AAS NEWSLETTER

Aviation Applications Section of INFORMS

Spring 2023

A Word from the Section Chair

Bruno F. Santos

Associate Professor
Air Transport & Operations, Delft
University of Technology
AAS Chair

Greetings and welcome to this year's edition of the INFORMS Aviation Applications Section newsletter!

As I am writing these words, several airlines worldwide are friendly competing to operate the most sustainable flight. The Sustainable Flight Challenge, a SkyTeam alliance initiative, is one good example of the airline industry's efforts to explore new ideas and set standards for a sustainable future for the aviation sector. Concurrently, many airports also invest in alternative energy sources and consider eco-friendly taxiing techniques. Moreover, innovative air traffic space structures and concepts are being experimented with to meet environmental requirements and decrease overall fuel usage.

Indeed, these are fascinating times for all of us. Operations research unquestionably plays a vital role in this transition toward sustainable aviation. Air transport operations must evolve as we navigate this new landscape, and new operational ideas must be studied, simulated, and optimized to support this change. These concepts and methodological challenges, and more, will be covered in the AAS sessions at the Annual Meeting. We hope you will join us!

Our Aviation Applications Section remains a lively community, demonstrated by the initiation of the INFORMS AAS Talk Series this year. This series aims to share insights and knowledge about the latest trends and innovations in aviation. We plan to host three such talks annually to allow our members to connect more frequently, albeit virtually. To promote discussions on sustainable aviation, we had our first talk last month by Prof. Henri Werij, Dean of Aerospace Engineering at TU Delft, who discussed aviation's future and the challenges in achieving climate-neutral aviation. Our next talk on June 13th will feature Dr. Rodrigo Acuna Agost, Head of Amadeus Research, discussing various OR and AI applications in the travel industry. Again, I hope you will join us!

The activities of the Aviation Applications Section could not have been possible without the participation and support of many. I want to express my gratitude to our diligent officers and volunteers. Especially our Vice-Chair, Lishuai Li, and our Secretary/Treasurer, Nuno Ribeiro, for their outstanding work managing our section activities, including organizing these online talks. I also appreciate the time and work dedicated to our session by Alessandro Bombelli, this year's Guest Editor and Communication Chair, and Max Li, our Cluster Chair. My thanks also go to our awards committee chairs: Vikrant Vaze (Dissertation Award), Sebastian Birolini (Best Paper Award), and Gianmarco Andreana (Best Student Presentation Award). A special mention to Heng Chen, who is facilitating our section's interaction with the Transportation Science and Logistics (TSL) Society.

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A Word from the Section Chair (cont.)

This issue contains information about these awards and other significant subjects. One highlight is, of course, our interview. This year, we present a unique three-party interview focused on air cargo operations. We talked with three industry experts: Ryan Keyrouse from Rotate, Maarten Wormer from FLYR, and Cedric Millet from CargoTech. They shed light on the intricate relationship between cargo services and passenger operations. Moreover, they discussed using Operations Research, Machine Learning, and Artificial Intelligence, exploring how these can enhance cargo operations. The insights these experts share provide an engaging perspective on developing airline decision-support tools and automation solutions.

I hope you find this newsletter engaging, and I eagerly anticipate reconnecting in Phoenix this coming October! Meanwhile, we would appreciate hearing your feedback or suggestions.

With Best Wishes,

Bruno F. Santos

Inside this issue

Ryan Keyrouse
Director at Rotate

Maarten Wormer
Head of Product, Cargo RM at FLYR
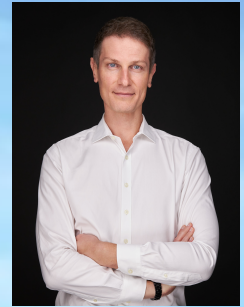
Cedric Millet
President of CargoTech

This year's featured article focuses on air cargo operations and how operations research and other novel solution techniques can be leveraged to improve the efficiency, sustainability, and synergy with passenger operations of this important supply chain. Ryan, Maarten, and Cedric, all actively working in the field, will share their impressions and thoughts on the topic.

Part I. Your background

Can you describe your educational background and current role?

