ATS NEWSLETTER

Air Transportation Section of INFORMS

Summer 2025

A Word from the Section Chair

Lishuai Li
Professor
City University of Hong Kong
ATS President

Greetings and welcome to this year's edition of the INFORMS Air Transportation Section (ATS) newsletter!

We are excited to announce that our community has officially changed its name from the Aviation Applications Section (AAS) to the Air Transportation Section (ATS), at INFORMS. This change reflects the expanding scope of our community's interests, research topics, and contributions to the broader air transportation ecosystem. While aviation remains a core focus, the new name better encompasses emerging topics such as sustainable aviation, urban air mobility, the low-altitude economy, and the burgeoning space economy.

As the world recovers from COVID-19, the air transportation industry is returning to pre-pandemic activity levels while addressing workforce shortages, operational disruptions, and evolving passenger needs. The pandemic has accelerated the adoption of AI and data-driven optimization, improving efficiency and customer experience. Our community continues to advance Operations Research (OR) and Artificial Intelligence (AI) to support this recovery and navigate the industry's evolving challenges.

The air transportation sector is undergoing rapid transformation, driven by emerging trends and technologies. Highlights include:

- Sustainable Aviation: Addressing the climate crisis requires innovative solutions to reduce emissions, optimize fuel efficiency, and integrate sustainable technologies such as SAF, electric and hydrogen-powered aircraft.

- Low-Altitude Economy: The rise of drones and advanced air mobility is creating new opportunities and challenges, attracting research in airspace integration, safety, and efficient operations.

- Space Economy: The expansion of commercial space activities opens up new frontiers for operations research, including satellite optimization, space traffic management, and launch logistics.

- Multi-Modal Mobility and Logistics: Seamless integration of air transportation with other modes of transport is increasingly important to provide efficient, sustainable, and customer-centric mobility solutions.

- AI and Data-Driven Optimization: The growing availability of aviation data has fueled the adoption of AI and data science methods, including large language models (LLMs), deep learning, machine learning, and their integration with optimization. These approaches are transforming all aspects of air transportation, from demand forecasting and scheduling to disruption management and air traffic control, enabling more precise, adaptive, and efficient decision-making.

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A Word from the Section Chair

Lishuai Li
Professor
City University of Hong Kong
ATS President

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The ATS community is at the forefront of advancing these research areas, leveraging OR and AI to develop innovative solutions and shape the future of air transportation. We are excited to share insights and developments with you at the INFORMS Annual Meeting, where our sessions will highlight cutting-edge research and applications across these topics.

I would like to take this opportunity to thank our exceptional leadership team and volunteers for their dedication and contributions. Special thanks to our Vice-President, Nuno Ribeiro, and Secretary/Treasurer, Max Li, for their outstanding efforts in coordinating our activities and preparing for the annual meeting. I also want to acknowledge the contributions of Fanruiqi Zeng (Cluster Chair), Zhenyu Gao (Dissertation Award Chair), Felipe Delgado (Paper Award Chair), Minghao Chen & Haochen Wu (Student Presentation Chair), our Communications Co-Chairs, Ang Li and Victor Qin, and our Seminar Coordinators, Anahita Jain and Jan-Rasmus Kunnen. Their hard work and fresh ideas are instrumental in sustaining and growing our vibrant community.

Finally, we are thrilled to announce that elections for the next leadership team will be held this year. If you are interested in getting more involved in the ATS community, please don't hesitate to reach out — we would love to hear from you!

Thank you for being a part of our community. Together, we will continue to advance research, foster innovation, and tackle the challenges and opportunities in air transportation.

