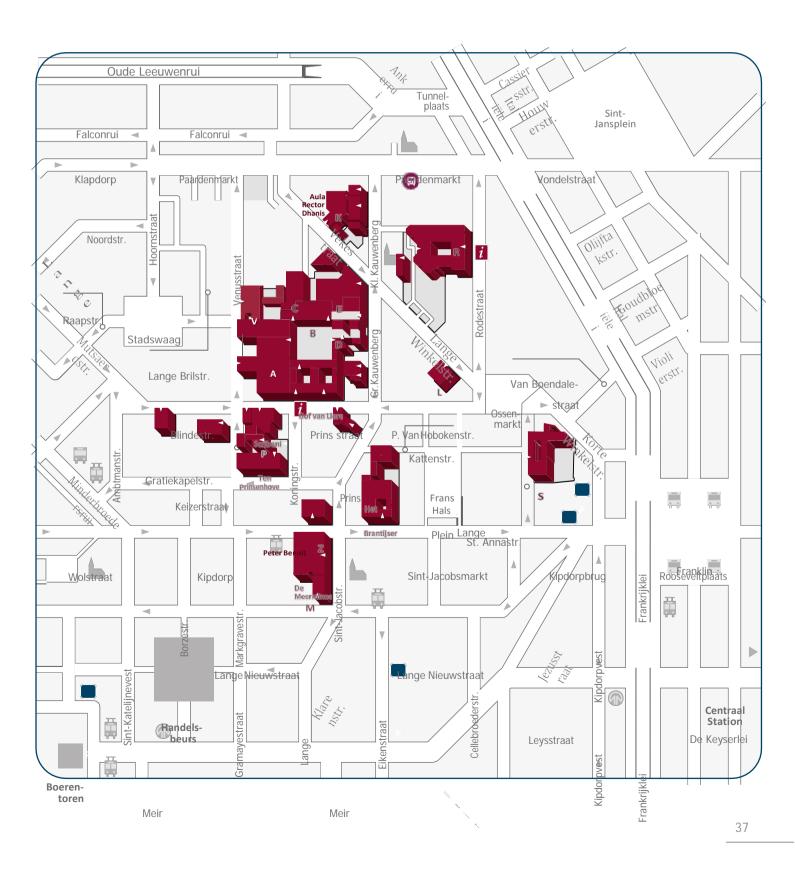




# Map of the University of Antwerp - Stadscampus

The conference sessions will mainly take place in the following rooms of the University of Antwerp - Stadscampus: B.001, B.002, B.003, B.004, C.002, C.003, C.101, C.102, C.103, C.204.

Rooms D.013, D.014 and D.015 are available for meetings and as working space.



# **Getting to University of Antwerp Stadscampus**



The Stadscampus of the University of Antwerp is within walking distance of the city centre and conference accommodation.

# Reaching the Stadscampus by public transport

The Stadscampus is a 15 minute walk from Antwerp Central Station (Antwerpen-Centraal) and the bus hub at F. Rooseveltplaats.

# Reaching the Stadscampus by car

In the Antwerp city center large-scale roadworks take place until the beginning of 2019. The stress-free way to get to the university is by bike or publictransport.

If you're coming by car, be sure to check www.slimnaarantwerpen.be for up-to-date traffic info.

There are several paid car parks nearby the campus:

- QPark Eikenstraat: entrance Eikenstraat 9, 2000 Antwerp
- Interparking Meir: entrance Eiermarkt 33/35, 2000 Antwerp
- Qpark Shopping Meir: entrance Korte Klarenstraat 10, 2000 Antwerp
- Parking St. Jacob: entrance Sint-Jacobsmarkt 81, 2000 Antwerp

#### **Attention: Low Emission Zone**

As of 1 February 2017, the entire city centre of Antwerp and part of Linkeroever are a Low Emission Zone (LEZ). The most polluting cars will no longer be welcome in the city as of this date.

