

A Framework for Sustainable and Autonomous Airside Operation Benchmarking

Author(s)

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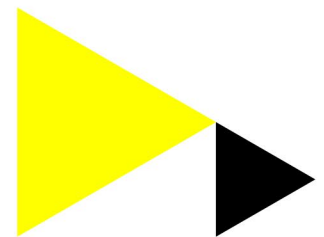
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KEYNOTE SPEAKERS

Pre-Conference Keynote Speech



Ogaga Udjo

Independent Strategist & Advisor,
Managing Director ZA Logics

Ogaga is a dynamic strategist and advisor with over a decade of global expertise in the air transport industry, specializing in airline management and corporate development. Beginning his career as an airline network planner in South Africa, Ogaga advanced through various roles in commercial strategy and corporate development at airlines including Qatar Airways, South African Airways, and British Airways (Comair). He is currently engaged in providing technical and transaction advisory services across the private, public and international development sectors of the air transport value chain. His areas of focus include aviation business restructuring, enhancing regional connectivity, aviation decarbonisation, and fostering integrated economic development. Ogaga has cultivated a track record of delivering innovative solutions and transformative projects in over 35 countries. His academic credentials include masters degrees in International Business & Strategy from South Africa and Finance & Investment from the United States. Known for his data-driven strategic insights and results-oriented approach, Ogaga regularly contributes market insights to media outlets such as Voice of America, CNBC, and YahooFinance and has published work alongside industry leaders like the World Bank and OAG. Based in Washington, DC, he currently provides advisory services in development finance, with a particular focus on air transport.

Main Conference Industry Keynote Speeches

Maria do Rosário Partidário is a Full Professor of Planning, Urbanism and Environment of the Department of Civil Engineering, Architecture and Georesources of IST-UL. With a profile in Environment, Planning and Sustainability, Maria is currently a researcher in CITUA (Centre for Innovation in Territory, Urbanism & Architecture) in IST-UL, where she coordinates the scientific line Planning, Management; Governance of Contemporary Urban Territories. Maria has largely contributed to the scientific fields of Environment and Sustainability, Strategy and Governance, Social-ecological Systems and Ecosystem Services, Planning and Environmental and Social Policies. From November 2023 to March 2024, she acted as coordinator of the Technical Independent Commission for the Strategic Environmental Assessment of the expansion of the Lisbon Airport.



Rosário Partidário

President,
Independent Technical Commission
for the New Lisbon Airport (Coord of
CTI for Lisbon Airport)



Luis Rodrigues
CEO,
TAP Air Portugal

Luis was for 9 years with Procter & Gamble in the Marketing area in Portugal, Austria, Belgium and European head offices. Afterwards he held leadership positions in several different industries like Media (TVI/Media Capital), Telecoms (PT) and Advertising (Fischer). He has been a member of several Associations and was distinguished in different areas. In 2009, he became Executive Board Member at TAP Portugal airline, where he served for almost 6 years in Portugal and Brazil in business restructuring and development initiatives. In 2014 he became an executive board member of Nova SBE where he led the Executive Education area, leading it to #1 position in Portugal and became Adjunct Professor. Since Jan. 2020 he is the President and CEO of Grupo SATA, a regional airline located in the Azores archipelago, and more recently since March 2023 he is the CEO of TAP Air Portugal.

Main Conference Academic Keynote Speech

Silke J. Forbes is a Professor of Economics at Tufts University. She has previously held faculty appointments at the University of California, San Diego, and at Case Western Reserve University, and she was a Visiting Associate Professor at the MIT Sloan School of Management. She received her Ph.D. from the Massachusetts Institute of Technology and an M.A. from the University of Mannheim, both in economics. She has received grants and fellowships from the National Science Foundation, the Alfred P. Sloan Foundation, and the German National Merit Foundation.

Her research interests are in at the intersection of Industrial Organization and Organizational Economics. Her work has investigated the determinants and consequences of vertical integration, competition spillovers to complementary industries, how firms respond to 'light-touch' regulation such as information disclosure requirements, and the interaction of switching costs and inattention. Her work has been published in leading economics and management journals, including the American Economic Review, Management Science, the American Economic Journal, the RAND Journal of Economics, the Journal of Public Economics, and the Journal of Law, Economics, & Organization.



Silke J. Forbes
Professor of Economics,
Tufts University

PROGRAMME OVERVIEW

Pre-Conference (Online)

This printed program is subject to changes. Please refer to the Whova App or posts at the conference venue for the latest updates (if any).

All times in WEST (UTC+1)

SUNDAY, 30 JUNE

- | | |
|----------------------|---|
| 09:00 – 09:15 | Online Welcome Address |
| 09:15 – 09:30 | Break |
| 09:30 – 11:00 | Online Paper Session I (Asia/Europe/Oceania) |
| P1-1 | Airline Strategy & Management |
| P1-2 | Airline & Airport Operations |
| P1-3 | Marketing & Consumer Behavior in Air Transport |
| P1-4 | Demand, Regulation & Policy |
| 11:00 – 14:00 | Break |
| 14:00 – 14:30 | Online Keynote Speech |
| 14:30 – 15:00 | Break |
| 15:00 – 16:30 | Online Paper Session II (Europe/Americas) |
| P2-1 | Sustainability in Air Transport |
| P2-2 | Airport Operations |
| P2-3 | Politics & Aviation Development |
| P2-4 | Machine Learning & Data-Driven Approaches |
| 16:30 – 17:00 | Break |
| 17:00 – 18:30 | Online Paper Session III (Europe/Americas) |
| P3-1 | Air Transport Demand |
| P3-2 | Air Transport & COVID-19 |
| P3-3 | Aviation Safety & Security |
| P3-4 | Airline & Airport Strategies |

MONDAY, 1 JULY

- | | |
|----------------------|--|
| 14:00 – 17:30 | Ph.D. Student and Junior Faculty Workshop |
|----------------------|--|

PROGRAMME OVERVIEW

Main Conference

This printed program is subject to changes. Please refer to the Whova App or posts at the conference venue for the latest updates (if any).

Map of the conference site on ISEC Lisboa campus



MONDAY, 1 JULY – Meetings and Reception		
09:00 – 16:00	Meetings (By invitation only)	PRL
13:30 – 20:30	Conference Registration	ISEC Lisboa campus
14:00 – 17:30	Ph.D. Student and Junior Faculty Workshop (Registration required)	D5, Building D & online
17:30 – 18:15	Meet the Experienced Scholars (MES) (Appointment required)	D5, Building D
18:30 – 20:30	Welcome Reception	ISEC Lisboa campus

TUESDAY, 2 JULY – Industry Plenary Sessions and Paper Sessions

08:30 – 17:30	Conference Registration	ISEC Lisboa campus
09:00 – 09:15	Welcome Address	Auditorium
09:15 – 10:30	Industry Keynote Speeches	Auditorium
10:30 – 11:00	Coffee Break	Auditorium, Buildings B & D
11:00 – 12:30	Paper Session I	Buildings B & D
	M1-1 Industry Session 1: Strategy & Management	D5
	M1-2 Airline Operations 1	D4
	M1-3 Urban Aviation Mobility 1: Ecosystem & Airport Feeder	B7
	M1-4 Sustainability in Air Transport 1: SAF 1	B8
	M1-5 Airline Economics & Performance 1	B9
	M1-6 Airline Network Development	B10
	M1-7 Airport Strategy & Management 1	B11
	M1-8 Air Transport Demand 1	B12
11:30 – 13:00	AIROBS Special Session on Airport Development I	Auditorium
12:30 – 14:00	Lunch	MC
14:00 – 15:30	Paper Session II	Buildings B & D
	M2-1 Industry Session 2: Industry & Government	D5
	M2-2 Air Transport Policy & Regulation 1	D4
	M2-3 Marketing & Consumer Behavior in Air Transport 1	B7
	M2-4 Sustainability in Air Transport 2: Behaviors	B8
	M2-5 Airline Strategy & Management 1	B9
	M2-6 Intermodal Operations & Modal Competition 1	B10
	M2-7 Airport Operations 1	B11
	M2-8 Aviation Safety & Security 1	B12
14:00 – 15:30	AIROBS Special Session on Airport Development II	Auditorium
15:30 – 16:00	Coffee Break	Auditorium, Buildings B & D
16:00 – 17:30	Paper Session III	Buildings B & D
	M3-1 Industry Session 3: Pandemic	D5
	M3-2 Aviation & Economic Development 1	D4
	M3-3 Urban Aviation Mobility 2: Network Design	B7
	M3-4 Sustainability in Air Transport 3: New Aircraft Technologies	B8
	M3-5 Sustainability in Air Transport 4: Policies & Practices	B9
	M3-6 Airline Economics & Performance 2	B10
	M3-7 Air Transport & COVID-19 1	B11
	M3-8 Air Cargo 1	B12
16:00 – 17:30	AIROBS Special Session on Airport Development III	Auditorium
18:30 – 20:30	ISEC Sponsored Dinner	ISEC Lisboa campus

WEDNESDAY, 3 JULY – Academic Plenary Session and Paper Sessions

08:30 – 17:30	Conference Registration	ISEC Lisboa campus
09:00 – 10:00	Academic Keynote Speech	Auditorium
10:00 – 10:45	Global Airport & Airline Benchmarking Reports	Auditorium
10:45 – 11:15	Coffee Break	Auditorium, Buildings B & D
11:15 – 12:45	Paper Session IV	Auditorium, Buildings B & D
	M4-1 Industry Session 4: Sustainability	D5
	M4-2 Aviation Safety & Security 2	D4
	M4-3 Urban Aviation Mobility 3: Viability & Acceptance	B7

M4-4	Sustainability in Air Transport 5: Carbon Emissions	B8
M4-5	Air Transport Policy & Regulation 2	B9
M4-6	Airport Strategy & Management 2	B10
M4-7	Airline Operations 2	B11
M4-8	Marketing & Consumer Behavior in Air Transport 2	B12
M4-9	Air Traffic Control 1	Auditorium
12:45 – 14:00	Lunch	MC
14:00 – 15:30	Paper Session V	Auditorium, Buildings B & D
M5-1	Industry Session 5: Sustainability	D5
M5-2	Air Transport & COVID-19 2	D4
M5-3	Urban Aviation Mobility 4: Multimodal Delivery	B7
M5-4	Sustainability in Air Transport 6: Airline Strategies & Economics	B8
M5-5	Air Transport Policy & Regulation 3	B9
M5-6	Intermodal Operations & Modal Competition 2	B10
M5-7	Airport Operations 2	B11
M5-8	Air Transport Demand 2	B12
M5-9	Air Cargo 2	Auditorium
15:30 – 16:00	Coffee Break	Auditorium, Buildings B & D
16:00 – 17:30	Paper Session VI	Auditorium, Buildings B & D
M6-1	Industry Session 6: Consumer Preference, Choice & Loyalty	D5
M6-2	Airport Economics & Performance	D4
M6-3	Urban Aviation Mobility 5: Safety & Service Design	B7
M6-4	Sustainability in Air Transport 7: Noise, Resilience & Climate Risk	B8
M6-5	Sustainability in Air Transport 8: SAF 2	B9
M6-6	Airport Strategy & Management 3	B10
M6-7	Airline Operations 3	B11
M6-8	Air Transport & COVID-19 3	B12
M6-9	Aviation & Economic Development 2	Auditorium
20:00 – 23:00	Gala Dinner & Award Presentations	INATEL Caparica
THURSDAY, 4 JULY – Paper Session and Conference Closing Session		
08:30 – 12:30	Conference Registration	ISEC Lisboa campus
09:00 – 10:30	Paper Session VII	Auditorium, Buildings B & D
M7-1	Airline Economics & Performance 3	D5
M7-2	Airline Strategy & Management 2	D4
M7-3	Urban Aviation Mobility 6: Scheduling & Routing	B7
M7-4	Sustainability in Air Transport 9: Operations & Emissions	B8
M7-5	Sustainability in Air Transport 10: Technologies & Infrastructure	B9
M7-6	Air Transport Policy & Regulation 4	B10
M7-7	Airport Operations 3	B11
M7-8	Marketing & Consumer Behavior in Air Transport 3	B12
M7-9	Air Traffic Control 2	Auditorium
10:30 – 11:00	Coffee Break	Auditorium, Buildings B & D
11:00 – 12:30	ATRS General Assembly & Closing Ceremony	Auditorium
12:30 – 15:00	Lunch	MC
15:00 – 17:00	Technical Tour (registration required, first-come-first-served)	

CONFERENCE PROGRAMME

Pre-Conference (Online)

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All times in WEST (UTC+1)

SUNDAY, 30 JUNE

09:00 – 09:15 Online Welcome Address

Anming Zhang | President of the ATRS
Rosário Macário | Chairwoman of ATRS Lisbon Conference

09:15 – 09:30 Break

09:30 – 11:00 Online Paper Session I (Asia/Europe/Oceania)

09:30 – 11:00 P1-1 Airline Strategy & Management

Chair: **Mateus Pongeluppi** | Reykjavik University

- 3 Analysing key drivers affecting expenditure and operating revenue of Indian airlines (Ajai Jayathilakan, Massey University)
- 22 Airline network development practices: an extensive worldwide empirical investigation (Andrea Signori, Bergamo University; Sebastian Birolini, Bergamo University; Nicolò Avogadro, Bergamo University)
- 46 Analysis of Airlines' Digital Platformer Business Model under the Multiple-sided Market Approach (Katsuya Hihara, Tokyo Metropolitan University)
- 4 Airline Mergers and Equity Alliances in the Post-COVID Era (Shuichi Fujimura, Japan Transport and Tourism Research Institute)
- 43 Growth, Strategic Choices and Complexity in Low-Cost Airlines (Mateus Pongeluppi, Reykjavik University; Sveinn Vidar Gudmundsson, Reykjavik University)