Warm regards,

Lishuai Li

President, INFORMS Air Transportation Section

Professor, Department of Data Science

Associate Vice-President (Strategic Research)

City University of Hong Kong

Content of the Newsletter

Inside this issue

This newsletter has been prepared and edited by:

Victor Qin
PhD Student at MIT
Ang Li
Assistant Professor at Hong Kong Polytechnic University

Co-communication chairs

Featured Article by Victor Qin and Ang Li

Interview with:

Raja Sengupta, Sandro Salgueiro, Bangyan Zhang, and Kai Wang

Raja Sengupta
Professor at UC Berkeley

Sandro Salgueiro
Senior Airspace Integration Engineer at Skygrid

Bangyan Zhang
R&D Manager at Keeta Drone

Kai Wang
Associate Professor at Tsinghua University

Advanced Air Mobility (AAM) and operations in the Low Altitude Economy (LAE) are ready to take off, as drone delivery and air taxis move on from test flights and begin revenue generating flights. We wanted to understand the operational challenges to scaling those operations in the next decade, and how the optimization research community can contribute solutions. We've interviewed experts in both industry and academia, in the US and China, to understand what the future of AAM looks like, and what questions our research should try to answer in this new era of aviation.

1. What's your current role and background? How did you find your way to working on future air mobility?

Raja: I am a professor in UC Berkeley's Aerospace & Civil Environmental Engineering programs. I have a EECS:Systems PhD research and entrepreneurial experience in control and networking. I started Berkeley's first drone program in 1997 with support from the Office of Naval Research. The Global Hawk had flown GPS guided from San Diego to Sydney and the Navy wanted us to enable the drone in every soldier's backpack which we did by leveraging the miniaturization revolution that drove the PC industry and later the smartphone one.

Sandro: I work as an Airspace Integration Engineer at SkyGrid, a Wisk Aero subsidiary focused on addressing the challenges of integrating emerging aircraft operations into the National Airspace System (NAS). Before joining SkyGrid, I completed both my Master's and PhD in air transportation systems at MIT. At MIT, I worked on designing instrument flight procedures for noise abatement and developed collision risk models to estimate the likelihood of aircraft collisions in shared airspace. I've always been drawn to exploring how new aircraft systems and air traffic management technologies can improve our way of operating aircraft. Today, Advanced Air Mobility (AAM) has emerged as a focal point in the industry, driving research into novel air traffic management concepts that could enable AAM operations to scale beyond the current limitations of the NAS and support new air transportation business models. That's what drew me to this part of the industry.

Bangyan: At Keeta Drone, I serve as an R&D Manager specializing in drone autonomy, UAV traffic management, and logistics delivery systems. I hold both undergraduate and graduate degrees in Robotics, and upon graduating from Carnegie Mellon University, I joined a startup to focus on the autonomy systems of aerial photography drones. Shortly thereafter, I joined Keeta Drone, where I began leading work on UAV swarm intelligence for food and medical supply drone delivery operations. Over the past several years, Keeta Drone has experienced rapid growth, and this trajectory afforded me the opportunity to develop an integrated system encompassing aerial transportation, logistics delivery, and onboard intelligence. To date, this system has facilitated over 600,000 delivery missions across densely populated cities around the world, maintaining exceptional standards of safety and operational efficiency.

Kai: I am currently an Associate Professor at the School of Vehicle and Mobility, Tsinghua University. Before joining Tsinghua, I was a Research Scientist at Heinz College, Carnegie Mellon University, from August 2021 to June 2022, and a Postdoctoral Associate at Sloan School of Management, Massachusetts Institute of Technology, from August 2019 to July 2021. My research focuses on mainly on smart transportation, urban aerial mobility, logistics management, and emerging mobility systems.

During my postdoctoral research at MIT, I recognized that Advanced Air Mobility (AAM) was an emerging paradigm in transportation. It became clear to me that AAM would constitute an entirely new transportation system, distinct from all existing modes—whether traditional aviation or shared mobility. Drawing on my prior research across different transportation fields, I identified suitable analytical models tailored to AAM. These models yielded insightful perspectives, which motivated me to embark on comprehensive research and exploration in this area.