Ryan Keyrouse: Ryan Keyrouse is a Managing Director at Rotate (www.letsrotate.com), a company of 20-plus persons founded in June 2022. Rotate combines a strategy consulting approach to building modern commercial decision-support tools for cargo airlines. Rotate works in close partnership with selected airlines to tackle complex topics dynamic pricing, revenue management, and fleet and network optimization. Research at Rotate is focused on making data science practical for everyday decision-making, enabling people at airlines to make faster decisions more confidently. Ryan started his career at Boeing and KPMG, before he fell in love with air cargo in 2010 as part of Seabury Cargo, where he worked on 50+ strategy consulting assignments in 35+ countries.

Maarten Wormer: At FLYR, Maarten shapes the Cargo RM product, supported by FLYR's experience with advanced data science techniques applied to aviation. Before joining FLYR, Maarten spent 8 years at Seabury Cargo, a strategy consulting practice specialized in air cargo and logistics, and worked with 20+ clients in Asia, Middle East, Europe and the Americas on topics such as cargo strategy, commercial planning, network design, fleet sizing, mid-term cargo optimization, and more. Maarten has a MSc degree in Aerospace Engineering and graduated from TU Delft, The Netherlands.

Cedric Millet: Cedric Millet started his career with Air France Cargo in 2000, holding various positions in the logistics and strategy departments. Following the merger of Air France and KLM Cargo, he became Commercial Director before being promoted Director Cargo Revenue Management. In 2013, he joined Qatar Airways where he successively held the position of Vice-President, Cargo Revenue Management & Pricing based in Doha and Head of cargo – South Europe based in Paris. Bringing 22 years of experience and knowledge of the air cargo business, he joined the Leading GSA "ECS Group" as Chief Strategy & Digital Officer in June 2018. In February 2022 he was also appointed President of CargoTech, a company whose ambition is to offer Digital Solutions for any business process in the air cargo industry. CargoTech today consists of 4 member companies: Wiremind Cargo, CargoAi, Rotate and ECS Cargo Digital Factory. Cedric was born in New Caledonia, studied engineering in France and holds a master's degree in engineering from the renowned Ecole Centrale in France.

Part II. Interview Questions

1. Can you briefly describe the vision of your company in the context of air cargo operations?

Ryan Keyrouse: Rotate is focused on building tools to improve commercial-decision making at cargo airlines. We are building our tools in codevelopment with domain experts at carriers, bringing our unique combination of cargo and technology experts together with a strategy consulting approach.

Maarten Wormer: FLYR's vision is to help travel and transportation companies remove their reliance on legacy systems and unlock their full potential. This includes airlines, cargo, hospitality companies, and more. Our Commercial Operating System for Travel and Transportation is a comprehensive, AI-based platform that helps these companies inform or automate all their key commercial decisions. Using the latest in advanced AI, data science, and hyper-connectivity, we enable travel companies to maximize revenues, create frictionless customer experiences, and deliver measurable results. Also in air cargo - FLYR is deploying its operating system to improve commercial performance and provide decision-support to cargo operators, whether in the near-term or mid-term commercial processes.

Cedric Millet: The air cargo industry is dominated by a mix of inefficient and time-consuming manual processes with a relatively low level of digitalization, executed using a vast range of often outdated legacy systems. The core belief at CargoTech is that whatever can be digitalized should not remain manual. Our novel and unique approach involves not only encouraging collaboration between technology experts within the air freight industry but also bringing these together with air cargo business experts.

2. What are the key challenges that you foresee for the next decade in the aviation industry ?

Ryan Keyrouse: We are currently working with two carriers to build dynamic pricing and sales optimization tools, respectively, with a focus on adoption and ensuring these AI-enabled tools are practical for the user. Adoption of these AI-enabled tools is our focus for the coming period. While there is a justified focus across air cargo on increased data capture to improve ML/AI-driven modeling, we believe there is already an abundance of under-utilized data at carriers, and that more value can be squeezed from existing data (sources).
The biggest challenge is simultaneously to increase data capture, while also being realistic about data availability in air cargo, and synthesizing the abundance of data airlines already have into action.