09:30 – 11:00 P1-2 Airline & Airport Operations

Chair: **Xuting Sun** | Shanghai University

- 14 A Multi-Objective A* Algorithm with Time Windows for Dynamic Routing in Large Airports (Bosheng Ba, Civil Aviation University of China; Ruixin Wang, Civil Aviation University of China; Ye Yu, China Civil Aviation Engineering Consulting co.,Ltd; Tieqiao Tang, Beihang University; Yunqi Gao, Beihang University)
- 131 Optimizing Baggage Handling Systems for Enhanced Efficiency and Security at Melbourne Airport (Ashique Ahmed, RMIT University)
- 44 Pilot Training Planning in Airlines: Plato (Yavuz Bulut, Pegasus Airlines; Kurtulus Ozturk, Pegasus Airlines; Mujgan OZKAYA, Pegasus Airlines; Caglar Ucler, Ozyegin University)
- 11 Bi-level optimization of aircraft maintenance routing and maintenance service resource allocation: An enhanced cooperation mechanism (Xuting Sun, Shanghai University; Sai-Ho Chung, The Hong Kong Polytechnic University; Hoi-Lam Ma, The Hang Seng University of Hong Kong; Xin Wen, The Hong Kong Polytechnic University)

09:30 – 11:00 P1-3 Marketing & Consumer Behavior in Air Transport

Chair: **Chieh-Hua Wen** | Feng Chia University

- 372 A Study on the Factors Influencing Passengers' Willingness to Use Airport Smart Facilities
(ZI YUN LIAO, National Kaohsiung University of Science and Technology; Ching-Cheng Chao, National Kaohsiung University of Science and Technology)
- 2 Self-Service Technology in Aviation: A Systematic Literature Review
(Phutawan Ho Wongyai, Massey University; Thanh Ngo, Massey University; Kan Tsui, University of Southern Queensland; Louis Wu, Massey University; Thu-Huong Nguyen, Victoria University)
- 1 A door-to-door travel companion for air transportation
(Jiezhuma La, CQ University; Cees Bil, RMIT University; Iryna Heiets, RMIT University)
- 21 A paired bundle logit model for the choice of ancillaries on air travel
(Chieh-Hua Wen, Feng Chia University; Yu-Chieh Tung, Feng Chia University; Yung-Chen Shih, Feng Chia University)

09:30 – 11:00 P1-4 Demand, Regulation & Policy

Chair: **Peter J. Forsyth** | Monash University

- 223 Blind tickets to solve the inefficiencies of subsidies for residents in air transport markets
(Juana María Alonso Déniz, University of Las Palmas de Gran Canaria; M. Pilar Socorro, University of Las Palmas de Gran Canaria)
- 83 The Impacts of Catchment Areas of Airports on the Route Traffic for Domestic Air Passengers in Japan
(Hidenobu Matsumoto, Kwansai Gakuin University; Koji Domae, Kansai Gaidai University)
- 10 Emerging economics and policy research priorities for enabling aviation climate action: Identification and expert evaluation
(Rubal Dua, KAPSARC; Prateek Bansal, National University of Singapore; Andres Guzman, KAPSARC)
- 168 Australian International Aviation - Case by case Liberalisation or Open Skies?
(Peter J. Forsyth, Monash University)
- 32 Analyzing the Impact of Airport Regulatory Reform on the Financial Performance of Private Airports and Economic Dynamics in Australia
(Nurettin Dinler, Erzincan Binali Yildirim University; Gajapriya Tamilselvan, Saint Louis University)

11:00 – 14:00 Break

14:00 – 14:30 Online Keynote Speech

Chair: **Achim Czerny** | VP Information Systems, ATRS, and the Hong Kong Polytechnic University

Speaker: **Ogaga Udjo** | Managing Director, ZA Logistics
African Aviation - Pathways to Connectivity and Growth

14:30 – 15:00 Break

15:00 – 16:30 Online Paper Session II (Europe/Americas)

15:00 – 16:30 P2-1 Sustainability in Air Transport

Chair: **Nico Fluethmann** | German Aerospace Center (DLR)

- 352 Achieving Sustainable Aviation in Small Island Developing States (SIDS): The Caribbean Case (Dennis Mc Call Jr, De Montfort University; Stephen Ison, De Montfort University; Lucy Budd, De Montfort University)
- 261 Air Transport versus HSR in the Japan Domestic Short-Haul Routes: A Comparative Analysis for Determining the Most Sustainable Vehicle (Gökhan Tanrıverdi, Erzincan Binali Yıldırım University / Delft University of Technology; Ömer Çam, Erzincan Binali Yıldırım University; Uğur Kılıç, Erzincan Binali Yıldırım University)
- 418 Exploring the Sustainability Agenda and Policy Development in the European Airport Market (Ozlem Colak, Gaziantep University; Nisa Secilmis, Gaziantep University)
- 7 Global Identificaton of Markets, Routes and Emission Reduction Potential of Electric Aircraft Based on Data Analysis from Commercial Flights in 2023 (Nico Fluethmann, German Aerospace Center (DLR); Roman Jaksche, German Aerospace Center (DLR))

15:00 – 16:30 P2-2 **Airport Operations**

Chair: **Caroline K Marete** | Purdue University

- 29 Investigation of Emergency Management Practices at Airports Affected by the February 3, 2023 Turkey Earthquake: A Perspective from an Aviation Expert (Nazan Gul, Eskisehir Technical University; Savaş S. Ateş, Eskisehir Technical University)
- 31 Human Factors Effects on Apron Safety: A Systematic Literature Review (Ayberk Tutkun, Eskisehir Technical University; Savas Selahattin Ates, Eskisehir Technical University)
- 41 Investigating Temporal Relationships Among US Commercial Airports with Similar Commercial Flight Delay Patterns (Zhi Dou, Purdue University; Sen Wang, Purdue University; Yi Gao, Purdue University)
- 47 Integrating Unmanned Aircraft System (UAS) Technologies to Improve Airport Sustainability: Advantages, Challenges, and Implications (Caroline K Marete, Purdue University; Cheng Wang, Minnesota State University, Mankato)

15:00 – 16:30 P2-3 **Politics & Aviation Development**

Chair: **Tyler Spence** | Embry-Riddle Aeronautical University

- 45 The nexus between air freight transportation and international trade: Empirical evidence from country groups (Kasım Kiracı, Iskenderun Technical University)
- 363 Multimethodology Applied to Public Transport: Case study of the Municipality of São Pedro da Aldeia/RJ (Giovani Avila, Federal University of Rio de Janeiro; Mauro Cesar Branco, Federal University of Rio de Janeiro; Marcos Estellita Lins, Federal University of Rio de Janeiro)
- 34 Evaluating International Air Travel Growth in the African Continent through Aviation Negotiation Frameworks (Jacob Shila, Bowling Green State University; Tyler Spence, Embry Riddle Aeronautical University; Cheng Wang, Minnesota State University - Mankato)
- 36 International Aviation Diplomacy – A Comparative Study to Review Political, Economic, and Social Frameworks (Tyler Spence, Embry-Riddle Aeronautical University; Steven Leib, Central Queensland University; Cheng Wang, Minnesota State University - Mankato; Hanzi Xie, Purdue University)

15:00 – 16:30 P2-4 Machine Learning & Data-Driven Approaches

Chair: **Juliane Roesing** | RWTH Aachen University

- 6 Airport Service Quality Assessment through Machine Learning-Enhanced Computer Vision Metrics
(Decio Yoshimoto, Instituto Tecnológico de Aeronautica; Claudio Jorge Alves, Instituto Tecnológico de Aeronautica; Evandro Silva, Instituto Tecnológico de Aeronautica)
- 127 Airport Financial Performance: A Framework to Evaluate Non-Aviation Revenues Generation Efficiency
(Marcus Vinicius Nascimento, Instituto Tecnológico de Aeronáutica; Giovanna Miceli Ronzani Borille, Aeronautics Institute of Technology - ITA)
- 162 Analyzing Public Sentiments on Electric Aircraft for Regional Air Mobility in China
(Chenchen Xu, Ghent University; Yiyang Luo, Ghent University; Fuellhart Kurt, Unison Consulting & Ghent University; Frank Witlox, Ghent University)
- 24 Defining Machine Learning Benchmarks for Flight Delay Prediction
(Hélio da Silva Queiroz Júnior, Federal University of Pernambuco; Viviane Falcão, Coventry University; Francisco Gildemir da Silva, Federal University of Ceará; Evandro da Silva, Instituto Tecnológico de Aeronáutica)
- 12 Data-driven demand analysis for air mobility services for passenger
(Juliane Roesing, RWTH Aachen University; Idoaldo de Lima, RWTH Aachen University; Eva Feldhoff, RWTH Aachen University)

16:30 – 17:00 Break

17:00 – 18:30 Online Paper Session III (Europe/Americas)

17:00 – 18:30 P3-1 Air Transport Demand

Chair: **Scott Winter** | Embry-Riddle Aeronautical University

- 37 Pricing and market concentration: A Case study of airlines
(Chuan Chen, Embry-Riddle Aeronautical University; Jayendra Gokhale, Embry Riddle Aeronautical University)
- 351 Unlocking The Power of Frequent Flier Programs: Exploring the relation between loyalty programs and airline ticket prices
(Hari Adhikari, Embry-Riddle Aeronautical University; Jayendra Gokhale, Embry-Riddle Aeronautical University; Aakhansha Mannam, Embry-Riddle Aeronautical University)
- 50 Adding the extra stop: modelling the presence of a transfer on journeys to non-stop destinations
(Toon Zijlstra, Netherlands Institute for Transport Policy Analysis; Roel Faber, The Netherlands Research Institute for Transport Policy Analysis)
- 260 The Impacts of Accident Count and Vehicle's Length of Time in Service on Consumer's Willingness to Fly in Autonomous Air Taxis
(Scott Winter, Embry-Riddle Aeronautical University; Stephen Rice, Embry-Riddle Aeronautical University; Sean Crouse, Embry-Riddle Aeronautical University; Ryan Wallace, Embry-Riddle Aeronautical University)

17:00 – 18:30 P3-2 Air Transport & COVID-19

Chair: **Renato Redondi** | University of Bergamo

- 402 Industrial Policy and Competition: Equity Injections in the European Airline Industry

- (Christina Stadler, KU Leuven & DIW Berlin; Jo Seldeslachts, KU Leuven & DIW Berlin; Albert Banal-Estanol, Universitat Pompeu Fabra & City University London; Wolfgang Grimme, German Aerospace Center (DLR); Sven Maertens, German Aerospace Center (DLR))
- 53 Recovery of COVID-19 in Brazilian airports under concession
(Fernanda Toledo, Federal University of Rio de Janeiro; Nelson F. F. Ebecken, Federal University of Rio de Janeiro)
- 312 Ground and Delay KPI Analysis of Main Brazilian Airports in Pre and Post Covid-19 Pandemic Scenarios
(Enzo Picchiello, Instituto Tecnológico de Aeronáutica - ITA; Marcelo Xavier Guterres, Instituto Tecnológico de Aeronáutica; Anderson Correia, Instituto Tecnológico de Aeronáutica; Priscila Correia, Instituto Tecnológico de Aeronáutica)
- 15 Who Bears the Brunt of Rising Airfares Most? Analyzing Airline Pricing Strategies in Europe
(Renato Redondi, University of Bergamo; Nicolò Avogadro, University of Bergamo; Chiara Morlotti, University of Bergamo; Andrea Salanti, University of Bergamo)

17:00 – 18:30 P3-3 Aviation Safety & Security

Chair: **Joseph Sobieralski** | Embry-Riddle Aeronautical University

- 42 Safety assessment of high voltage power lines in the vicinity of general aviation airports: The case study of Airport Subotica, Serbia
(Bojana Mirkovic, University of Belgrade; Tatjana Krstic Simic, University of Belgrade; Fedja Netjasov, University of Belgrade; Jovana Kuljanin, Universidad Politecnica de Catalunya)
- 117 A lean management-based perspective on intercultural risk in aviation operations
(Triant Flouris, Metropolitan College; Triant Flouris, Metropolitan College; Konstantinos Malagas, University of the Aegean; Ayse Kucuk Yilmaz, Eskisehir Technical University)
- 9 Low wages and more injuries: Do labor unions make a difference for flight attendant safety?
(Joseph Sobieralski, Embry-Riddle Aeronautical University)

17:00 – 18:30 P3-4 Airline & Airport Strategies

Chair: **Steve Lawford** | ENAC, University of Toulouse

- 30 Next Level of Landside Airport's Accessibility: Merging the City
(Alessandro Massaro, Architect/Planner/MSc)
- 417 Decision Making Biases in Air Service Development Activity: Exploration of Bounded Rationality Under Uncertainty
(Darshi Piyathilake, Coventry University)
- 152 An Examination of Network Consolidation in the Cathay Pacific Group: A Review of Network Efficiency
(Nadine Itani, University of Surrey; Scott Porter, University of Surrey; John Frankie O'Connell, University of Surrey; Nikolas Thomopoulos, University of Surrey; Anyu Liu, The Hong Kong Polytechnic University)
- 98 The competitive effects of an airline multi-brand strategy: An analysis of Qantas Group's market power and pricing
(Aditya Maddipati, University of Surrey; John Francis O'Connell, University of Surrey; Nadine Itani, University of Surrey; David Warnock-Smith, Buckinghamshire New University)
- 33 Network effects and incumbent response to entry threats: empirical evidence from the airline industry
(Steve Lawford, ENAC, University of Toulouse)

MONDAY, 1 JULY

14:00 – 17:30 Ph.D. Student and Junior Faculty Workshop

- 14:00 – 15:00 **Sebastian Birolini** | Università degli studi di Bergamo
Modeling of Supply-Demand Interactions in Airline Scheduling and Network Planning
- 15:00 – 16:00 **Silke Forbes** | Tufts University
The Impact of Airline Mergers on Quality
- 16:00 – 16:30 Break
- 16:30 – 17:30 **Nicola Volta** | Eurocontrol
Efficiency Measurement Methods in the Air Transport Sector and Policy Implications

CONFERENCE PROGRAMME

Main Conference

This printed program is subject to changes. Please refer to the Whova App or posts at the conference venue for the latest updates (if any).