2. What are the immediate operational, technical, infrastructure, and/or regulatory challenges you foresee, as Advanced Air Mobility / Low Altitude Economy operations scale up? What research are you interested to see in response to these challenges?

Raja: Today's immediate challenge is air traffic management and airspace surveillance infrastructure. Aircraft are more ready than airspace. The FAA's ATO cannot refuse tactical separation services to AAM operators flying people for hire, but it lacks the manpower and budgetary outlays to do so. No technically proven alternative exists to the FAA's ATO tactical separation services. I would like to see research proving an alternative ATC technological and business model.

Sandro: When considering the integration of uncrewed, passenger-carrying aircraft into the NAS, a key challenge we identified is the reliance on human-to-human coordination (e.g., between pilots and air traffic controllers) to keep aircraft safely organized and separated. This characteristic of today's airspace can impose significant constraints on highly automated operations.

To address this, we are pursuing a two-pronged approach:

1. Developing novel conflict management automation capable of safely organizing aircraft in the airspace with reduced dependence on human coordination; and

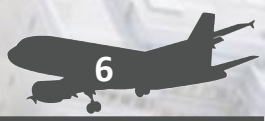
2. Investigating new operational concepts for highly automated aircraft in the NAS while systematically exploring how new airspace structures and flight rules could support the airspace integration of these aircraft.

For future research, I would like to see greater exploration of ways for aircraft to rely less on voice communications for traffic management instructions and instead leverage digital communications. This transition could create near-term opportunities to scale AAM operations by reducing ATC workload and frequency congestion, even before conflict management automation and new airspace structures are fully implemented.

Bangyan: Over the past several years, as the low-altitude economy has evolved, we have witnessed a growing number of stakeholders developing drones and eVTOLs (electric vertical takeoff and landing aircraft) for diverse applications. However, the majority of operational deployments remain confined to suburban or rural regions. Keeta Drone stands among the select few operators that have implemented large-scale drone operations in densely populated urban areas.

As the low-altitude economy continues to expand, I anticipate more participants entering urban markets—where commercial demand is significantly higher. That said, a critical gap persists: we have yet to see a UAV traffic management system capable of addressing the unique challenges of civil urban drone operations, including tight spacing requirements, time-sensitive missions, large-scale deployment, and the varied commercial needs of the tens of thousands of drones that will eventually operate in city airspace.

Moving forward, I hope to see increased research focus on integrating three core elements: distributed onboard drone autonomy, centralized traffic management intelligence, and solutions for addressing the non-cooperative commercial objectives of different operators.



Kai: The most pressing challenge lies in identifying viable operational scenarios. Currently, it is difficult to establish a profitable business model—whether in passenger transport or logistics—due to high costs. Achieving commercial sustainability is essential for the healthy development of AAM or the Low Altitude Economy. This raises a series of research questions, such as how to integrate AAM with existing transportation modes to fully leverage its potential.

Safety is another critical issue that must be treated as a bottom line, especially since AAM operations will take place over densely populated urban areas, posing significant third-party risks. This opens up research directions focused on designing low-altitude routes that balance risk and economic efficiency.

Furthermore, the current general aviation management system is ill-suited to support the high-frequency, high-density operations envisioned for AAM. There is an urgent need to develop more advanced traffic management systems that enhance the role of algorithms in optimizing low-altitude airspace utilization.

3. How has developments in AI changed your future plans? What technical advances in AI are you excited about using in your future projects? How have AI products affected hiring, business strategy, operations, etc.?

Raja: AI could be the basis for a new technological ATC model that also has a viable business model. I have been developing reinforcement learning for AAM fleet management and control.

Sandro: At the research level, we are exploring the use of AI and machine learning (AI/ML) methods to parse unstructured data (e.g., voice communications) into machine-readable formats and to analyze large search spaces such as aircraft encounter geometries and collision avoidance maneuvers. However, we recognize that these tools still have some way to go before they can be reliably applied in safety-critical applications, where certification and approval processes require system designers to specify system behavior with a very high degree of certainty.