Check your car and find all information on: www.slimnaarantwerpen.be/en/lez

# Local organizing institutions



The University of Antwerp is characterised by its high standards in education, internationally competitive research and an entrepreneurial approach. It was founded in 2003 after the merge of three universities. The University's roots go back to 1852. The University of Antwerp has approximately 20,000 students, which makes it the third largest university in Flanders. About 13% of those students are from foreign countries all over the world, with a majority from EU countries. In order to face the challenges posed by the internationalisation of European education and research, the University is part of the Antwerp University Association (AUHA).

www.uantwerp.be





The Department of Transport and Regional Economics (TPR) is the home of C-MAT. TPR is committed to be an international centre of excellence for fundamental and applied academic research in transport economics, logistics and regional economics. Its mission is to improve transport and logistics for our society and the business community. Its research results in theories, applications and instruments to enhance existing academic knowledge, transport policy and supply chain environments. Therefore, TPR conducts innovative and multidisciplinary research within an international context and organizes educational programs from bachelor up to PhD level. TPR pursues results that are academically sound, economically viable and supporting sustainable development. It values a critical and an independent approach and an open communication. TPR's research activities unfold within a framework of programs stimulated by the university, public authorities at all policy levels, non-profit organizations as well as private or semi-private actors.

www.uantwerp.be/tpr





C-MAT, the Centre for Maritime and Air Transport Management established in 2015 is one of the world's premier suppliers of highly specialized academic as well as practice-based education and research in transport economics. C-MAT offers a strong international MSc programme that links academic research to contemporary industry know-how and practice with specialization in Maritime, or Air Transport. Next to the MSc programme, C-MAT offers short specialisation courses open to industry representatives designed to address current industry challenges and academic research questions.

Students taking C-MAT's programme will benefit from highly specialised instruction and intercultural training as well as from opportunities to engage in international networking. The added value of C-MAT lies in its commitment to academic rigor and practical assessment: the academic education we offer is supported by highly competent staff members from the Faculty of Applied Economics and guest professors who have devoted their talents and careers to advancing this mission. The centre contributes actively to research on transportation and has a proven track record in the field. C-MAT pledges to support students' work, encourage their professional development and evaluate their professional performance.

www.c-mat.be



# **ATRS Networking Committee and Corporate Members**

## **ATRS Networking Committee**

**Directors** 

Tae H. OUM - ATRS Founder and Chair UPS Foundation Chair Professor Sauder School of Business, University of British Columbia

Martin DRESNER - President and CEO Robert H. Smith School of Business University of Maryland

Gianmaria MARTINI - VP Publications University of Bergamo

Christian HOFER - VP Programs
Sam M. Walton College of Business University of Arkansas

Kostas IATROU - VP Public Relations Managing Director ATN

Sveinn GUDMUNDSSON - VP External Toulouse Business School

Andreas WITTMER Treasurer & Swiss Representative University of St. Gallen

Anming ZHANG - VP Research 1999 Conference Chair (Hong Kong, China) Sauder School of Business, University of British Columbia

Chunyan YU - VP Benchmarking College of Business Embry Riddle Aeronautical University

# **ATRS Permanent Corporate Members**









#### **ATRS Gold Corporate Members**



#### **ATRS Corporate Members**



Jackson Municipal Airport Authority (JMAA)





# **Partners**

# **Strategic partners**

## **Brussels Airport**



www.brusselsairport.be/en

Brussels Airport is one of the largest airports in Europe, handling nearly 22 million passengers and 500,000 tonnes of freight annually. Brussels Airport links the European capital with 238 destinations worldwide that are served by 78 different airlines (figures 2016).

Brussels Airport caters for the specific needs of the business travelers and holidaymakers, for both intra-European and long distance flights, and also has the largest low-fare offer in Belgium. Brussels Airport is the second most important centre of economic growth in Belgium providing direct and indirect employment for 60,000 people.

## Belgocontrol



www.belgocontrol.be/home

Belgocontrol is an autonomous public company founded in 1998. Besides air traffic management and control, Belgocontrol provides many other services to civil aviation: pre-flight information, flight plan assistance, aeronautical and meteorological information, communication, navigation and surveillance services, as well as training of air traffic controllers. More than 750 persons among whom 300 air traffic controllers work on 7 sites, day and night, 365 days a year.

# **Brussels Airlines**



www.brusselsairlines.com

Brussels Airlines, member of Lufthansa Group and a Star Alliance member, is the Belgian airline that offers the widest choice of flights to and from the capital of Europe, Brussels Airport. The company has more than 3,500 employees and 50 aircraft operating some 300 flights daily, connecting the Capital of Europe to over 90 European and African destinations, as well as three destinations in North America (New York JFK, Washington D.C. and Toronto) and one in India (Mumbai).