MONDAY, 1 JULY – Meetings and Reception

09:00 – 16:00 Meetings (By invitation only)

Venue: PRL

09:00 – 11:00 ATRS Executive Committee meeting

11:00 – 13:00 ATRS Networking Committee meeting

13:00 – 14:00 Lunch

14:00 – 15:00 Airport Benchmarking Taskforce Meeting

15:00 – 16:00 JATRS Editorial Board Meeting

13:30 – 20:30 Conference Registration

Venue: ISEC Lisboa campus

14:00 – 17:30 Ph.D. Student and Junior Faculty Workshop (Registration required)

Venue: D5, Building D & online

14:00 – 15:00 **Sebastian Birolini** | Università degli studi di Bergamo

Modeling of Supply-Demand Interactions in Airline Scheduling and Network Planning

15:00 – 16:00 **Silke Forbes** | Tufts University

The Impact of Airline Mergers on Quality

16:00 – 16:30 Break

16:30 – 17:30 **Nicola Volta** | Eurocontrol

Efficiency Measurement Methods in the Air Transport Sector and Policy Implications

17:30 – 18:15 Meet the Experienced Scholars (MES) (Appointment required)

Venue: D5, Building D

18:30 – 20:30 Welcome Reception

Venue: ISEC Lisboa campus

TUESDAY, 2 JULY – Industry Plenary Sessions and Paper Sessions

08:30 – 17:30 Conference Registration

Venue: ISEC Lisboa campus

09:00 – 09:15 Welcome Address

Venue: Auditorium

Miguel Pinto Luz | Minister of Infrastructure and Housing

Anming Zhang | President of the ATRS

Rosário Macário | Chairwoman of ATRS Lisbon Conference

Maria Cristina Ventura | President of ISEC Lisboa

09:15 – 10:30 Industry Keynote Speeches

Venue: Auditorium

Chair: **Rosário Macário** | Chairwoman of ATRS Lisbon Conference and University of Lisbon

Speakers: **Rosário Partidário** | President, Independent Technical Commission for the New Lisbon Airport
Strategic Environmental Impact Assessment for expansion of the Lisbon Airport

Luis Rodrigues | CEO, TAP Air Portugal
Challenges developing TAP Air Portugal

10:30 – 11:00 Coffee Break

Venue: Auditorium, Buildings B & D

11:00 – 12:30 Paper Session I

Venue: Rooms D4-D5 (Building D) & Rooms B7-B12 (Building B)

11:00 – 12:30 M1-1 Industry Session 1: Strategy & Management

D5

Chair: **Sharon Sarmiento** | Unison Consulting

146 Altitude in Adversity: Airline Resilience During Global Turmoil

(Aisling Reynolds-Feighan, University College Dublin)

180 Recent Evolution of the U.S. Air Cargo Network in the Era of E-Commerce

(Kurt Fuellhart, Unison Consulting; Liang Dai, Nanjing University of Finance and Economics;

Gary Lin, Unison Consulting, Inc.; Sharon Sarmiento, Unison Consulting, Inc.; Ian Diaz,

Unison Consulting, Inc.; Karanki Fecri, Purdue University)

116 An Examination of UK Regional Airport Closure

(Anne Graham, University of Westminster; Lucy Budd, De Montfort University; Stephen

Ison, De Montfort University)

69 AI-generated SWOT Analysis of Emerging Technologies in Air Transportation: Potential and Limitations

(Richard Klophaus, Worms University of Applied Sciences)

11:00 – 12:30 M1-2 Airline Operations 1

D4

Chair: **Lingxiao Wu** | The Hong Kong Polytechnic University

13 A Deep Reinforcement Learning Approach for Airline Recovery

(Xin Wen, The Hong Kong Polytechnic University; Sai-Ho Chung, The Hong Kong Polytechnic

University; Hoi-Lam Ma, The Hang Seng University of Hong Kong; Xuting Sun, Shanghai

University)

66 Dynamic Engine Dispatching with Shared Warehouses for Resilient Aircraft Engine Logistics

(Wenzhao Dong, The Hong Kong Polytechnic University; Xuanyu ZHANG, The Hong Kong

Polytechnic University; Gangyan XU, The Hong Kong Polytechnic University)

108 A Workload Balance-based Algorithm for Scheduling the Shifts of Airline Dispatchers

(Changxin Zhu, The Hong Kong Polytechnic University; Kam Hung NG, The Hong Kong

Polytechnic University)

239 An Efficient Hangar Scheduling Problem in the Aircraft MRO Industry

(Haiyang Kong, The Hong Kong Polytechnic University; Lingxiao Wu, The Hong Kong

Polytechnic University)

Chair: **Maria Baltazar** | Instituto Superior de Educação e Ciências de Lisboa (ISEC Lisboa)

- 207 Determinants for the provision of UAM (feeder) services to airports
(Philip Autekie, University of Antwerp)
- 306 Market Share and Carbon Emission Trade-Offs in the Transition to Advanced Air Mobility: A Comparative Analysis of Urban Mobility Apps and eVTOL
(Carolina Ansélmo, Aeronautics Institute of Technology; Giovanna Miceli Ronzani Borille, Aeronautics Institute of Technology; Flavia Renata Dantas Alves Silva Ciaccia, Eve Air Mobility; Wallace Silva Sant Anna Souza, Aeronautics Institute of Technology)
- 250 Simulation of Symbiotic Evolution of UAM Innovation Ecosystem – A Case of Meituan Urban Drone Delivery
(Xinhui Ren, Civil Aviation University of China; Jiarui Wang, Civil Aviation University of China; Hong Jiang, Civil Aviation University of China)
- 374 Urban Air Mobility Integration to City Planning: A Review of Concepts and Approaches
(Wallace Souza, Aeronautics Institute of Technology; Edson Aníbal de Aquino Guedes Filho, Aeronautics Institute of Technology; Marcelo Xavier Guterres, Aeronautics Institute of Technology; Carolina Silva Ansélmo, Aeronautics Institute of Technology)
- 408 Advanced Air Mobility - Roadmap Portuguese. An Analysis of the urban and regional aviation ecosystem maturity through EVTOL aircraft and the perspectives for deployment in Portuguese airspace
(João Brilhante, ISEC Lisboa; Maria Baltazar, Instituto Superior de Educação e Ciências de Lisboa (ISEC Lisboa))

Chair: **Changmin Jiang** | The Hong Kong Polytechnic University

- 111 Impacts of a Sustainable Aviation Fuel Mandate on Airline Competition --- Full-service carrier vs. low-cost carrier
(Ruotian Chen, University of International Business and Economics; Hangjun Yang, University of International Business and Economics; Kun Wang, The Hong Kong Polytechnic University; Changmin Jiang, University of International Business and Economics)
- 58 Do airlines adopt sustainable aviation fuel under modal competition?
(Sai Jael Bravo Melgrejo, ENAC; Estelle Malavolti, ENAC-TSE)
- 122 Towards a Green Aviation System: Purchasing Carbon Offsetting Projects or Investing in Technology Advances?
(Yanyan Ding, The Hong Kong Polytechnic University; Sisi Jian, The Hong Kong University of Science and Technology; Anming Zhang, British Columbia University, Sauder Business School)
- 137 The Implication of SAF Usage on Airports
(Changmin Jiang, The Hong Kong Polytechnic University; Bokun Zhao, University of International Business and Economics; Qiang Wang, University of International Business and Economics)
- 346 Carbon Taxation vs. SAF Usage in Reducing Aviation Emissions: a structural model for short- and long-haul flights
(Flavio Porta, University of Bergamo; Chikage Miyoshi, Cranfield University; Chui Ying Lee, Hiroshima University; Megersa Abera Abate, World Bank; Hideki Fukui, Kyoto University)

Chair: **Angela Stefania Bergantino** | University of Bari

- 67 How new airline might change performance – case study in Taiwan
(Shu Pei Huang, National Yang Ming Chiao Tung University; Barbara T.H. Yen, National Yang Ming Chiao Tung University)
- 175 Influences of New-Entrant Premium Airlines on Market: A Case Study of STARLUX Airlines
(Hsing Pang Huang, National Yang Ming Chiao Tung University; Yi-Shih Chung, National Yang Ming Chiao Tung University)
- 217 Will cross shareholding between airlines lead to tacit collusion?
(Meng Hou, Civil Aviation University of China; Xingwu Zheng, Civil Aviation University of China)
- 178 Merger waves in retrospective: Evidence from the US airline industry
(Isabel Pham, WU Vienna, WIFO; Kevin Remmy, University of Mannheim; Christian Bontemps, ENAC and Toulouse School of Economics)
- 124 Sliding doors: Alitalia's exit and ITA's entry impact on pricing strategies and territorial accessibility
(Angela Stefania Bergantino, University of Bari Aldo Moro; Intini Mario, University of Bari Aldo Moro; Ada Spiru, University of Bari Aldo Moro)

11:00 – 12:30 M1-6 Airline Network Development

B10

Chair: **Collin WH Wong** | The Hang Seng University of Hong Kong

- 144 Developing a Framework to Identify Structural Characteristics of the Air Traffic Network
(Wenhao Ding, University of Tokyo; Taiki Haba, The University of Tokyo; Satori Tsuzuki, The University of Tokyo; Eri Itoh, The University of Tokyo & Electronic Navigation Research Institute (ENRI))
- 160 Spatiotemporal evolution of airline network strategies in China's domestic market
(Yue Hu, Ghent university; Liang Dai, Nanjing University of Finance and Economics; Kurt Fuellhart, Unison Consulting; Frank Witlox, Ghent University)
- 213 Enhanced Airline Network Planning for Connecting Markets
(Antonio Montaruli, University of Twente; Sebastian Birolini, University of Bergamo; Dennis Prak, University of Twente; Martijn Mes, University of Twente)
- 280 Flight network design with supply-demand interactions under the multimodal transport network
(Xinyuan Chen, Nanjing University of Aeronautics and Astronautics)
- 422 Examining the impact of multi-airport region on global network using multi-airport region index
(Collin WH Wong, The Hang Seng University of Hong Kong; Becky P Y Loo, The University of Hong Kong; Anming Zhang, The University of British Columbia; Tommy King-Yin Cheung, The Swinburne University of Technology)

11:00 – 12:30 M1-7 Airport Strategy & Management 1

B11

Chair: **Viviane Falcão** | UFPE

- 125 Navigating Uncertainty: Airport Resilience in Challenging Times
(Noel Hiney, Dublin City University; Marina Efthymiou, Dublin City University; Edgar Morgenroth, Dublin City University)
- 183 Insights in Diversity: Clustering Western European Regional Airports
(Jolien Pauwels, University of Antwerp; Sven Buyle, University of Antwerp; Wouter Dewulf, University of Antwerp)

- 208 A systematic literature review of success factors of Airport Cities
(Nigel Lai Hong Tse, Airport City Developers Forum; Henrik Rothe, Cranfield University, Urban Turbine; Mirjam Wiedemann, University of New South Wales; Matthias Zibuschka, Fachhochschule Wiener Neustadt)
- 273 Unveiling Brazil's Regional Airports: A Comprehensive Overview
(Viviane Falcão, UFPE; Marcos Araújo, Federal University of Pernambuco)

11:00 – 12:30 M1-8 Air Transport Demand 1

B12

Chair: **Wolfgang Grimme** | German Aerospace Center (DLR)

- 228 Demand forecasting of short-time unit air passenger transport using LightGBM Model
(Zehui Tang, Inha University; Hun-Koo Ha, Inha University; Dohun Kim, Inha University; Wenxia Wang, Inha University)
- 257 Forecasting Potential Routes in Europe: A Case Study of the Istanbul Air Transport Market
(Gizem Colak, Cranfield University)
- 289 In the Flow of Connectivity: A Dynamic Network Exploration of Europe's Air Transportation System
(Katrin Koelker, German Aerospace Center (DLR); Klaus Lütjens, German Aerospace Center (DLR))
- 309 Post-invasion Air Traffic from and to Russia: Who profits from the retreat of Western Airlines?
(Wolfgang Grimme, German Aerospace Center (DLR); Stephan Bingemer, Heilbronn University of Applied Sciences; Sven Maertens, German Aerospace Center (DLR))

11:30 – 13:00 AIROBS Special Session on Airport Development I

Venue: Auditorium

Theme: Expansion of Aeronautical Capacity of Lisbon Region (Part 1)