Bangyan: AI is a powerful tool that enhances drone intelligence and is indispensable for large-scale low-altitude economy (LAE) systems. Given the projected exponential growth in the number of drones, it would be both logistically unfeasible and economically unsustainable to rely on human operators to manage every drone at scale.
For this reason, AI serves two primary functions in LAE ecosystems. First, it monitors and analyzes data from large drone fleets, identifying scenarios that require intervention—either by human operators or secondary AI systems. Second, it enables autonomous critical decision-making; this can occur either onboard individual drones or within a centralized traffic management system. For example, AI can dynamically adjust UAV flight plans to avoid collisions with obstacles or other drones, or identify optimal emergency landing sites for UAVs with low battery levels.
Recent advancements in AI—such as large language models (LLMs)—have simplified the execution of these roles. However, significant work remains to develop AI models that address domain-specific challenges while minimizing errors. In aerial operations, even minimal errors are rarely tolerable, making this precision-focused development a critical priority.

Kai: AI is poised to significantly influence my future research. My work has traditionally centered on mathematical modeling and algorithm design, yet I have increasingly recognized the limitations of such models in capturing the complexities of real-world applications. I plan to incorporate more AI techniques to uncover patterns that conventional models cannot adequately represent. For instance, I am excited about the potential of large language models to interpret uncertainties in human behavior within transportation systems, thereby enabling more responsive and adaptive system optimization.

The integration of AI is transforming talent acquisition, with growing demand for researchers and engineers skilled in machine learning and data analytics. Strategically, organizations are leveraging AI to enhance operational efficiency, and improve decision-making processes. From an operational standpoint, AI-driven automation is expected to reduce human error, increase safety, and enable scalable management of complex mobility systems.

4. What does the future look like for AAM? In your wildest dreams, what will AAM deliver to people? What technologies will be enabling these futures? Why should students and young researchers join this field right now?

Raja: The automobile and limited access freeway exploded urban America in the 20th century. The two opened new land for housing, drove suburbanization and created the American dream. The automobile and limited access freeway has now run its course. 21st century America needs a new mode of transportation able to connect people over greater distances without overheating the planet or creating still more sprawl. Advanced Air Mobility needs to be developed and advanced as such a solution. Why not open the great skies above our cities even as we sprawl and crawl on the ground?. AAM will produce land use patterns different from freeway or rail. One cannot be born on the wrong side of the tracks if there are no tracks.

Sandro: At the moment, the AAM sector is driving many of the key conversations about the future of air traffic management. Since many proposed AAM business models depend on operating highly automated aircraft at high tempo, there is a growing consensus that AAM will require greater operational predictability, efficiency, and capacity than the current NAS can provide.

This is where new operational concepts and automated traffic management capabilities come into play. For example, if automation can assist controllers in maintaining safe separation among AAM aircraft, it could enable them to manage a larger number of vehicles simultaneously (effectively increasing airspace capacity).

If the AAM industry succeeds in demonstrating that these traffic management technologies are viable, their impact could extend well beyond low-altitude operations, eventually influencing how all air traffic is managed. Considering that our air traffic control system has been in place for roughly seven decades, with relatively little change in its fundamental approach to separating aircraft, the introduction of conflict management automation would represent a significant step forward in the way we manage aircraft.

Bangyan: The low-altitude economy (LAE) is an industry in its nascent stages, with a long evolutionary path ahead. UAV traffic management systems, aerial vehicles (e.g., eVTOLs, drones), and vertiport infrastructure form the foundational pillars of its future development. Each of these three domains offers substantial growth opportunities for students and early-career researchers alike.