Maarten Wormer: Cargo airlines are, typically more so than their passenger counterparts in the business, still reliant on disconnected, offline and manual processes. In all planning areas, whether it's mid-term or short-term planning, spreadsheets are oftentimes the default for analysts to make their decisions. Moreover, airlines only recently started to capture and structure highly interesting data for their cargo commercial processes, for example, search and inquiry data. We see significant potential to improve those processes, especially when combined with the additional data that is now becoming available. For example, empowering an analyst to leverage booking search data to understand the demand for a specific flight and therefore make a confident pricing decision. This is just an example, but leveraging this incremental data also in capacity forecasting, mid-term allotment planning, and further areas highlights the untapped potential we see.

Cedric Millet: While we acknowledge that not everything can be digitalized, the majority of the available Digital Solutions in the air cargo industry are transactional systems. There are still many untapped areas in the areas of revenue optimization, but also efficiency and error and cost reductions with the right digital set-up. CargoTech aims are proposing a Digital Solution for each and every Business process that would benefit from it.

3. What role do Machine Learning and Artificial Intelligence play in your work and modeling paradigms? Do you see them as a replacement or as a complement to Operations Research in strategic/tactical/operational decision-making models?

Ryan Keyrouse: We believe Machine Learning and AI should complement decision-makers and be used in very targeted ways. One example, we are modeling airlines' achievable share for a given market and sharing those outcomes with sales people and pricing analysts so they can better understand their competitive position; we do not envision the model output to replace the sales person.

Maarten Wormer: FLYR sees these as highly complementary areas. ML and AI are highly suitable to produce results (e.g., forecasts) from a broad set of contextual features, whereas OR can then optimize the commercial decisions at hand. In mid-term planning, for example, complementing an AI/ML-driven forecast to capture complexities of varying seasonality patterns and impacts on global connected networks with an OR approach to determine the optimal mix of allotment requests unlocks greater decision-making power and confidence for the analysts making the decision.

Cedric Millet: ML and AI clearly have a role in strategic, tactical and operational decision-making models in our industry. Science is not really broadly used today in air cargo, simply because it did not trigger a lot of interest (for wrong reasons) so far. Forecasting and optimization were mainly used in the passenger business, as airlines always preferred to invest in that business segment, roughly representing 85% of their revenues. This is changing today. ML & AI will clearly be a game changer in air cargo, as more tech companies will make use of these techniques to develop digital solutions supporting the decision making related to fleet & network planning (strategic), medium term pricing & sales steering (tactical) or ad-hoc pricing (operational).

4. In the aviation sector, cargo operations are generally considered second-tier operations when compared to the passenger counterpart by combination airlines. Do you see this as a limitation or as an extra motivation for your work?

Ryan Keyrouse: I fell in love with air cargo years ago precisely because cargo teams need to be scrappy in a passenger-centric industry. Cargo teams need to make very complex decisions with lower-quality data and inadequate tools. I really enjoy the challenge to help them make better commercial decisions – even within all the constraints they face.

Maarten Wormer: Cargo is, perhaps stereotypically, oftentimes seen as highly separate from the passenger side of aviation. In most airlines, the passenger and cargo teams do not frequently engage, and as an example it often takes a phone call to the passenger teams to understand the latest cargo capacity available (due to the latest passenger and baggage numbers). The COVID pandemic put air cargo back on the map, often serving as a lifeline for carriers by providing much-needed revenues to keep them afloat. As passenger numbers dwindled, many airlines responded by hauling more cargo, including medical supplies and vaccines for countries in need. Cargo revenues increased significantly due to the capacity crunch, which amplified the industry's visibility in the airline boardrooms, opening the doors for further investments in, for example fleet and systems, as well as in RM and commercial decision-making capabilities. Now that the market is at a turning point and cargo revenues are declining from their peak two years ago, the need for improvements in decision-making remains, and you could even argue has increased, which is a strong motivation for our efforts and investments in air cargo.

Cedric Millet: This used to be true. However, it changed during Covid, when airlines realized that what kept the aircrafts and the pilots in the air were the cargo business and its associated revenues. Without cargo, many airlines would have gone bankrupt as bringing back the aircrafts from cocooning and renewing the licenses of all pilots would have been simply too costly. Cargo is no longer considered a side product, where cargo revenues only need to cover the variable costs. Cargo is a clear revenue stream, and digital solutions (mainly related to revenue optimization) start being the focus point of many airlines. It was high time. I worked in the Revenue optimization field of 3 major airlines most of my career, and it's now an extra motivation for me to see that even medium-size or smaller-size airlines consider that as a main priority. And CargoTech is there to provide a vast range of solutions related to Revenue Optimization.