Moderator: **Jorge Miguel Reis Silva** | Universidade da Beira Interior

Speakers: **Nuno Marques da Costa** | University of Lisbon

An overview of future air transport demand

Rosário Macário | University of Lisbon

Looking at airport capacity from a strategic view point

Paulo Pinho | University of Porto

Landing a new airport in the Lisbon Region: a critical overview from a spatial and transport planning perspectives

12:30 – 14:00 Lunch

Venue: MC

14:00 – 15:30 Paper Session II

Venue: Rooms D4-D5 (Building D) & Rooms B7-B12 (Building B)

14:00 – 15:30 M2-1 Industry Session 2: Industry & Government

D5

Chair: **Liying Gu** | Airports Council International

- 426 Incorporating climate change impacts into long-range aviation demand forecasts
(Roger Schaufele, Federal Aviation Administration)
- 256 Addressing Climate Change Impacts in Forecasting Aviation Activity - A Case Study of U.S. Airport

- (Sharon Sarmiento, Unison Consulting; Gary Lin, Unison Consulting, Inc.; Kurt Fuellhart, Unison Consulting, Inc.; Ian Diaz, Unison Consulting, Inc.)
- 106 A Scenario Study: Metaverse Applications in Commercial Aviation 2030+
(Axel Becker, Airbus; Nicolas Tschechne, Airbus; Michael Olbert, Airbus; Kay Ploetner, Bauhaus Luftfahrt; Lily Koops, Bauhaus Luftfahrt; Anna Schneider, Lufthansa Innovation Hub; Ivan Terekhov, Lufthansa Innovation Hub)
- 425 Boeing Commercial Market Outlook
(Kathryn Peters, Boeing)

14:00 – 15:30 M2-2 Air Transport Policy & Regulation 1

D4

Chair: **Thorsten Ehlers** | German Aerospace Center (DLR)

- 68 Assessing the Efficacy of EU Greenwashing Legislation: A Study of European Airlines' Voluntary Carbon Offset Programs
(Fabiana Peixoto de Mello, Universidade de Lisboa)
- 234 The EU-ETS impact on the airline supply chain and stakeholders
(Pol Fontanet Pérez, University of Vigo; Lucas López-Manuel, University of Vigo - Rede Group; Pere Suau-Sanchez, Universitat Oberta de Catalunya and Cranfield University; Xose H. Vazquez, University of Vigo - Rede Group)
- 340 Evaluating European environmental policies for net zero aviation in a tourism dependent economy: The case study of Greece
(Evangelia Pantelaki, Emirates Aviation University; Nadine Itani, University of Surrey; John Frankie O'Connell, University of Surrey; Andreas Papatheodorou, University of Aegean)
- 361 Case for Supporting Sustainable Investing in Aviation
(Vedapuri Raghavan, Embry-Riddle Aeronautical University)
- 398 The Route Specific Cost Impact of the European Union Fit-For-55-Measures and their Effect on Air Travel Demand
(Thorsten Ehlers, German Aerospace Center (DLR); Katrin Kölker, German Aerospace Center (DLR); Klaus Lütjens, German Aerospace Center (DLR))

14:00 – 15:30 M2-3 Marketing & Consumer Behavior in Air Transport 1

B7

Chair: **Mikio Takebayashi** | Kobe University

- 82 Exploring willingness-to-pay of carbon offset for air passengers using the Integrated Choice and Latent Variable (ICLV) model: Evidence of Taiwan
(Hsun-Ting Liu, National Cheng Kung University; Ching-Fu Chen, National Cheng Kung University)
- 130 Traveller's Willingness to Pay for Features Offered by a Leisure Airline in the Swiss-German market
(Alessandro Buchmann, University of St.Gallen)
- 291 Multi-user class air passenger assignment model considering passengers' heterogeneous risk preferences against travel time reliability
(Ryuichi Tani, Hokkaido University; Kensuke Kagami, Hokkaido University; Kenetsu Uchida, Hokkaido University)
- 76 Transport services for remote areas: the case of southern area of Japan
(Mikio Takebayashi, Kobe University; Hiromichi Yamaguchi, Kanazawa University; Yuka Kataoka, Ehime University; Kazuhiko Ishiguro, Kobe University; Masamitsu Onishi, Kyoto University)

14:00 – 15:30 M2-4 Sustainability in Air Transport 2: Behaviors

B8

Chair: **Li Zou** | Embry-Riddle Aeronautical University

- 314 Defining the green airline pilot from an individual perspective: an empirical approach
(Carlos García Molaguero, Las Palmas de Gran Canaria; Desiderio García Almeida, Universidad de Las Palmas de Gran Canaria)
- 286 Carbon communication in the airline sector and its potential impact on decarbonization and improving consumer trust
(David Li, The University of Sydney; Matthew Beck, The University of Sydney; Rico Merkert, The University of Sydney)
- 55 The effect of awareness of aviation sustainability initiatives on travellers' intention and behaviour
(Chrystal Zhang, RMIT University; Chunyu Shan, RMIT University; Yeyao Jia, RMIT University; Luyi Ruan, RMIT University; Shuqin Zhao, RMIT University)
- 126 Does Green Come at a Premium?
(Li Zou, Embry-Riddle Aeronautical University; Kiljae K. Lee, Embry-Riddle Aeronautical University; Blaise Waguespack, Embry-Riddle Aeronautical University)

14:00 – 15:30 M2-5 Airline Strategy & Management 1

B9

Chair: **Florian Erbach** | Lufthansa Consulting

- 63 A study on the role of airline social responsibility on corporate value: A sustainability perspective
(Mengyuan Lu, Cranfield University; Edgar Jinenez Perez, Cranfield University; Keith Mason, Cranfield University)
- 123 A Combined Approach using Structural Equation Modeling and Analytic Hierarchy Process in Hub Airports Selection
(Gabriel Rego, University of Porto; António José Fidalgo do Couto, University of Porto; Edgar Jimenez Perez, Cranfield University)
- 170 Unlocking value through multi-AOC airline operations: Balancing complexity and strategic benefits
(Lars-Michael Wendel, Antwerp University; Sascha Albers, University of Antwerp and Antwerp Management School; Wouter Dewulf, University of Antwerp)
- 206 What has happened in the airline business structure during the COVID-19 era?
(Yukio Yamashita, Japan Transport and Tourism Research Institute)
- 75 New Airline Business Model Framework and Analysis
(Florian Erbach, Lufthansa Consulting; Andreas Wittmer, University of St. Gallen; Marc Gebler, Lufthansa Consulting; Alessandro Buchmann, University of St. Gallen)

14:00 – 15:30 M2-6 Intermodal Operations & Modal Competition 1

B10

Chair: **Chantal Roucolle** | ENAC

- 145 Modeling Coopetition between Flight and High-speed Rail Services under Delay Uncertainty
(Enoch Lee, The Hong Kong Polytechnic University; Yue Huai, The Hong Kong University of Science and Technology; Hong K. Lo, The Hong Kong University of Science and Technology; Anming Zhang, University of British Columbia)
- 119 Airline Departure-Time Differentiation under High-Speed Rail Competition
(Hongyi Gu, The Hong Kong Polytechnic University; Yulai Wan, The Hong Kong Polytechnic University)

- 311 Analysis of the impact of connecting flights on passenger mode choice behaviors in intercity transportation in Japan
(Kyoko Manaka, Ryutsu Keizai University; Satoru Hashimoto, Aomori Public University)
- 329 Impacts of sustainability oriented regulatory measures on air-rail modal shifts: the case of a kerosene tax
(Chantal Roucolle, ENAC; Isabelle Laplace, ENAC; Nathalie Lenoir, ENAC; Tatjana Bolic, University of Westminster; Annika Paul, Bauhaus Lufthart)

14:00 – 15:30 M2-7 Airport Operations 1

B11

Chair: **Chung-Cheng Lu** | National Yang Ming Chiao Tung University

- 100 Sustainable Airport Baggage Transport Service with Autonomous Electric Vehicles
(Xuanyu Zhang, The Hong Kong Polytechnic University; Gangyan Xu, The Hong Kong Polytechnic University; Wenzhao Dong, The Hong Kong Polytechnic University)
- 105 Data-driven Dynamic Scheduling of Heterogeneous Shared Autonomous Vehicles for Airport Ground Transportation
(Yongwu Liu, The Hong Kong Polytechnic University; Ruibing Zhang, The Hong Kong Polytechnic University; Yuying Long, The Hong Kong Polytechnic University; Binglei Xie, School of Architecture, Harbin Institute of Technology (Shenzhen), Shenzhen, China; Gangyan Xu, The Hong Kong Polytechnic University)
- 370 Electric Ferry Vehicle Scheduling Problem for Sustainable Airport Operation
(Haoqing Wang, The Hong Kong Polytechnic University; Zhongyi Jin, The Hong Kong Polytechnic University; Kam K.H Ng, The Hong Kong Polytechnic University; Shuaian Wang, The Hong Kong Polytechnic University)
- 360 Optimal Assignment of Inbound Flights to Baggage Carousels Considering Stochastic Arrival Times of Flights
(Chung-Cheng Lu, National Yang Ming Chiao Tung University; Chia-Yu Jen, National Yang Ming Chiao Tung University)

14:00 – 15:30 M2-8 Aviation Safety & Security 1

B12

Chair: **Jinyoung (Jin) Choi** | Leiden University

- 224 Application of eye-tracking technology in research of image analysis process by air security control operators
(Ewa Mardeusz, Wrocław University of Science and Technology; Artur Kierzkowski, Wrocław University of Science and Technology; Tomasz Kisiel, Wrocław University of Science and Technology; Jacek Ryczyński, Wrocław University of Science and Technology)
- 79 Sustainable human-machine collaborations in aviation: past, present, and future
(Fan Li, The Hong Kong Polytechnic University)
- 251 Embracing technology while ensuring safety: the emerging role of AI in global aviation
(Nilgun Ozgur, Leiden University; Truxal Steven, Leiden University)
- 319 Unruly Sky - Recent Unruly Passenger Cases in South Korea
(Jinyoung (Jin) Choi, Leiden University; Youn Chul Choi, Hanseo University)

14:00 – 15:30 AIROBS Special Session on Airport Development II

Venue: Auditorium

Theme: Expansion of Aeronautical Capacity of Lisbon Region (Part 2)
Moderator: **Martin Dresner** | Chair, ATRS, and University of Maryland
Speakers: **Teresa Fidelis** | University of Aveiro

Landing a new airport in the Lisbon Region: constraint and risk factors to better respect the environment under a complex public decision-making process

Fernando Alexandre | University of Minho (TBC)

Landing a new airport in the Lisbon Region: assessing economic impacts

Raquel Carvalho | Catholic University of Porto

The legal and contractual framework and challenges for airport expansion in Lisbon

Round table discussion

Moderator: **Martin Dresner** | Chair, ATRS, and University of Maryland

15:30 – 16:00 Coffee Break

Venue: Auditorium, Buildings B & D

16:00 – 17:30 Paper Session III

Venue: Rooms D4-D5 (Building D) & Rooms B7-B12 (Building B)

16:00 – 17:30 M3-1 Industry Session 3: Pandemic

D5

Chair: **Sharon Sarmiento** | Unison Consulting

255 Benchmarking Airport Traffic COVID-19 Recovery and Post-Pandemic Trajectory Using Visual Analytics

(Ian Joseph Diaz, Unison Consulting; Sharon Sarmiento, Unison Consulting, Inc.; Gary Lin, Unison Consulting, Inc.; Paulos Ashebir Lakew, Boeing)

427 Federal Airport Funding and Additional Support During the Pandemic

(Rachel Tang, Congressional Research Service)

114 Effects of the Covid-19 pandemic on the hub status of European airports

(Edgar Jimenez Perez, Cranfield University; Dillon Failoni, Cranfield University)

167 Identify potential niche passenger markets for Asia Pacific airports after COVID-19's impact on global airport connectivity

(Yu-Chun Chang, National Taiwan Ocean University; Hsi-Tung Yu, National Taiwan Ocean University; Wenchun Tseng, CQ University)

16:00 – 17:30 M3-2 Aviation & Economic Development 1

D4

Chair: **Tomoaki Nakamura** | Keio University

182 Understanding the drivers and modalities of the servitization of business and general aviation manufacturers

(Marie Fabre, Université de Montpellier; Paul Chiambaretto, Montpellier Business School and Ecole Polytechnique)

247 The Role and Influence of Airports in Spatial Planning and Regional Development

(João Pedro Martins, University of Porto; Alvaro Costa, CITTA - FEUP; Carlos Oliveira Cruz, CERIS - Instituto Superior Técnico, University of Lisbon)

379 Strategic options for MRO firms' enhanced value proposition in the rapidly changing commercial aviation Maintenance, Repair, and Overhaul (MRO) market

(Christiane Hallensleben, University of Antwerp; Sascha Albers, University of Antwerp; Wouter Dewulf, University of Antwerp)

166 Will tourism spending by inbound travelers be increased by multi-destination tours?

(Tomoaki Nakamura, Keio University)

48 Data Mining and Machine Learning in Aviation: A Bibliometric Analysis

(Mehmet Erturk, Eskisehir Technical University & Ozyegin University; Savas Selahattin Ates, Eskisehir Technical University)