Over the next decade, low-altitude drone operations will transition from science fiction to reality—integrated into the fabric of daily life on the streets and in neighborhoods of major cities worldwide, delivering services such as logistics, passenger transportation, and more. Earlier this year, I took my 4-year-old daughter to Shenzhen, the primary hub for Keeta Drone's UAV operations. We walked to a nearby park and ordered two milk teas for her and her friend; notably, neither child showed surprise when a drone arrived with their drinks. By the time they reach adulthood, I believe the low-altitude economy will be as ordinary a part of their lives as their afternoon milk tea is today.

Kai: The pursuit of speed and aerial mobility is a timeless human aspiration. I believe AAM and the Low Altitude Economy (LAE) will eventually become integral to everyday life. Beyond providing faster and more convenient transportation and logistics services, AAM or LAE will unlock three-dimensional urban living spaces, potentially reshaping cities on an unprecedented scale.

Key enabling technologies will include advanced eVTOL aircraft, which must see improvements in power systems, endurance, safety, reliability, and intelligence. In addition, physical and digital infrastructure—such as vertiports, communication, positioning, and navigation systems—will require further innovation. Most critically, a next-generation traffic management system must be developed to ensure safe and efficient operations amid high-density low-altitude flights.

This field is truly nascent, highly interdisciplinary, and in need of disruptive solutions. It offers a unique opportunity for young researchers and students to contribute with fresh, less constrained thinking. Their creativity will be essential to building entirely new technological systems and accelerating progress in this exciting domain.

Thank you to Raja, Sandro, Bangyan, and Kai for your insights!

Victor Qin
PhD Student at MIT
Ang Li
Assistant Professor at Hong Kong Polytechnic University

2024 INFORMS Annual Meeting

Air Transportation Section Business Meeting Minutes

Nuno Ribeiro
Assistant Professor
Singapore University of Technology and Design
ATS Vice President

The meeting was held on Oct 20, 2024, at 6:30 PM (PDT) in Summit - 430.

AAS Chair Lishuai Li opened up the meeting by introducing the 2023-2024 AAS Section Officers.

AAS Secretary/Treasurer Nuno Ribeiro provided an overview of membership:
As of 13 October 2024, AAS has 98 members, with membership declining over the years. The committee discussed several ideas to increase membership, including: (i) changing the section name to Air Transportation Section to reach a wider audience; (ii) organizing a webinar series to maintain activity and attract new members; and (iii) posting more regular updates on the LinkedIn page, INFORMS AAS discussion forum, and WeChat group to keep members engaged.

AAS Secretary/Treasurer Nuno Ribeiro also noted that many INFORMS AAS session attendees realized they were not registered or had not renewed their membership, as the renewal process is not straightforward. Instructions for membership renewal were provided during the business meeting, and a summary of the steps has been posted on the LinkedIn page.

AAS Secretary/Treasurer Nuno Ribeiro also provided an overview of finances:
Since 2020, expenses have exceeded revenues due to a decline in membership income — averaging $1,385 from 2020 to 2023, compared to $2,222 from 2008 to 2019. At the same time, award expenses have increased significantly, averaging $1,777 from 2020 to 2023, up from $774 between 2008 and 2019. This year, award costs were reduced by about $1,500, with only certificates (no cash awards) being issued. This adjustment resulted in a positive net balance, with revenues exceeding expenses. The situation will be reviewed again next year, with the expectation that a rise in membership may allow the return of cash awards.

Alexander Estes, AAS Cluster Chair, presented the activities at the 2024 INFORMS Annual Meeting.
The 2024 AAS cluster involved 12 general sessions. Topics were varied, ranging from Advanced/Urban Air Mobility, UTM, Airline, airport, air traffic management, Terminal and en route airspace operations, Sustainable aviation, forecasting, ML.

We have two joint TSL sessions — one on drones and one on UAM — three award sessions, including two for the student presentation competition and one for the best dissertation and best paper awards, and a keynote talk by Yuqian Dong, Director of Last Mile Strategy at Walmart, titled "The Future of Last-Mile Delivery Technology and the Importance of a Holistic Approach," scheduled for October 22 from 2:15 PM to 3:30 PM in Summit 431.