# **Gold Sponsor**





## Antwerp International Airport (LEM/LOM Antwerpen)

www.antwerp-airport.be

Antwerp International Airport is located at the economic heart of Flanders, about 4 km from Antwerp city center and has a catchment area of 3 million people within a 1 hour driving distance. It's easily accessible by road and offers affordable car parking. The passenger terminal has modern facilities and meets the expectations of both passengers and airlines in terms of services and international standards. Antwerp International Airport was voted 4th best Airport Worldwide by Test Aankoop (May 2017).

# **Silver Sponsors**



#### Federal Public Service Economy, S.M.E.s, Self-employed and Energy

www.economie.fgov.be/en

Over the next six years the FPS Economy, inspired by the values of respect and excellence, has the intention of developing a joint strategy to serve the players on the goods and services market. Within the federal authorities the FPS aims to be the key figure in regulating and coordinating the policies and the governance of the single market, as regards both its internal and external aspects, in a permanent dialogue with the regions.

## Flemish Government Department of Economy, Science & Innovation



www.ewi-vlaanderen.be/en

The Department of Economy, Science and Innovation (EWI Department) prepares, monitors and evaluates policy in the Economy, Science and Innovation policy area. Their main aim is to develop Flanders into one of the most advanced and prosperous regions in the world. Their driving forces are the promotion of excellence in scientific research, an attractive and sustainable business climate, a creative, innovative and entrepreneurial society.

#### **DiamondLand**



www.diamondland.be

In the heart of the famous diamond district, at a walking distance from the renowned Diamond Bourse, lies the largest diamond showroom in Antwerp: DiamondLand. Whether you are looking for a memorable experience or the finest quality affordable diamond jewellery, a tour at DiamondLand is a something every person needs to experience at leastonce.

# **Bronze Sponsors**

#### DHL



www.dhl.com

DHL is the global market leader in the logistics and transportation industry and "The logistics company for the world". DHL commits its expertise in international express, national and international parcel delivery, air and ocean freight, road and rail transportation as well as contract and e-commerce related solutions along the entire supply chain. A global network composed of more than 220 countries and territories and around 315,000 employees worldwide offers customers superior service quality and local knowledge to satisfy their shipping and supply chain requirements. DHL accepts its social responsibility by supporting environmental protection, disaster management and education.

# pwc

#### **PWC Belgium**

www.pwc.be

At PwC, they are committed to providing quality audit, tax and consulting services to our public and private clients in Belgium and internationally. PwC is founded on the principle of creating value through relationships – it's a principle that lies at the heart of everything they do and everywhere they are. PwC believes that being able to call on their global network of specialists in 157 countries helps us to create even greater value for your business and your investments.

## **Liege Airport**

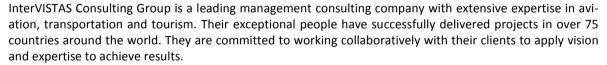




Liege Airport is the most specialized cargo platform in the heart of the Amsterdam-Paris-Frankfurt golden triangle. Having a product-driven development strategy it positions itself as the easy in & out cargo hub for Central Europe. Be it e-commerce, pharmaceutical products or perishables, each product group has a specialized set of procedures to guarantee the fastest throughput time on the market. Liege Airport, the Flexport® is less than one day by truck from the largest European cities, thus reaching around 400 million consumers. Besides offering a non-congested 24/7 operational airport it also offers the advantage of an excellent, uncongested motorway network.

#### **InterVISTAS Consulting Group**

www.intervistas.com



#### Unifly

www.unifly.aero



Unifly is an award-winning spin-off company of VITO (Flemish institute for technological research) specialized in aviation software development. Their main mission is to develop software applications that facilitate drone traffic in the very-low-altitude airspace. The focus is always on safety for all stakeholders involved. Their innovative tools inform drone operators where it is safe and legal to fly there drone and enable authorities and other aviation stakeholders to track the drone traffic and manage their airspace.

# Wi-Fi Guest Account

The login and password of your personal Wi-Fi Guest Account is distributed with your conference badge.

The network of the University of Antwerp may only be used for legal purposes.

Users must make sure their equipment is in no way a threat to the proper operation of other networked devices (virus-free, ...).

Some applications (e.g. P2P networks) are excluded from use on the UAntwerp network. If you will use such applications, your device will be quarantined for at least one hour.

This means that during this period no connection can be made to the internet.

Take care: some download programs (characterized by contacting a lot of hosts in a limited period) can be seen as a P2Pclient and can trigger the device to be quarantined.

The use of the UAntwerp network is at your own risk. The University of Antwerp is not responsible for any damage to your device by using the UAntwerp network.