16:00 – 17:30 M3-3 Urban Aviation Mobility 2: Network Design

B7

Chair: **Renata Cavion** | UFSC

- 118 On the network equilibrium of an integrated air-ground urban transport system
(Zhenwei Gong, University of Hong Kong; Zhuoye Zhang, The University of Hong Kong;
Fangni Zhang, The University of Hong Kong)
- 163 Data-driven resilient urban air mobility network design under dynamic demand
(Ruibing Zhang, The Hong Kong Polytechnic University; Gangyan Xu, The Hong Kong
Polytechnic University; Xiaowei Hu, Harbin Institute of Technology; Yongwu Liu, The Hong
Kong Polytechnic University; Yuying Long, The Hong Kong Polytechnic University)
- 274 Unlocking the Potential–Drones Revolutionizing Intra-City Courier Services: A Cost-benefit
Analysis
(Xiao Chu, The Hong Kong Polytechnic University; Shuiwang Chen, The Hong Kong
Polytechnic University; Kai Wang, Tsinghua University; Lingxiao Wu, Hong Kong Polytechnic
University)
- 189 Urban Air Mobility and the Built Environment: network design potential
(Renata Cavion, UFSC; Andrea Holz Pfützenreuter, Federal University of Santa Catarina
(UFSC); Simone Becker Lopes, Federal University of Santa Catarina (UFSC))

16:00 – 17:30 M3-4 Sustainability in Air Transport 3: New Aircraft Technologies

B8

Chair: **Davide Scotti** | Università degli studi di Bergamo

- 297 A Comparison of GHG Emissions of Conventional, Electric, Hybrid, Biofuel and Hydrogen
Aircraft in Europe
(Rizwan Shoukat, University of Bergamo; Renato Redondi, University of Bergamo; Nicolò
Avogadro, University of Bergamo)
- 269 A comparison of surface and air transport greenhouse gas emissions for electric aviation in
Finland
(Tim Ryley, Griffith University; Baumeister Stefan, University of Jyväskylä; Abraham Leung,
Griffith University)
- 188 Future Emission Pathways from the Uptake of Hydrogen Fuelled Aircraft
(Max Lawrence-Griffiths, Loughborough University)
- 179 A Strategic Approach to Developing Hydrogen-Fueled Aviation Gas Turbines
(Sanghak Lee, Korea Aerospace University; Suhyeon Park, Korea Aerospace University)
- 99 Estimating the social effects of electric aircraft adoption: A counterfactual analysis based on
an equilibrium model
(Davide Scotti, Università degli studi di Bergamo; L Gallarati, University of Bergamo; Andrea
Gualini, University of Bergamo; Gianmaria Martini, University of Bergamo)

16:00 – 17:30 M3-5 Sustainability in Air Transport 4: Policies & Practices

B9

Chair: **Ram Kamath** | Bauhaus Luftfahrt

- 354 Turbulence and Transition: Civil Aviation's Path to Lower Emissions After COVID-19
(Chrystiane Abreu, UFF; Fernando Araujo, UFF)
- 371 Characteristics of a Digital Tool for Sustainable Aviation

(Helena Almeida, Iscte-IUL; Sofia Kalakou, ISCTE - Instituto Universitário de Lisboa; Renato Pereira, ISCTE - Instituto Universitário de Lisboa; Anna Palaiologk, Future Needs; Akash Mishra, Future Needs)

- 164 Strategies for the Carbon Neutrality in Korean International Aviation
(Jinseo PARK, Korea Transport Institute; Seunghan BAEK, Korea Transport Institute; Jaekyung LEE, Korea Transport Institute; Seungwon NOH, Korea Transport Institute)
- 65 Decarbonizing Aviation: Cash-for-Clunkers in the Airline Industry
(Jan Brueckner, University of California, Irvine; Matthew Kahn, University of Southern California; Jerry Nickelsburg, UCLA)
- 71 Effective combinations of policy and innovation for aviation's green-transition
(Ram Kamath, Bauhaus Luftfahrt)

16:00 – 17:30 M3-6 Airline Economics & Performance 2

B10

Chair: **Kun Wang** | The Hong Kong Polytechnic University

- 391 Price effects of the merger and acquisition in the air cargo market – the case of Korea
(Sunkyu Kim, Inha University; Gapbong Kim, Inha University; Tae Seung Kim, Inha University)
- 237 Lessons from airline deregulation and airline bankruptcy for the key success and failure factors for start-up airlines
(Peter Bulckaert, University of Antwerp; Eddy Van de Voorde, University of Antwerp; Wouter Dewulf, University of Antwerp)
- 74 The Impact of Add-On Pricing Strategy on Airline Markups
(Fecri Karanki, Purdue University; Gudbrand Lien, Inland Norway University of Applied Sciences; Subal Kumbhakar, State University of New York at Binghamton)
- 64 Loyalty rewards and redemption behavior: Stylized facts for the U.S. airline industry
(Alexander Luttmann, The MITRE Corporation; Ladd Daniel, Quantitative Economic Solutions)
- 376 Airline Competition in Indonesian Domestic Market: Airline-within-Airline Strategies and Impact of the Pandemic
(Kun Wang, The Hong Kong Polytechnic University; Weicheng Wang, The Hong Kong Polytechnic University; Xiaowen Fu, The Hong Kong Polytechnic University; Rongwen Jia, The University of International Business and Economics)

16:00 – 17:30 M3-7 Air Transport & COVID-19 1

B11

Chair: **Laingo Randrianarisoa** | KEDGE Business School

- 91 Vaccination and Transportation Intervention Strategies for Pandemic Control with Cost Optimization
(Yang Liu, Tokyo Institute of Technology; Shinya Hanaoka, Tokyo Institute of Technology; Kashin Sugishita, Tokyo Institute of Technology)
- 92 Analyzing the Risk of COVID-19 Propagation through US Air Travel Networks
(Jules Yimga, Embry-Riddle Aeronautical University)
- 278 Changing passenger demographics at UK airports before and after COVID-19 and the implications for airport management: Empirical study using GDS data of air passengers worldwide
(Muneki Yokomi, Kindai University)
- 337 Air travel demand under uncertain times: Do social preferences matter?
(Laingo Randrianarisoa, KEDGE Business School)

Chair: **Daniel Dobos** | University of Luxembourg

- 88 The dynamic freighter network - A big data perspective on the flexibility and behaviour of freighters in air transportation
(Vincent Van Bockstaele, University of Antwerp; Wouter Dewulf, University of Antwerp; Sven Buyle, University of Antwerp)
- 364 Air Cargo Demand Allocation to Passenger Airlines Consider Uncertainty
(Yufan Zuo, The Hong Kong Polytechnic University; Wei Liu, The Hong Kong Polytechnic University)
- 323 AI-based Movement & Process Detection for Air Cargo Logistics
(Hendrik Neumann, Frankfurt University of Applied Sciences; Benjamin Bierwirth, Frankfurt University of Applied Sciences)
- 394 Data driven approach for predicting air cargo turnaround time
(Daniel Dobos, University of Luxembourg; Anne Lange, Frankfurt University of Applied Sciences; Sandria Rüßmann, ESCP Business School; Sarah Van der Auweraer, IESEG School of Management)

16:00 – 17:30 AIROBS Special Session on Airport Development III

Venue: Auditorium

Theme: Advanced Air Mobility (AAM)

Moderator: **Wouter Dewulf** | University of Antwerp

Speakers: **Vasco Reis** | Instituto Superior Técnico - Universidade de Lisboa

Vertiports: the new trend in airport infrastructures

Evandro Silva | ITA Brazil

Geospatial Strategies for Integrating Vertiports into Existing Transport Networks

João Brilhante | ISEC Lisboa

Portuguese AAM - Challenges and Opportunities

18:30 – 20:30 ISEC Sponsored Dinner

Venue: ISEC Lisboa campus

WEDNESDAY, 3 JULY – Academic Plenary Session and Paper Sessions

08:30 – 17:30 Conference Registration

Venue: ISEC Lisboa campus

09:00 – 10:00 Academic Keynote Speech

Venue: Auditorium

Chair: **Gianmaria Martini** | VP Education, ATRS, and University of Bergamo

Speaker: **Silke Forbes** | Tufts University

Consumer Choice, Regulation, and Airline Service Quality

10:00 – 10:45 Global Airport & Airline Benchmarking Reports

Venue: Auditorium

Global Airport Benchmarking Report

Chunyan Yu | VP Benchmarking, ATRS, and Embry-Riddle Aeronautical University

Global Airline Benchmarking Report

Xiaoqian Sun | Secretary, ATRS, and Beihang University

Wouter Dewulf | VP External, ATRS, and University of Antwerp

10:45 – 11:15 Coffee Break

Venue: Auditorium, Buildings B & D

11:15 – 12:45 Paper Session IV

Venue: Rooms D4-D5 (Building D), Rooms B7-B12 (Building B) & Auditorium

11:15 – 12:45 M4-1 Industry Session 4: Sustainability

D5

Chair: **Kurt Fuellhart** | Unison Consulting

- 271 Assessing the understanding and willingness to pay (WTP) for sustainable aviation fuel (SAF): Comparison between UK and Japan
(Chui Ying Lee, Hiroshima University; Chikage Miyoshi, Cranfield University / Hiroshima University; Xiaoqian Sun, Beihang University; Jiachang Li, Beihang University; Hideki Fukui, Ehime University; Flavio Porta, University of Bergamo)
- 181 Understanding the drivers of the awareness and acceptability of green innovations in the air transport industry
(Paul Chiambaretto, MBS - Chaire Pégase; Sara Laurent, Montpellier Business School; Camille Bildstein, University of Montpellier; Audrey Rouyre, Montpellier Business School; Charlotte Chappert, University of Montpellier; Marie Bovis, University of Montpellier; Dante - Anne-Sophie de La Hiz-Leyva - Fernandez, University of Montpellier)
- 159 Modelling the impact of introducing first-generation hydrogen aircraft on the passenger air transportation network in Europe
(Alexander Rau, RWTH Aachen University; Eike Stumpf, Institute of Aerospace Systems (ILR))
- 62 Sustainable Aviation Fuels in the business travel market
(Andreas Ernst Wittmer, University of St. Gallen; Adrian Mueller, University of Bern)

11:15 – 12:45 M4-2 Aviation Safety & Security 2

D4

Chair: **Sohel Imroz** | Embry-Riddle Aeronautical University

- 133 A design model for an Integrated Management System in aviation: Introduction of the IMS Cube
(Joeri Meeus, University of Antwerp; Wouter Dewulf, University of Antwerp; Rosário Macário, University of Lisbon)
- 355 Accident Model to Predict Bird Strike Risks in Aviation
(Bruna Azevedo, Federal University of Goiás (UFG); Michelle Carvalho Galvão da Silva Pinto Bandeira, Federal University of Goiás (UFG); Anderson Ribeiro Correia, Aeronautics Institute of Technology; Marcos Paulino Roriz Junior, Federal University of Goiás (UFG); Hugo Alexandre Dantas do Nascimento, Federal University of Goiás)
- 345 Simulation Modelling for Airport Security Systems Analysis through a Real-World Case Study
(Viktoria Ivannikova, Dublin City University; Kostiantyn Cherednichenko, National Aviation University; Olena Sokolova, National Aviation University)
- 383 Insider Threat: Is the Australian Aviation Industry Complacent or Just Not Understanding Insider Threat?
(Vanessa Palmer, Griffith University; Wu Xiaoyu, Griffith University)
- 203 A Case Study of Management Shortcomings: Lessons from the Boeing 737-Max Aviation Accidents

(Sohel Imroz, Embry-Riddle Aeronautical University; Shivane Cannon-Patron, Embry-Riddle Aeronautical University; Shakaynah Gourdet, Embry-Riddle Aeronautical University; Fathima Haneen, Embry-Riddle Aeronautical University; Carlos Medina, Embry-Riddle Aeronautical University; Sammy Thompson III, Embry-Riddle Aeronautical University)

11:15 – 12:45 M4-3 Urban Aviation Mobility 3: Viability & Acceptance

B7

Chair: **Jan Pertz** | German Aerospace Center (DLR)

- 265 Economic Viability of Rural Air Mobility
(Dalton Laine, Utah Valley University; Ryan Leick, Utah Valley University; Aaron Organ, Utah Valley University)
- 302 Development of a generalized eVTOL vehicle cost model for Urban Air Mobility operations
(Ansgar Kirste, RWTH Aachen University; Eike Stumpf, RWTH Aachen University)
- 413 Analyzing the Acceptability of Urban Air Mobility in South Korea Using Importance-Expected Performance Analysis (IPA)
(Sunwook PARK, Seoul National University; Myeonghyeon Kim, Korea transport Institute)
- 110 Unveiling Economic Opportunities for Air Transport Logistic Scenarios in Offshore Windfarms
(Jan Pertz, German Aerospace Center (DLR); Stefan Haag, EnBW Energie Baden-Württemberg AG; Klaus Lütjens, German Aerospace Center (DLR))

11:15 – 12:45 M4-4 Sustainability in Air Transport 5: Carbon Emissions

B8

Chair: **Kam K.H. Ng** | The Hong Kong polytechnic University

- 85 City-level commercial aviation carbon emissions peak in China
(Congcong Du, The Hong Kong Polytechnic University; Kam K.H. Ng, The Hong Kong Polytechnic University)
- 373 Comparative Environmental Impact of Executive and Commercial Jets on Global Warming Through Equivalent CO2 Emissions
(Simon Shin, ISEC Lisboa; Maria Baltazar, ISEC Lisboa)
- 338 Disproportionalities between flight movements and CO2 emissions for various groups of flights using the BeyondCO2 model
(Bram Peerlings, Royal Netherlands Aerospace Centre; Liesbeth Wijn, Royal Netherlands Aerospace Centre; David Engler Faleiros, Royal Netherlands Aerospace Centre; Lukas Soeffing, Royal Netherlands Aerospace Centre)
- 84 Carbon inequality and its driving factors in commercial aviation at the city level in the Yangtze Delta Zone, China
(Kam K.H. Ng, The Hong Kong polytechnic University; Du Congcong, The Hong Kong Polytechnic University)