Nuno Ribeiro
Assistant Professor
Singapore University of Technology and Design
ATS Vice President

Fanruiqi Zeng, AAS Communications and Webmaster, reported on the AAS website and LinkedIn group. The website features recent publications, job postings, and information on the AAS Dissertation Award, Best Presentation Award, and Student Presentation Competitions for both undergraduate and graduate students. Fanruiqi Zeng also presented the most recent newsletter, which includes updates on AAS activities and interviews with leading researchers and industry professionals in the aviation autonomy domain, including Prof. Mykel Kochenderfer (Stanford University), Jia Xu (CEO, SkyGrid), Parker Vascik (Autonomy Systems Architect, Joby Aviation), and Timothy Wang (Research Engineer, RTX Technology).

Luis Cadarso, Chair of the AAS Dissertation Committee, announced the 2024 Dissertation Award. The Committee, comprising Sebastian Birolini (University of Bergamo), Guglielmo Lulli (Lancaster University), and Lavanya Marla (University of Illinois at Urbana-Champaign), received 2 submissions from two countries. After careful evaluation, the Committee decided to present an Honorable Mention to Thomas Johannes Hagspihl from Technische Universität München for his dissertation titled "Essays on Optimization of Airport Infrastructure."

Max Li, Chair of the 2024 AAS Best Paper Award Committee, presented the selection process and announced the winners. The Committee included Gianmarco Andreana (University of Bergamo), Xiaojia Guo (University of Maryland, College Park), Ang Li (Hong Kong Polytechnic University), and Chiwei Yan (University of California, Berkeley). The 2024 Best Paper Award was presented to Kai Wang, Alexandre Jacquillat, and Vikrant Vaze for their paper titled "Vertiport Planning for Urban Air Mobility: An Adaptive Discretization Approach," published in Manufacturing & Service Operations Management.

Wayne Ng, Chair of the 2024 AAS Best Student Presentation Competition, presented this year's competition results. The competition featured ten presentations from various countries, including the United States, Hong Kong, Spain, and Singapore, covering topics such as ANSP competition, airline network design and fleet planning, aircraft trajectory optimization, and drone routing and network design. The Committee, comprising Lishuai Li (City University of Hong Kong), Jan-Rasmus Künnen (Wing Labs), and Burak Cankaya (Embry-Riddle Aeronautical University), awarded the Best Student Presentation to Haochen Wu (University of Michigan, Ann Arbor) for "Distributionally Robust Airport Ground Holding Problem under Wasserstein Ambiguity Sets." An Honorable Mention was given to Minghao Chen (Columbia University) for "Energy-constrained, Risk-averse Drone Delivery under Spatiotemporally Varying Winds."

The meeting was adjourned around 7:45 PM, followed by AAS dinner at La Cocina Oaxaqueña.

Luis Cadarso Morga
Associate Professor
Rey Juan Carlos University
2024 Best Dissertation Committee Chair

Luis Cadarso Morga, the 2024 ATS Dissertation Award Chair, announced the 2024 Dissertation Award. The Committee included, besides the chair, Sebastian Birolini (University of Bergamo), Guglielmo Lulli (Lancaster University), and Lavanya Marla (UIUC). There were 2 total submissions from 2 countries and 2 continents.

The Committee awarded an honorable mention to one dissertation – **Thomas Johannes Hagspihl** (Technische Universität München) for his dissertation "**Essays on Optimization of Airport Infrastructure"**.

2024 ATS PhD Presentation Award Winners

Wayne Ng
PhD researcher
Singapore University of
Technology and Design
2024 PhD Presentation Committee Chair

Wayne Ng, ATS Dissertation Committee chair, announced the 2024 Dissertation Award. The Committee included, besides the chair, Lishuai Li of City University of Hong Kong, Jan-Rasmus Künnen of Wing Labs, and Burak Cankaya of Embry-Riddle Aeronautical University.