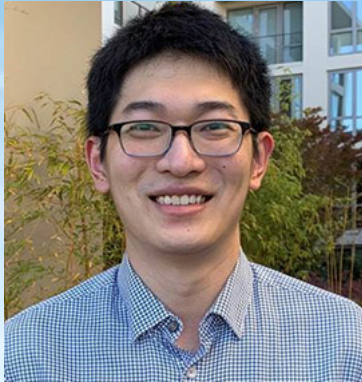**Thank you Ryan, Maarten, and Cedric for your insights!**
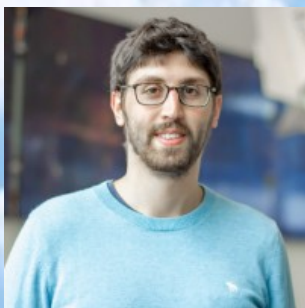
Alessandro Bombelli

Assistant Professor
Delft University of Technology
Interviewer

Chiwei Yan
Assistant Professor
University of Washington
2021 AAS Treasurer/Secretary

The business meeting was held on October 16th, 2022 at 6:30 pm during the INFORMS annual meeting in Indianapolis. Approximately 30 people were in attendance. AAS Chair Alex Jacquillat opened up the meeting by introducing the 2021 – 2022 AAS Section Officers. AAS Secretary/Treasurer Chiwei Yan provided an overview of finances and membership: as of 10/14/2022, there are 110 active members, which is the first uptick since 2015. It was discussed ways of increasing the membership. Those in attendance were encouraged to invite friends and others to join AAS to grow membership. It was reiterated that every AAS award winner should be registered as a member of the section at the time he/she received the award.

A net financial loss of $1,700 is expected in 2022. There are two reasons for a net loss – the best paper award ($800) was initiated in 2020; second, the increased expense due to the business moving back to in-person. The negative expected net result was presented as not being a major concern due to the existence of an additional savings account with a current balance of around $13,000. However, the loss has to be monitored and circumvented because the due revenues are decreasing. About 140 regular members in our section should be enough to have a break-even situation with the costs of running our current yearly activities.

Sebastian Birolini, AAS Cluster Chair, presented the activities at the 2022 INFORMS Annual Meeting. The 2022 AAS cluster involved 13 general sessions, one flash talk session, 4 award sessions and 1 keynote session. Topics were varied, ranging from airline, airport, aviation networks and markets, and air traffic management but also emerging topics such as unmanned aircraft systems, urban air mobility and sustainable aviation. Finally, Sebastian recalled the keynote talk from Tim Niznik, from American Airlines, titled "An Analytics-based Framework for Responding and Adapting to Changing Conditions Driven by Covid-19".

Andrew Churchill, AAS Dissertation Committee chair, announced the 2022 Dissertation Award. The Committee awarded the award to Dr. Max Z. Li from MIT. His dissertation was entitled "Spectral Models for Air Transportation Networks".

Keji Wei, Chair of the 2022 AAS Best Student Presentation Competition, presented the Best Student Presentation Competition. The committee included Bo Zou, from University of Illinois Chicago, Max Li, from University of Michigan, Alessandro Bombelli from TU Delft and Keji Wei from CAE. The competition included 8 entries and spanned a very wide range of topics. The committee recognized Kevin Wang from MIT as the honorable mention and Gianmarco Andreana from University of Bergamo as the winner.

Kai Wang, Chair of the 2022 AAS Best Paper Award, presented the outcome of the best paper competition. The committee included Max Z. Li from the University of Michigan, Lishuai Li from City University of Hong Kong, Virginie Lurkin from HEC Lausanne, and Peng Wei from George Washington University. The winner goes to Xiaojia Guo, Yael Grushka-Cockayne and Bert De Reyck, "Forecasting Airport Transfer Passenger Flow Using Real-Time Data and Machine Learning", published on Manufacturing and Service Operations Management.