11:15 – 12:45 M4-5 Air Transport Policy & Regulation 2

B9

Chair: **Achim I. Czerny** | The Hong Kong Polytechnic University

- 233 The Impact of Potential Slot Reductions on Airlines, Market Access and Competition: The Case of Amsterdam
(Pere Suau-Sanchez, Open University of Catalonia; Augusto Voltes-Dorta, University of Edinburgh)
- 342 The Impact of ICMS Tax Collection on State of Ceará after the Concession of Fortaleza Airport

- (Francisco Gildemir Ferreira da Silva, Universidade Federal do Ceará; Viviane Adriano Falcão, Universidade Federal de Pernambuco; Elmo Henrique Fernandes Bezerra, Universidade Federal do Ceará/CAEN; Raimundo Nonato Palmeira Dias Júnior, Universidade de Brasília)
- 72 Airline cooperation and non-price competition: the impact of code-sharing on air service quality
(Andrea Gualini, University of Bergamo; Gianmaria Martini, University of Bergamo; Laura Ogliari, University of Bergamo; Davide Scotti, University of Bergamo)
- 387 Toward a consolidation of the European Airline Sector: the potential merger between ITA and Lufthansa
(Christian Bontemps, ENAC and Toulouse School of Economics; Angela Stefania Bergantino, University of Bari; Mario Intini, University of Bari; Ada Spuru, University of Bari)
- 318 Misallocation in Multiple Airport Regions
(Achim I. Czerny, The Hong Kong Polytechnic University; Hideki Fukui, Ehime University)

11:15 – 12:45 M4-6 Airport Strategy & Management 2

B10

Chair: **Maurice Timmer** | German Aerospace Center (DLR)

- 89 Application of circular economy principles to characterise airport metabolism
(Maria Santos-Alfageme, Instituto Superior Tecnico - Universidade de Lisboa; Rosario Macario, Instituto Superior Tecnico - Universidade de Lisboa; Patricia Baptista, Instituto Superior Tecnico - Universidade de Lisboa)
- 409 Social and Technical Complexities of Airports: An Airport Manager Perspective
(Safia Bahas, Loughborough University; Andrew Timmis, Loughborough University; Taimaz Larimian, Loughborough University)
- 225 Methodological Framework to Depict Airport Corporate Ethical Stigma
(Dimitrios Dimitriou, Democritus University of Thrace; Aristi Karagkouni, Democritus University of Thrace)
- 384 The Future of Airports: A Deep Dive into the Integration of Industry 4.0 Technologies at Ponta Delgada Airport
(Jorge Miguel Reis Silva, Universidade da Beira Interior; Clara Dias, Universidade da Beira Interior)
- 321 Sustainable Airport Development: A financial modelling approach for informed decision air
(Maurice Timmer, German Aerospace Center (DLR); David Liebert, Hamburg Airport; Daniel Braune-Krickau, German Aerospace Center (DLR); Klaus Lütjens, German Aerospace Center (DLR); Christian Thies, Hamburg University of Technology)

11:15 – 12:45 M4-7 Airline Operations 2

B11

Chair: **Kristina Marintseva** | Coventry University

- 171 Research on the Selection attributes of destination alternate airport in airlines using Markov Chain Analysis
(Hyoseok Chang, Hanseo University; Dohyun Kim, Hanseo University; Seungjoon Lee, Hanseo University)
- 380 Accessibility for Passengers with Hidden Disabilities in Air Transport: A Literature Review
(Heloisa Vidotti, Federal University of Sao Carlos; Sérgio Luiz Da Silva, Federal University of São Carlos; João Alberto Camarotto, Federal University of São Carlos; Igor Dos Santos, Federal University of São Carlos)
- 378 Assistance for Passengers with Hidden Disabilities on Air Travel According to the Experience of Air Operators

- (Igor Dos Santos, Federal University of São Carlos; João Alberto Camarotto, Federal University of São Carlos; Luis Antônio Tonin, Federal University of São Carlos)
- 176 Assessment of Aircraft Leasing Efficiency: An Airline Perspective
(Kristina Marintseva, Coventry University; Ivan Stevenson, Coventry University)

11:15 – 12:45 M4-8 Marketing & Consumer Behavior in Air Transport 2

B12

Chair: **Makoto Tsukai** | Hiroshima University

- 201 Research on Repetitive Purchasing Behavior of Airline Prepayment Products from the Perspective of Bounded Rationality in Passengers
(Gui-hong Zhao, Civil Aviation University of China; Chenao Ma, Civil Aviation University of China)
- 205 The Impacts of Airline Service Quality on Customer Satisfaction and Repurchase Intention and The Characteristics of Business
(Ik Hyun Han, Korea Aerospace University; Myeong Hyeon Kim, Korea Transport Institute)
- 411 Questionnaire design for intercity air travel characteristics by stated preference survey
(K Ramachandra Rao, Indian Institute of Technology Delhi; Manoj M, IIT Delhi; Arvind M Jain, IIT Delhi)
- 356 Change in demand for intercity business trips due to shift to web conferencing
(Makoto Tsukai, Hiroshima University; Makoto Okumura, Tohoku University, International Research Institute of Disaster Science; Takuya Maruyama, Kumamoto University, Faculty of Advanced Science and Technology)

11:15 – 12:45 M4-9 Air Traffic Control 1

Auditorium

Chair: **Frank Fichert** | Worms University of Applied Sciences

- 142 International regulatory co-ordination of air traffic management: An assessment of regulatory co-ordination in the southern Asia-Pacific
(Margaret Arblaster, RMIT University)
- 246 Evaluating the impact of air traffic management developments on airline CO2 emissions: an empirical model of flight efficiency
(Alessandro V. M. Oliveira, Aeronautics Institute of Technology; Mayara Murça, Aeronautics Institute of Technology; João Szenczuk, Aeronautics Institute of Technology)
- 298 Flexibility in Capacity Provision: Reducing Delays under Demand Uncertainty
(Thi Thuy An Vo, Worms University of Applied Sciences & Vrije Universiteit Amsterdam; Christiaan Behrens, Vrije Universiteit Amsterdam; Frank Fichert, Worms University of Applied Sciences; Eric Pels, Vrije Universiteit Amsterdam; Erik T. Verhoef, Vrije Universiteit Amsterdam)
- 290 A causal relationship between ANSP charges and traffic volume in Europe?
(Frank Fichert, Worms University of Applied Sciences; Thi Thuy An Vo, Worms University of Applied Sciences)
- 219 An Optimization Approach for Solving the Terminal Airspace Scheduling Problem
(Wayne Ng, Singapore University of Technology and Design; Nuno Ribeiro, Singapore University of Technology and Design; Diana Jorge, Universidade de Lisboa)

12:45 – 14:00

Lunch

Venue: MC

14:00 – 15:30

Paper Session V

Chair: **Gary Lin** | Unison Consulting

- 60 Decarbonization Paths for the Dutch Aviation Sector
(Igor Davydenko, Netherlands Environmental Assessment Agency (PBL); Hans Hilbers, Netherlands Environmental Assessment Agency (PBL))
- 241 The “E” from the European Airlines ESG Reports
(Marina Efthymiou, Dublin City University; Luis MARTIN-DOMINGO, Ozyegin University)
- 102 How Does Environmental, Social, and Governance (ESG) Impact Major Integrators’ Productivity
(Seock-Jin Hong, University of North Texas; Anming Zhang, The University of British Columbia; Ferhat Caliskan, University of North Texas; Yavuz Idug, University of North Texas)
- 190 Aviation Outlook 2050: Pathway to Net Zero CO2 Emissions
(Carolina Vitor, Universidade da Beira Interior)

Chair: **Yap Yin Choo** | British Columbia Institute of Technology

- 150 Airline price responses in the face of demand shocks: Lessons from the COVID-19 pandemic
(Mattia Borsati, University of Barcelona; Xavier Fageda, University of Barcelona)
- 192 The impact of the COVID-19 pandemic on international air passenger arrivals: a comprehensive overview
(Maozhu Liao, The University of British Columbia; Yilin Zhang, The University of British Columbia)
- 407 Airline ticket prices behaviour: the post-COVID era and in the wake of the Russia–Ukraine war
(Jose-Luis Alfaro-Navarro, Universidad de Castilla-La Mancha; Maria-Encarnacion Andres-Martinez, Universidad de Castilla-La Mancha)
- 252 Changes in US Aviation Network Post-Pandemic
(Volodymyr Bilotkach, Purdue University; Kateryna Bilotkach, Public)
- 282 Impact of COVID-19 pandemic on Canadian air transport demand and recovery path
(Yap Yin Choo, British Columbia Institute of Technology)

Chair: **Ang Li** | The Hong Kong Polytechnic University

- 70 Urban Delivery with a Coordinated Fleet of Trucks and Drones
(Wenjia Zeng, The Hong Kong University of Science and Technology; Hai Yang, The Hong Kong University of Science and Technology; Hai Wang, Singapore Management University; Mingyao Qi, Tsinghua Shenzhen International Graduate School)
- 104 Cooperative food delivery service with riders and drones
(Mingzhi Lyu, The Hong Kong Polytechnic University; Wei Liu, The Hong Kong Polytechnic University)
- 227 Policy Challenges for Coordinated Delivery of Trucks and Drones
(Shuang Wang, Beihang University; Xiaoqian Sun, Beihang University; Sebastian Wandelt, Beihang University; Changhong Zheng, Beihang University)
- 295 Congestion Mitigation by UAV-based Multimodal Delivery
(Ang Li, The Hong Kong Polytechnic University)

Chair: **Shawei He** | Nanjing University of Aeronautics and Astronautics

- 135 Does short-haul ban always reduce emissions? When would the zero-emission aircraft be a better alternative?
(Xiangru Wu, The Hong Kong Polytechnic University; Kun Wang, The Hong Kong Polytechnic University; Yan Liu, The Hong Kong Polytechnic University; Xiaowen Fu, The Hong Kong Polytechnic University; Changmin Jiang, University of International Business and Economics; Shiyuan Zheng, Shanghai Maritime University)
- 172 Sustainability challenges of Finnish flying practices
(Minna Käyrä, University of Jyväskylä; Jenny Rinkinen, Lappeenranta-Lahti University of Technology; Stefan Baumeister, University of Jyväskylä)
- 220 Airline and passenger responses to novel aircraft technologies in China
(Peizhi Li, University College London (UCL); Khan Doyme, University College London; Lynnette Dray, University College London; Andreas Schäfer, University College London)
- 153 Pricing of climate externalities in European aviation and policy implications
(Thijs Boonekamp, Royal Schiphol Group; Richard Emmerink, Royal Schiphol Group; Guillaume Burghouwt, Royal Schiphol Group)
- 157 Design of Low Carbon Baggage Policy for Low Cost Carriers from Interactive Perspective
(Shawei He, Nanjing University of Aeronautics and Astronautics; Yishuang Lu, Nanjing University of Aeronautics and Astronautics; Ting Zhu, Nanjing University of Aeronautics and Astronautics)

Chair: **Hans-Martin Niemeier** | Hochschule Bremen

- 56 Optimal aeronautical capacity, airport charge and suggested check-in time considering the airport side business
(Yue Huai, The Hong Kong University of Science and Technology Shenzhen Research Institute; Enoch Lee, The Hong Kong University of Science and Technology; Hong K. Lo, The Hong Kong University of Science and Technology; Anming Zhang, The University of British Columbia)
- 194 The effect of dual-till revenue cap regulation on non-aeronautical revenues
(Victor Valdes, Universidad Anáhuac México; Lilian Toriz, Comisión Federal de Competencia Económica, México)
- 165 Optimizing Multiple Airport Charges with Endogenous Airline Quality Considering the Marginal Cost of Public Funds
(Naoshi Doi, Otaru University of Commerce; Tatsuhito Kono, Tohoku University; Izumo Suzuki, Tohoku University)
- 202 How does banning short-haul flights change the market? A counterfactual analysis in Japan
(Yushi Tsunoda, Kobe University; Naruya Fujii, Kobe University; Jun Mizutani, Kobe University; Ryohei Yamamoto, Fukui Prefectural University)
- 214 Airport Charges and Capacity Management
(Hans-Martin Niemeier, Hochschule Bremen; Peter Forsyth, Monash University; Guiomard Cathal, DCU)

Chair: **Michal Weiszer** | University of Westminster

- 216 The Interactions between Railway Organisational Structure and Air-HSRs Competition: Considering Open Access of Railway
(Yixiao Wang, The Hong Kong Polytechnic University; Kun Wang, The Hong Kong Polytechnic University; Eric Pels, Vrije Universiteit; Jianhong Wu, Beijing Jiaotong University)
- 86 Intermodality as a legitimacy maintenance strategy for airline. The Air France & SNCF case
(Pauline ALESSANDRA, University of Montpellier; Paul Chiambaretto, Montpellier Business School / Chaire Pégase)
- 248 Joint Investment on Cross-region High-Speed Railways and Its Impact on air-HSR competition
(Wenyi Xia, HEC Montreal; Shiyuan Zheng, Shanghai Maritime University; Kun Wang, The Hong Kong Polytechnic University; Xiaowen Fu, Hong Kong Polytechnic University; Changmin Jiang, The Hong Kong Polytechnic University)
- 115 Optimization of Air-rail Integration Service System Considering the Game Relationships among the Airport, Airline and HSR Company
(Shunan Yu, Dalian Maritime University; Zhongzhen Yang, Ningbo University; Jing Lyu, Dalian Maritime University; Zheng Chang, Dalian Maritime University)
- 149 Multimodal air-rail simulation model for evaluation of tactical disruptions
(Michal Weiszner, University of Westminster; Luis Delgado, University of Westminster; Gerald Gurtner, University of Westminster)