The competition included 10 entries from top Universities such as MIT, UIUC, Columbia, and University of Michigan. Each participant submitted an extended abstract in addition to giving a talk on the Sunday of INFORMS. The Committee presented an honorable mention to **Minghao Chen** (Columbia University) for his presentation titled "**Energy-constrained, Risk-averse Drone Delivery under Spatiotemporally Varying Winds**". The Committee presented the award to **Haochen Wu,** (University of Michigan). His presentation was entitled "**Distributionally Robust Airport Ground Holding Problem under Wasserstein Ambiguity Sets**".

2024 ATS Best Paper Award Winners

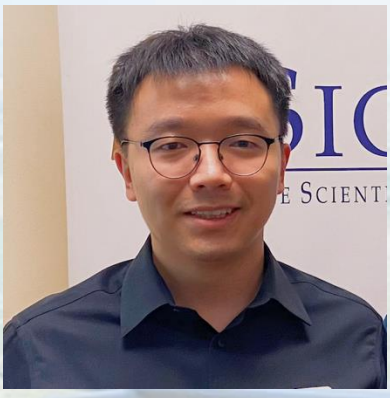
Max Li
Assistant Professor
University of Michigan
2024 Best Paper Committee Chair

Max Li, the Chair of the 2024 ATS Best Paper Award, presented the process and the winners of the award.

The Committee included, besides the chair, Xiaojia Guo (University of Maryland), Chiwei Yan (University of California Berkeley), Gianmarco Andreana (University of Bergamo), and Ang Li (Hong Kong Polytechnic University).

Out of 5 total submissions, the committee presented the Best Paper Award to one paper, "**Vertiport Planning for Urban Air Mobility: An Adaptive Discretization Approach**" by **Kai Wang**, **Alexandre Jacquillat**, and **Vikrant Vaze**, published in Manufacturing & Service Operations Management.

2025 ATS Dissertation Award Call for Submissions



Zhengyu Gao
Assistant Professor
Hong Kong University of Science and Technology
2025 Best Dissertation Committee Chair

The INFORMS Air Transportation Section (AAS) recognizes the best dissertation in any area related to applying operations research and related approaches to aviation. The winner will be announced at the ATS business meeting during the 2025 INFORMS Annual Meeting in October and will receive a plaque. Other finalists will receive an honorable mention and a certificate.

Eligibility Criteria

Doctoral dissertations meeting the following criteria are eligible for consideration:

- The dissertation must be completed and submitted between July 16, 2024, and July 15, 2025.
- The dissertation must be in an area relevant to aviation research or practice.

We warmly invite the broader operations research and aviation community to submit nominations. Please note that final awardees are required to be members of the INFORMS ATS to receive the award.

Submission Instructions

To be considered, a dissertation must be nominated by the thesis supervisor, who must submit the following items in portable document format (PDF):

- An electronic copy of the dissertation.
- An electronic copy of the extended abstract (up to 4 pages, single-spaced) describing the work, its relevance, and including a list of publications related to the dissertation (published or under review).
- An electronic abstract of 300 words without formulas or mathematical notation.
- An electronic copy of the nomination letter from the dissertation supervisor supporting the submission and highlighting the importance of the research.

Nominations must be emailed to the committee chair, Zhenyu Gao, at zhenyu.gao@ust.hk. Please use the subject line: 2025 ATS Dissertation Award Nomination – [Nominee_Name]. Any questions regarding the award or nomination should be sent via email to the committee chair.