AAS Chair Alexandre Jacquillat discussed various AAS positions during 2022 - 2023 and announced the election outcomes. Bruno Santos will become the new chair, Lishuai Li will be the vice chair / chair-elect. Nuno Ribeiro will be the secretary/treasurer. Following the tradition from past years, Max Li, winner of the AAS Dissertation Award, should be the Cluster Chair for INFORMS Annual Meeting 2023. Alessandro Bombelli will be the communication chair. Vikrant Vaze will be the 2023 dissertation prize committee chair. Sebastian Birolini will be the 2023 best paper award committee chair. The meeting was then adjourned.

Andrew Churchill

Mosaic ATM (former). Principal data
scientist at Walmart
2022 Dissertation Committee Chair

At the 2022 INFORMS Annual Meeting, Andrew Churchill, AAS Dissertation Committee chair, announced the 2022 Dissertation Award. The Committee included William Coupe (NASA Ames) and David Lovell (University of Maryland).

The Committee awarded the award to one dissertation – Dr. **Max Li**, from MIT, with a dissertation entitled "**Spectral Models for Air Transportation Networks**".

The winner of the award presented his work on the INFORMS Annual Meeting. There was a good participation and discussion after the presentation.

Keji Wei

Senior Operations Research Engineer
Sabre & CAE
2022 PhD Presentation Committee Chair

At the 2022 INFORMS Annual Meeting AAS, Keji Wei, chair of the 2022 AAS Best PhD Presentation Competition, presented the Best Student Presentation Competition. The Committee included the chair, Bo Zou (University of Illinois Urbana-Champaign), Max Li (University of Michigan), and Alessandro Bombelli (Delft University of technology)

The competition included 11 entries across 9 universities and divided into 3 sessions.

The winner of this award was Gianmarco Andreana (University of Bergamo), with a presentation titled "**Competing on Emission Charges**"

The committee gave one honorable mention to Kevin Wang (MIT), who presented a work titled "**Airline Dynamic Offer creation Using a Markov Chain Choice Model**"

Kai Wang
Assistant Professor
Tsinghua University
2022 Best paper Award Chair

At the 2022 INFORMS Annual Meeting, Kai Wang, Chair of the AAS Best Paper Award, presented the process and the winners of the award.

The Committee included, besides the chair, Max Li (University of Michigan), Lishuai Li (City University of Hong Kong), Virginie Lurkin (HEC Lausanne), and Peng Wei (George Washington University).

In total, 9 papers were submitted for consideration for this award. The evaluation was done according to a weighted sum of criteria - significance of contribution (20), structure of paper (10), writing quality (15), appropriateness of the approach (20), clarity of drawings, graphs and tables (5), appropriateness of abstract (10), quality of discussion and conclusions (10), adequacy of references and discussion of prior work (10).

The paper "**Forecasting Airport Transfer Passenger Flow Using Real-Time Data and Machine Learning**", from Xiaojia Guo, Yael Grushka-Cockayne and Bert De Reyck, received the award.

Vikrant Vaze
Stata Family Career Development Associate
Professor of Engineering
Dartmouth College
2023 Dissertation Committee Chair

The INFORMS Aviation Applications Section awards a prize for the best dissertation in any area related to applying operations research and related approaches to aviation. The winner will receive a plaque and an honorarium of $500. Other finalists will receive an honorable mention and a certificate.

Eligibility Criteria
Doctoral dissertations meeting the following criteria are eligible for consideration:

Dissertation must be completed and submitted between June 1, 2022 and May 31, 2023
Dissertation must be in an area relevant to aviation research or practice
Must be a member of the AAS

Committee members
Vikrant Vaze, Dartmouth College (chair)
Alexander Estes, University of Maryland
Milind Sohoni, Indian School of Business

Submission Instructions
To apply, submit the following documents in portable document format (PDF) via email to Holly.A.Buker@dartmouth.edu, on or before Thursday, June 1, 2023. Use the subject line: AAS Best Dissertation Award Submission – [dissertation author last name]:

The completed dissertation
An extended abstract (up to 4 pages, single spaced) describing the work and its relevance
A short paper (20 to 25 pages, double spaced) that is based on the dissertation (this is optional, but welcome)
The winner(s) will be announced at the AAS business meeting during the 2023 INFORMS Annual Meeting in October.