14:00 – 15:30 M5-7 Airport Operations 2

B11

Chair: **António Couto** | University of Porto

- 87 Integrating FMEA and HFACS to assess the risk of airport operations
(James Liou, National Taipei University of Technology; Chih Wei Chien, National Taipei University of Technology; Fang-Qi Chang, National Taipei University of Technology; Chao-Che Hsu, Tamkang University)
- 187 Understanding airport surface congestion using three-dimensional fundamental diagrams
(Kailin Chen, Imperial College London; Daniel Graham, Imperial College London; Anupriya Anupriya, Imperial College London; Prateek Bansal, National University of Singapore; Richard Anderson, Imperial College London; Nicholas Findlay, Imperial College London)
- 404 Passenger Preference Elements and Criteria Towards Terminal Facilities of International Airports
(Nurul Hazwani Binti Hamzah, Universiti Teknologi MARA; Wan Mazlina Wan Mohamed, Universiti Teknologi MARA; Saiful Aman Sulaiman, Universiti Teknologi MARA)
- 112 A Binary Logistic Regression Model to Identify Key Aspects that Enhance Hub Airports Status
(António Couto, University of Porto; Gabriel Rego, University of Porto)

14:00 – 15:30 M5-8 Air Transport Demand 2

B12

Chair: **Andreas Wittmer** | University of St. Gallen

- 281 A latent class choice model to understand passenger' itinerary choice preference for short-haul and long-haul itineraries using stated preferences
(Mustansir Farooq, Indian Institute of Technology Delhi; Manoj M, Indian Institute of Technology Delhi; Ramachandra Rao Kalaga, Indian Institute of Technology Delhi)
- 335 Airline choice model considering the perceived quality as a latent variable in domestic flights
(Mateo Alzate-Alvarez, Universidad Nacional de Colombia; Laura I Tobón-Caballero, Universidad Nacional de Colombia; Claudia Aldana, Universidad Nacional de Colombia;

- Claudia Munoz, Universidad Nacional de Colombia; Carlos A González-Calderón, Universidad Nacional de Colombia)
- 81 Declining Intra-Regional Air Travel – Is It More than High Fares? Evidence from the Caribbean
(Dalano DaSouza, University of the West Indies Cave Hill Campus; Dennis Mc Call, Teesside University)
- 236 Modeling Destination, Route and Carrier Choices: A Passenger Demand Model for Air Transportation
(Chieh-Yu Hsiao, Tamkang University; Han-Fang Che, THI Consultants Inc.)
- 107 Changing Customer Preferences for Long-Haul Leisure Flights among Swiss Travelers - An Adaptive Choice-Based Conjoint Study
(Joel Kohler, University of St. Gallen; Andreas Wittmer, University of St. Gallen)

14:00 – 15:30 M5-9 Air Cargo 2

Auditorium

Chair: **Wouter Dewulf** | University of Antwerp

- 308 Mapping the Internal Structure of Global Dedicated Air Cargo Network
(Xiaohong Lin, Harbin Institution of Technology (Shenzhen); Zuopeng Xiao, Harbin Institute of Technology (Shenzhen))
- 322 The Future of Air Cargo Transportation: Challenges and Opportunities for its Expansion
(Diogo Belejo, Universidade Lusófona; Lucia Piedade, Universidade Lusofona)
- 263 Strategic Evolution in Air Freight Integration: A Comprehensive Literature Review, Research Gaps Analysis, and Future Directions
(Serhat Yuksel, University of Antwerp; Wouter Dewulf, University of Antwerp; Roel Gevaers, University of Antwerp)
- 80 The increasing importance of aviation in (cross-border) e-commerce: a historical analysis
(Stijn Michielsen, University of Antwerp; Wouter Dewulf, University of Antwerp; Roel Gevaers, University of Antwerp)
- 381 Employee Performance in the Air Cargo Logistics Industry in Nigeria
(Adedotun Joseph Adenigb, University of Johannesburg; Joash Mageto, University of Johannesburg; Rose Luke, University of Johannesburg)

15:30 – 16:00 Coffee Break

Venue: Auditorium, Buildings B & D

16:00 – 17:30 Paper Session VI

Venue: Rooms D4-D5 (Building D), Rooms B7-B12 (Building B) & Auditorium

16:00 – 17:30 M6-1 Industry Session 6: Consumer Preference, Choice & Loyalty D5

Chair: **Gary Lin** | Unison Consulting

- 103 Can LCC survive in the long-haul market?: Consideration from the perspective of consumer preference
(Jun Mizutani, Kobe University; Yoshihiro Ueda, Kobe University / Graduate School of Maritime Sciences; Naruya Fujii, Kobe University / Graduate School of Maritime Sciences)
- 128 The effects of the low cost carriers' presence and withdrawal on domestic tourism: Evidence from New Zealand
(Louis Wu, Massey University; Yulu He, The Hong Kong Polytechnic University; Kun Wang, The Hong Kong Polytechnic University; Kan Wai Hong Tsui, University of Southern Queensland; Xiaowen Fu, The Hong Kong Polytechnic University)

- 336 The Influence of Frequent Flyer Programs on Airline Choice: A Case Study of Domestic Flight Passengers from Medellin, Colombia
(Juan David Nieto-Hincapie, Universidad Nacional de Colombia; Claudia Munoz, Universidad Nacional de Colombia at Medellin; Juana Jaramillo Ríos, Universidad Nacional de Colombia at Medellin; Juana Jaramillo-Rios, Universidad Nacional de Colombia at Medellin; Carlos Gonzalez-Calderon, Universidad Nacional de Colombia at Medellin)
- 191 Navigating the Skies of Airline Customer Loyalty: A Comprehensive Review of Airline Frequent Flyer Program Studies
(Yi Gao, Purdue University; Jiayu Liu, Purdue University)

16:00 – 17:30 M6-2 Airport Economics & Performance

D4

Chair: **Sebastian Birolini** | University of Bergamo

- 226 Multiple Airport Regions: An Analysis of Market Concentration
(Changhong Zheng, Beihang University; Xiaoqian Sun, Beihang University; Sebastian Wandelt, Beihang University)
- 243 Airport Corporate Performance Management in the era of Business Intelligence
(Dimitrios Dimitriou, Democritus University of Thrace; Aristi Karagkouni, Democritus University of Thrace)
- 316 Does additional runway airport infrastructure always increase an airport's declared airport capacity?
(Cathal Guiomard, Dublin City University; Hans-Martin Niemeier, Hochschule Bremen; Peter Forsyth, Monash University; Wolfgang Grimme, German Aerospace Center (DLR))
- 348 The Impacts of Airline Competition on Airport Performance
(Chunyan Yu, Embry-Riddle Aeronautical University)
- 174 Con-Accessibility: Logit-based catchment area modeling for strategic airport system planning
(Sebastian Birolini, University of Bergamo; Avogadro Nicolò, University of Bergamo; Malighetti Paolo, University of Bergamo; Paleari Stefano, University of Bergamo)

16:00 – 17:30 M6-3 Urban Aviation Mobility 5: Safety & Service Design

B7

Chair: **Yeon Myung KIM** | Hanseo University

- 120 Synchronizing Check-in and Security Services in Airports and Urban Air Mobility Hubs: A Preference Analysis of Air Passengers
(Ying Zhao, Hiroshima University; Yan Hu, Hiroshima University; Tao Feng, Hiroshima University)
- 245 Towards the Future of Transportation: eVTOL-based Mobility Service Design
(Jie Lin, University of Hong Kong; Fangni Zhang, The University of Hong Kong)
- 267 A Study on Developing UAM Safety Assessment Model
(Deokbae An, Korea Transport Institute; Mi-Jin Ahn, Korea Transport Institute; Jungwoo Cho, Korea Transport Institute; Seungwon Noh, Korea Transport Institute)
- 339 Preliminary design and operational analysis of unmanned aerial system for rapid AED delivery in cases of cardiac arrest in suburban areas
(Bartłomiej Dziewoński, Wrocław University of Science and Technology; Krzysztof Kaliszuk, Wrocław University of Science and Technology; Artur Kierzkowski, Wrocław University of Science and Technology; Tomasz Kisiel, Wrocław University of Science and Technology; Ewa Mardeusz, Wrocław University of Science and Technology; Maciej Milewski, Wrocław University of Science and Technology)

- 399 Safety and Reliability Testing Criteria of UAM (a.k.a. Flying Taxi) on Airway under Urban Adverse Wind Condition
(Yeon Myung Kim, Hanseo University; Mikyoung Lee, DfRConsulting; Senyung Kim, Korea Agency for Infrastructure Technology Advancement,)

16:00 – 17:30 M6-4 Sustainability in Air Transport 7: Noise, Resilience & Climate Risk B8

Chair: **Anming Zhang** | University of British Columbia

- 249 Non-Acoustic Indicators Associated with Noise Nuisance Generated by Air Traffic Around Airports in Urban Areas
(Marco Antônio Silva, Instituto Superior Técnico - Universidade de Lisboa; Luis Guilherme de Picado Santos, Instituto Superior Tecnico - Universidade de Lisboa; Rogéria de Arantes Gomes, Instituto Tecnológico da Aeronautica - ITA)
- 292 Evaluation of the fairness of the burden of aircraft noise caused by the opening of new air routes to Haneda Airport
(Takashi Miyazawa, Tokyo Denki University; Shuhei Kaneko, Tokyo Denki University; Kazuyuki Takada, Tokyo Denki Univeristy)
- 132 Airport climate risk analysis: reflections from a pilot study conducted in the UK
(Asimina Voskaki, Cranfield University; Thomas Budd, Cranfield University; Keith Mason, Cranfield University)
- 334 Multi-airport System Resilience: A Case Study of the São Paulo Metropolitan Region
(Evandro José da Silva, Aeronautics Institute of Technology; Alessandro Massaro, Planner; Guilherme dos Santos Zapola, Aeronautics Institute of Technology (ITA))
- 268 Global Airport Resilience Index (GARI): Towards a comprehensive understanding of air transport vulnerability
(Anming Zhang, University of British Columbia; Xiaoqian Sun, Beihang University; Sebastian Wandelt, Beihang University)

16:00 – 17:30 M6-5 Sustainability in Air Transport 8: SAF 2 B9

Chair: **Yahua Zhang** | University of South Australia

- 368 Supply Dynamics of Sustainable Aviation Fuel: Regulatory & Production Perspectives within Europe to 2050
(Breen Mark, Dublin City University; Marina Efthymiou, Dublin City University; James Carton, Dublin City University)
- 375 SAF Economic Impact on Aircraft Operations. Case Study Emirates
(Luis Gabriel, ISEC Lisboa; Maria Baltazar, ISEC Lisboa)
- 414 Balancing act: cultivating crop-based sustainable aviation fuel while minimizing land use change impacts
(Erin Russell, Cranfield University; Toby Waine, Cranfield University; Chikage Miyoshi, Cranfield University; Ron Corstanje, Cranfield University)
- 221 CO2 emissions reduction activities in the aviation sector
(Kazuma Komikado, Japan Transport and Tourism Research Institute; Tomohito Takeuchi, Japan Transport and Tourism Research Institute; Ryuichi Kurokawa, Japan Transport and Tourism Research Institute; Masafumi Matsusaka, Ministry of Land, Infrastructure, Transport and Tourism; Shunsuke Kawagishi, Mitsubishi Research Institute, Inc.; Fumiaki Isono, Mitsubishi Research Institute, Inc.)
- 421 Sustainable aviation fuel current status, pathways and challenges
(Yahua Zhang, University of South Australia; Paul Lee, University of South Australia)

Chair: **Bojana Spasojevic** | Griffith University

- 330 A Markov Decision Process for Multi-source Airport Investment Problem
(Wei-Ting Chen, National Yunlin University of Science and Technology; Chia-Yi Huang, National Yunlin University of Science and Technology)
- 389 Turnover intention of airport security employees: a job demands-resources model
(Thi Anh Hong Nguyen, Singapore University of Technology and Design; Tuchen Stefan, Singapore University of Technology and Design (SUTD); Blessing Lucienne, Singapore University of Technology and Design (SUTD); Joyce Sam, Singapore University of Technology and Design (SUTD))
- 285 Implications to align Amsterdam Airport Schiphol with the Paris Agreement based on cumulative CO2 emissions
(Liesbeth Wijn, Royal NLR; Bram Peerlings, Royal Netherlands Aerospace Centre; Stefan Grebe, CE Delft; Thijs Boonekamp, Schiphol Group)
- 101 Exploring the 'Crown Shyness' Phenomenon in Intercity Airport Shuttle Bus Routes: A Case Study of the Yangtze River Delta Airport Cluster
(Yonglei Jiang, Beijing Jiaotong University; Ailing Huang, Beijing Jiaotong University; Jingci Xie, Shandong University; Qian Luo, the Second Research Institute of Civil Aviation Administration of China; Huan Xia, the Second Research Institute of Civil Aviation Administration of China; Tao Zhang, the Second Research Institute of Civil Aviation Administration of China)
- 169 Passenger-centric airport terminal design: Current research, approaches, and future trends for enhancing user experience
(Bojana Spasojevic, Griffith University; Renan Peres de Oliveira, Buckinghamshire New University; Bruno de Oliveira, Griffith University)