2025 ATS Best Dissertation Award Committee

John-Paul Clarke (University of Texas at Austin)
Jan-Rasmus Künnen (Wing Labs)
Max Li (University of Michigan)
Kai Wang (Tsinghua University)
Zhenyu Gao (Hong Kong University of Science and Technology), Chair

2025 ATS PhD Presentation Award Call for Submissions

Haochen Wu
PhD Student
University of Michigan
2025 PhD Presentation Committee Co-Chair

Minghao Chen
PhD Student
Columbia University
2025 PhD Presentation Committee Co-Chair

The INFORMS Air Transportation Section (ATS) will hold a Best Student Presentation Competition at the 2025 INFORMS Annual Meeting in Atlanta. ATS is organizing this competition for undergraduate and graduate students who are members of the INFORMS Air Transportation Section. A certificate of recognition will be awarded.

To enter the competition, the following criteria must be satisfied:

- The presenter must be a member of ATS for the year of the competition.
- 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 Sample provided on the ATS website. The extended abstracts should be emailed to aas.students.awards@gmail.com, by 12 p.m. CDT on July 31, 2025, with the subject "2025 ATS Best Student Presentation Abstract Submission – [last name]"
- 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 the extended abstract submission deadline, 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. ATS looks forward to an exciting set of submissions this year! For further information, please feel free to contact the committee via aas.students.awards@gmail.com.

Committee members:
Minghao Chen (Co-Chair)
Columbia University

Haochen Wu (Co-Chair)
University of Michigan

Shulu Chen
Tsinghua University

Junghyun Kim
Sejong University

Ang Li
The Hong Kong Polytechnic University

Harry Liu
Lancaster University

Tim Lu
Sabre Corporation

Amro El-Adle
Old Dominion University

2025 ATS Best Paper Award Call for Submissions

Felipe Delgado
Assistant Professor
Pontificia Universidad Católica de Chile
2025 Best Paper Committee Chair

The ATS Best Paper Award (2025) is given once a year to recognize an outstanding paper in the field of aviation applications. The paper must demonstrate innovative approaches for solving complex problems in aviation and air transportation, with an emphasis on operations research and quantitative methods.

Eligibility Criteria

To be eligible for the competition, the paper must meet the following criteria:

- The main topic must relate to the field of aviation and air transportation.
- The paper must be written in English.
- It must have been published in a refereed journal, or appear in pre-print form online through the publishing agency, between June 1, 2023, and May 31, 2025. For papers that are only available in pre-print form, the online publication date must be easily verifiable.

Submission Guidelines

Each author may submit only one eligible paper.
No individual may be a co-author on more than two papers submitted to the competition.

Topics of Interest

All topics within the field of aviation and air transportation will be considered. Areas of interest include, but are not 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.

Award Announcement and Prize

The winning paper will be announced at the ATS business meeting to be held during the INFORMS Annual Meeting in Atlanta, Georgia, in 2025. Each author of the winning paper will receive a certificate.

Submission Process

To submit a paper for the 2025 competition, one of the authors must email the following to the Chair of the ATS Best Paper Award Committee, on or before June 15, 2025, 11:59 pm US Eastern Time.

- A copy of the paper.
- A short cover letter (maximum one page) describing the merits of the paper.

Submissions should be sent to fdb@uc.cl with the subject line: "2025 ATS Best Paper Award Application / Applicant name."

Review and Disclaimer

All submitted papers 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.

Chair: Felipe Delgado (Pontificia Universidad Católica de Chile)

Committee Members:

Alessandro Bombelli (Delft University of Technology)
Alexander S. Estes (University of Maryland)
Cheng-Lung Wu (University of New South Wales)
Xinting Zhu (City University of Hong Kong)

Upcoming/Recent Meetings

2025 INFORMS Annual Meeting
26 October – 29 October
Georgia World Congress Center and Omni Atlanta Hotel at Centennial Park, Atlanta, GA, USA

Workshop on Artificial Intelligence for Air Transportation (AI4AT)
at the Fortieth AAAI Conference on Artificial Intelligence (AAAI-26)
26 January
Singapore EXPO, Singapore

2026 INFORMS Transportation Science and Logistics Conference
26 July – 29 July
Samberg Conference Center, Massachusetts Institute of Technology
Cambridge, MA, USA

Section Officers

Chair
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