Gianmarco Andreana

Postdoctoral researcher
Hebrew University of Jerusalem
2023 PhD Presentation Committee Chair

The INFORMS Aviation Applications Section (AAS) will hold a Best Student Presentation Competition at the 2023 INFORMS Annual Meeting in Phoenix. AAS is sponsoring this competition for undergraduate and graduate students who are members of the INFORMS Aviation Applications Section. A certificate of recognition and a cash prize will be awarded.
To enter the competition, the following criteria must be satisfied:

The presenter must be a member of AAS for the year 2023.
The presentation must be in an area relevant to aviation research or practice (e.g. airline operations, air traffic management, urban aerial mobility, unmanned aerial systems, revenue management).
The presenter must provide an extended abstract (one or two pages in length) as per the Extended Abstract Template provided on the AAS website. The extended abstracts should be emailed to Gianmarco Andreana (gianmarco.andreana@huji.ac.il), the Committee Chair, by 5 p.m. CDT on July 1, 2023.
Each presenter is allowed to submit at most one abstract for the competition.
The presenter must be an undergraduate or graduate student at the time of extended abstract submission deadline (i.e. on July 1, 2023), and the presentation must be based on the research conducted while he/she was a student.
The winner will be chosen based on both the quality of the presentation itself and the extended abstract. AAS looks forward to an exciting set of submissions this year! For further information, please contact Gianmarco Andreana gianmarco.andreana@huji.ac.il.

Committee members
Gianmarco Andreana (chair)
The Hebrew University of Jerusalem
Fanruiqi Zeng
Georgia Institution of Technology
Luis Cadarso Morga
Rey Juan Carlos University
Chris Chin
Massachusetts Institute of Technology
Alexander Stewart Estes
University of Minnesota

Sebastian Birolini

Assistant Professor
University of Bergamo
2023 Best Presentation Committee Chair

Committee members

Sebastian Birolini (chair)
University of Bergamo

Nicole Adler
The Hebrew University of Jerusalem

Bo Zou
University of Illinois Chicago

Nuno Ribeiro
Singapore University of Technology & Design

Kai Wang
Tsinghua University

The AAS Best Paper Award is given once a year to an outstanding paper in the field of aviation applications. The paper must have been published in a refereed journal and must present innovative approaches for solving complex problems in aviation and air transportation, with an emphasis on operations research and quantitative methods. Any author must submit only one of his/her eligible papers. In addition, no individual may be a co-author on more than two papers submitted to the competition.

A paper is eligible for the competition if

its main topic is related to the field of aviation and air transportation; it is written in English; and it has been published, or appears in pre-print form online through the publishing agency, between June 1, 2021, and May 31, 2023. In the case of papers that are only available in pre-print form online at the time of consideration, the online publication date must be easily verifiable.

All topics related to the field of aviation and air transportation will be considered, including, but not being limited to:

aviation economics, operation concepts, and business models;
airline operations;
air traffic flow management and airspace management;
tactical air traffic control;
airport operations;
air transportation networks;
aircraft trajectory management;
UAS traffic management;
on-demand air mobility;
electric/hybrid aircraft operations;
drone delivery;
pilot, flight deck, or onboard decision-making models

The winning paper will be announced at the AAS business meeting to be held during the annual INFORMS meeting in Phoenix, Arizona 2023. The authors of the winning paper will share a prize of $800, and each will receive a certificate.

To submit a paper for the 2023 competition, one of the authors must email the paper, along with a short cover letter (maximum one page) describing the merits of the paper, to the Chair of the AAS Best Paper Award Committee, on or before June 15, 2023, 11:59 pm US eastern time. Please use the following email address for submissions: sebastian.birolini@unibg.it (Email Subject: 2023 AAS Best Paper Award Application / Applicant name).

Disclaimer: each paper will be reviewed and scored by the award committee members. The award committee members are not eligible for this year's award. We will enforce an unbiased review process.