Chair: **Dabin Xue** | The Hong Kong Polytechnic University

- 143 Fleet management of aging aircraft: a comprehensive analysis of aircraft leasing and passenger-to-freighter
(Zhou Miao, The Hong Kong Polytechnic University; Lingxiao Wu, The Hong Kong Polytechnic University; Hao Lang, The Hong Kong Polytechnic University)
- 386 The role of passenger airlines in the air cargo market
(Tomás Roldão, ISEC Lisboa; J. M. G. Marques, IDMEC, Escola de Ciências e Tecnologia, Universidade de Évora; Vítor Coelho, VICTORAIR)
- 419 Effect of an armed conflict on air transportation operations: the case of Israel after the outbreak of the October 7 war
(Uzi Freund-Feinstein, Kinneret College on the Sea of Galilee)
- 57 Examining the economic costs of the 2003 Halloween storm effects on aviation operation using flight data in 2019
(Dabin Xue, The Hong Kong Polytechnic University; Jian Yang, Southern University of Science and Technology; Zhizhao Liu, The Hong Kong Polytechnic University; Shiwei Yu, The Hong Kong Polytechnic University)

Chair: **Tommy Cheung** | Swinburne University of Technology

- 90 Policy Scenario Development in the Canadian Aviation Industry
(Emma Neale, Carleton University)
- 158 Air Transport Strategic Plans
(Carlos Antunes, Instituto Superior Técnico de Lisboa (IST); Rosário Macário, Instituto Superior Técnico de Lisboa (IST))
- 283 What shapes international air transportation in Africa?
(Yilin Zhang, University of British Columbia; Tommy Cheung, Swinburne University of Technology; Maozhu Liao, University of British Columbia; Anming Zhang, University of British Columbia)
- 296 From Rescue to Rebirth: Portugal and Italy's Government Strategies for National Airlines Amidst COVID-19
(Miguel Madeira, Iscte-IUL)

16:00 – 17:30 M6-9 Aviation & Economic Development 2

Auditorium

Chair: **Yi-Hsin Lin** | National Taichung University of Science and Technology

- 264 Exploring the Economic Influence of Airports: an Input-Output Approach for Evaluating the Efficiency of Public Investments
(Ivaciane Magalhaes, Aeronautics Institute of Technology; Anderson Ribeiro Correia, Aeronautics Institute of Technology; Michelle Carvalho Galvão da Silva Pinto Bandeira, Federal University of Goias; Natália Xavier Moreira, Federal University of Goias)
- 304 Quantifying the impact of Air Transportation on Regional Economic development-the case of Uzbekistan
(Akbar Usmanov, Inha University; Tae Seung Kim, Inha University)
- 212 Is Sustainability a Two-Way Runway? Exploring the Causal Dynamics Between Airports and Regional Sustainability
(Xibei Jia, University of Antwerp/Técnico Lisboa; Rosário Macário, Instituto Superior Técnico; Sven Buyle, University of Antwerp)
- 199 Dynamic Interplay of Civil Aviation, Economic Growth, and Tourism: Implications for Carbon Emissions and Sustainability in China
(Yi-Hsin Lin, National Taichung University of Science and Technology; Long Lin, Civil Aviation Flight University of China; Zhongxu Wei, Civil Aviation Flight University of China; Hang He, Civil Aviation Flight University of China; Yan Liu, University of Southern Queensland)

20:00 – 23:00 Gala Dinner & Award Presentations

Venue: INATEL Caparica

Address: Av. Afonso De Albuquerque, S. João Da Caparica, 2825-450 Costa da Caparica, Portugal

THURSDAY, 4 JULY – Paper Session and Conference Closing Session

08:30 – 12:30 Conference Registration

Venue: ISEC Lisboa campus

09:00 – 10:30 Paper Session VII

Venue: Rooms D4-D5 (Building D), Rooms B7-B12 (Building B) & Auditorium

09:00 – 10:30 M7-1 Airline Economics & Performance 3

D5

Chair: **Hangjun Yang** | University of International Business and Economics

- 353 Influence of Early Purchase of Airline Tickets on Airline Choice Using Discrete Choice Models (Miguel Gonzalez Arismendi, Universidad Nacional de Colombia; Andrea Cristina Gomez Quezada, Universidad Nacional de Colombia; Mateo Naranjo Ruiz, Universidad Nacional de Colombia; Claudia Munoz, Universidad Nacional de Colombia)
- 136 Airline stocks' reaction to the 737-Max groundings: how long did it take for the market to forget? (Augusto Voltes-Dorta, University of Edinburgh Business School; Pere Suau-Sánchez, Cranfield University)
- 230 Modelling Airline Profitability based on Causal AI for Better Understandability and Increased Transparency (Julia Usher, Zurich University of Applied Sciences; Jovana Kuljanin, Polytechnic University of Catalonia; Manuel Renold, University of Applied Sciences Zurich; Oliver Carmignani, University of Applied Sciences Zurich; Janik Vollenweider, University of Applied Sciences Zurich)
- 184 Engine Selection in the Commercial Aviation Industry: Considering International Competition and Industrial Policy (Hangjun Yang, University of International Business and Economics; Ruotian Chen, University of International Business and Economics)

09:00 – 10:30 M7-2 Airline Strategy & Management 2

D4

Chair: **Noriko Okabe** | Chuo Gakuin University

- 385 The Domino Effect of Airport Dehubbing: A case study of Cleveland Hopkins International Airport and Akron Canton Airport (Sen Wang, Purdue University; Zhi Dou, Purdue University; Tolulope Oluwumi, Purdue University; Liu Jiayu, Purdue University; Yi Gao, Purdue University)
- 331 Airline choice model for domestic flights: the role of airline flexibility (Camila Amin, Universidad Nacional de Colombia; Lina Vasco, Universidad Nacional de Colombia; Juan Ramirez, Universidad Nacional de Colombia; Claudia Munoz, Universidad Nacional de Colombia; Carlos Gonzalez-Calderon, Universidad Nacional de Colombia)
- 231 Airlines' reactions to exogenous shocks and their performance consequences (Michal Jirásek, Masaryk University; Steinmann Fabian, Cranfield School of Management; Sascha Albers, University of Antwerp)
- 141 Emotional Work of Customer Service Employees in Airline (Noriko Okabe, Chuo Gakuin University)

09:00 – 10:30 M7-3 Urban Aviation Mobility 6: Scheduling & Routing

B7

Chair: **Wei Liu** | The Hong Kong Polytechnic University

- 93 An exact algorithm for drone scheduling problem of shore-to-ship delivery (Ying Yang, The Hong Kong Polytechnic University; Shuaian Wang, The Hong Kong Polytechnic University)
- 310 An Exact Formulation for Unmanned Aerial Vehicle Routing Problem with Stochastic Travel Time (Yue Lin, The Hong Kong University of Science and Technology; Hai Yang, The Hong Kong University of Science and Technology)
- 94 Robust coordinated path planning of unmanned aerial vehicles and unmanned surface vehicles in maritime monitoring with travel time uncertainty

(Qingying He, The Hong Kong Polytechnic University; Wei Liu, The Hong Kong Polytechnic University & Harbin Institute of Technology (Shenzhen))

09:00 – 10:30 M7-4 Sustainability in Air Transport 9: Operations & Emissions B8

Chair: **Hideki Fukui** | Ehime University

- 173 Environmental implications of network structures: how new aircraft technologies contribute to aviation sustainable transition?
(Nicolò Avogadro, University of Bergamo; Renato Redondi, University of Bergamo)
- 235 The impact of aircraft fleet on carbon emissions in regional markets of China
(Yilin Chen, Qufu Normal University; Hangjun Yang, University of International Business and Economics; Kun Wang, The Hong Kong Polytechnic University; Xiangru Wu, The Hong Kong Polytechnic University)
- 294 How do low fuel costs and high emissions coexist? Lessons from Hong Kong and Mainland airlines in China
(Chunan Wang, Beihang University; Anming Zhang, University of British Columbia; Shuai Yue, Beihang University)
- 148 Decarbonisation potential of operational measures in Saudi Arabian commercial aviation
(Andres Felipe Guzman Valderrama, KAPSARC; Edgar Jimenez Perez, Cranfield University)
- 305 Do faster turnaround operations reduce CO2 emissions? The case of Seattle-Tacoma International Airport
(Hideki Fukui, Ehime University; Chikage Miyoshi, Cranfield University; Chui Ying Lee, Hiroshima University; Flavio Porta, University of Bergamo; Megersa Abera Abate, World Bank)

09:00 – 10:30 M7-5 Sustainability in Air Transport 10: Technologies & Infrastructure B9

Chair: **Janina Scheelhaase** | German Aerospace Center (DLR)

- 320 ETS - Electric Taxi System
(Lucas Sampaio, ISEC Lisboa)
- 109 Potential for airport excess power management using airside solar PV and parked EVs
(Tetsuo Yai, Tokyo Institute of Technology; Suguru Miyazaki, Hankyu Hanshin Properties Corp)
- 155 Considerations on the potential Integration of Battery-Electric Regional Aircraft
(Fabian Helmchen, University of the Bundeswehr Munich; Sophie F. Armanini, Technical University of Munich; Andreas Hupfer, University of the Bundeswehr Munich)
- 96 Roadmap for the introduction of hydrogen at medium-sized airports in Europe
(Janina Scheelhaase, German Aerospace Center (DLR); Katrin Oesingmann, German Aerospace Center (DLR); Axel Classen, German Aerospace Center (DLR))

09:00 – 10:30 M7-6 Air Transport Policy & Regulation 4 B10

Chair: **Sven Maertens** | German Aerospace Center (DLR)

- 195 Estimation of X Efficiency Factor in a Cap Regulatory Framework
(Oscar Corzo, ANAHUAC; Valdes Victor, Universidad Anáhuac México; Laura G. Zúñiga-Feria, Universidad Anáhuac México)
- 193 Exploring the discussions around slot allocation through the lens of institutional work theory
(Leyla Adiloglu-Yalcinkaya, Özyeğin University)
- 198 The Industry Policy in Antitrust in Air Transportation Industry: The Case of USA and Its Implication

(Xingwu Zheng, Civil Aviation University of China; Yu Zhang, Civil Aviation University of China)

- 97 Multimodal travelling passengers without rights? Application of European air passenger rights in intermodal travel chains
(Sven Maertens, German Aerospace Center (DLR))

09:00 – 10:30 M7-7 Airport Operations 3

B11

Chair: **Erlangga Rudy Sunaryo** | Amsterdam University of Applied Science

- 232 How airports enhance the environmental sustainability of operations: A critical review from the perspective of Operations Research
(Shuiwang Chen, The Hong Kong Polytechnic University; Shuiwang Chen, The Hong Kong Polytechnic University; Lingxiao Wu, The Hong Kong Polytechnic University; Kam K.H. Ng, The Hong Kong Polytechnic University; Wei Liu, The Hong Kong Polytechnic University; Kun Wang, The Hong Kong Polytechnic University)
- 275 Improved prediction accuracy of aircraft ground movement time from the perspective of air traffic controllers
(Hyunsoo Cho, Korea Airports Corporation; Soohwan OH, Hanseo University)
- 401 A Framework for Sustainable and Autonomous Airside Operation Benchmarking
(Erlangga Rudy Sunaryo, Amsterdam University of Applied Science; Alcaraz Catya Zuniga, Amsterdam University of Applied Science)

09:00 – 10:30 M7-8 Marketing & Consumer Behavior in Air Transport 3

B12

Chair: **Xiaowen Fu** | The Hong Kong Polytechnic University

- 196 Robust customer satisfaction index for domestic air journeys: A structural equation model approach
(Claudia Munoz, National University of Colombia; Henry Laniago, Universidad del Cauca; Carlos Gonzalez-Calderon, National University of Colombia)
- 209 The Impacts of Airport Service Quality on User Satisfaction and The Characteristics of Airport Group
(Myeong Hyeon Kim, Korea Transport Institute; Ik Hyun Han, Korea Transport Institute)
- 293 Tradeoffs between Privacy and Travel Screening Efficiency: Unraveling preferences of business and leisure air passengers in Hong Kong and Shanghai
(Xiaowen Fu, The Hong Kong Polytechnic University; Hyungchul Chung, Xi'an Jiaotong-Liverpool University; Tiantian Chen, Korea Advanced Institute of Science and Technology; Xin Wen, The Hong Kong Polytechnic University)

09:00 – 10:30 M7-9 Air Traffic Control 2

Auditorium

Chair: **Elen Paraskevi Paraschi** | University of Patras

- 61 Basic Analysis for Supply and Demand of Data Link Communications with a focus on Trajectory Based Operation in the Digitization
(Nobuo Hongo, Ibaraki University; Terumitsu Hirata, Ibaraki University)
- 154 Modeling delay propagation in the Japanese domestic air transport network
(Kashin Sugishita, Tokyo Institute of Technology; Hiroki Mizutani, Tokyo Institute of Technology; Shinya Hanaoka, Tokyo Institute of Technology)
- 151 En-route weather-induced flight delays in Single European Sky (SES) Area
(Elen Paraskevi Paraschi, University of Patras)

10:30 – 11:00 **Coffee Break**

Venue: Auditorium, Buildings B & D

11:00 – 12:30 **ATRS General Assembly & Closing Ceremony**

Venue: Auditorium

12:30 – 15:00 **Lunch**

Venue: MC

15:00 – 17:00 **Technical Tour (registration required)**

Gathering point: ISEC Entrance (Signs will be available)