Bruno F. Santos
Associate Professor
Delft University of Technology
AAS Chair

Lavanya Marla
Associate Professor
University of Illinois at Urbana-Champaign
AGIRFORS - Symposium Technical Chair

The Airline Group of the International Federation of Operational Research Societies (AGIFORS) is a professional society dedicated to advancing and applying Operational Research within the airline industry. The society has five study groups, focusing on different aspects of airline operations. Each of these study groups meets in the spring to discuss new technical developments and trends in the aviation industry. They are fora to discuss new methodologies and concepts applied to airlines and aviation. In addition to the study group meetings, AGIFORS members meet at the Annual Symposium, typically held in September or October. The symposium includes guest speakers from academia and industry, discusses state-of-the-art developments and practices, and panel discussions on trending topics, and presents awards to recognize exceptional achievements in the field.

AGIFORS presents a good venue for Airline Application Section (AAS) members to engage with practitioners, hear about the challenges in practice, and discuss new methodologies with potential end-users. Additionally, AGIFORS has two awards for early-stage researchers. The well-known Anna Valicek Award distinguishes original and innovative research performed by graduate students. At the same time, the Ken Wang Scholars Program aims to recognize and encourage graduate students at even earlier stages to pursue careers in airline analytics. There are no costs of being an AGIFORS member, and all AAS members should be eligible to apply for membership. Furthermore, the study group meetings are all online this year and have nominal registration fees. So if you have not done it in previous years, do consider getting involved this year!

AGIFORS Program:

Revenue Management SG Meeting
June 5-7, Helsinki, Finland
Airline Operations SG Meeting
June 6-9, Mexico City, Mexico
Aircraft Maintenance Operations Special Session
June 6-9, Mexico City, Mexico
Scheduling and Strategic Planning SG Meeting
May 22-24, Santiago de Chile, Chile
Crew Management SG Meeting
May 22-24, Santiago de Chile, Chile

- Anna Valicek award deadline June 1st
- Ken Wang Scholars Program deadline June 1st

Alessandro Bombelli

Assistant Professor
Delft University of Technology
Communication Chair

The AAS is compiling a list of recent publications to support aviation researchers. Following is a list of sample recent papers that have appeared in INFORMS journals. You are invited to submit your published or working papers to be listed on the AAS website. Please send your papers to the AAS webmaster Alessandro Bombelli

On Airport Time Slot Auctions: A Market Design Complying with the IATA Scheduling Guidelines
Martin Bichler, Peter Gritzmann, Paul Karaenke, Michael Ritter
Published Online: Transportation Science (January-February 2023)

Passenger-Centric Integrated Airline Schedule and Aircraft Recovery
Luis Cadarso, Vikrant Vaze
Published Online: Transportation Science (-Not available-)

Passenger-Centric Slot Allocation at Schedule-Coordinated Airports
Sebastian Birolini, Alexandre Jacquillat, Phillip Schmedeman, Nuno Ribeiro
Published Online: Transportation Science (January-February 2023)

Vertiport Planning for Urban Aerial Mobility: An Adaptive Discretization Approach
Kai Wang, Alexandre Jacquillat, Vikrant Vaze
Published Online: Manufacturing & Service Operations Management (November-December 2022)

Minimizing Airplane Boarding Time
Felix J. L. Willamowski, Andreas M. Tillmann
Published Online: Transportation Science (September-October 2022)

Branch-and-Price for Drone Delivery Service Planning in Urban Airspace
Michael W. Levin, David Rey
Published Online: Transportation Science (-Not available-)

The Parallel Drone Scheduling Traveling Salesman Problem with Collective Drones
Minh Anh Nguyen, Minh Hoàng Hà
Published Online: Transportation Science (-Not available-)

Upcoming/Recent Meetings

2023 AIAA Aviation and Aeronautics Forum and Exposition (AIAA AVIATION Forum)

12 June - 16 June 2023

Manchester Grand Hyatt, San Diego, California & Online, USA

INFORMS Annual Meeting

Phoenix Convention Center, Hyatt Regency Phoenix

Country: United States of America (USA)

State: (USA) Arizona

October 15-18, 2023

Revenue Management SG Meeting

June 5-7, Helsinki, Finland

Airline Operations SG Meeting

June 6-9, Mexico City, Mexico

Aircraft Maintenance Operations Special Session

June 6-9, Mexico City, Mexico

Scheduling and Strategic Planning SG Meeting

May 22-24, Santiago de Chile, Chile

Crew Management SG Meeting

May 22-24, Santiago de Chile, Chile

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Cluster Chair
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