

SEN WANG

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RESEARCH AREAS

Airline & Airport Economics, Transport Geography, Aviation Sustainability

EDUCATION

Purdue University	West Lafayette, Indiana, USA
Ph.D. in Technology	08/2020 – 05/2024
Graduate Certificate in Geospatial Information Science	09/2022 – 12/2022
Certificate of Foundation in College Teaching	09/2022 – 12/2022
Master of Science in Aviation and Aerospace Management	01/2019 – 05/2020
Florida Institute of Technology	Melbourne, Florida, USA
Bachelor of Science in Aviation Management (<i>Magna Cum Laude</i>)	08/2016 – 12/2018
Kunming University Science of Technology	Kunming, Yunnan, China
Bachelor of Engineering in Transportation Engineering	08/2014 – 07/2019

WORK EXPERIENCE

The Ohio State University	Columbus, Ohio, USA
Assistant Professor at Department of Geography	08/2024 – Present
Purdue University	West Lafayette, Indiana, USA
Course Instructor at School of Aviation and Transportation Technology	01/2021 – 05/2024
Graduate Research Assistant at School of Aviation and Transportation Technology	08/2021 – 05/2024
Teaching Assistant at School of Aviation and Transportation Technology	08/2022 – 12/2022

PEER-REVIEWED PUBLICATIONS

- Wang, S., Kong, N. & Gao, Y.** (2024). Use Mobile Location Data to Infer Airport Catchment Areas and Calibrate Huff Gravity Model in the New York Metropolitan Area. Manuscript accepted to *Journal of Transport Geography*, 114, 103790. <https://doi.org/10.1016/j.jtrangeo.2023.103790>
- Wang, S.** (2024). *Determinants of Airport Parking Revenues in the United States: An Econometric Analysis* (Doctoral dissertation, Purdue University Graduate School).
- Wang, S., Zheng, Y., & Gao, Y.** (2023). Airport Ground Access Choice Between Transportation Network Companies and Parking: A Case Study of Hartsfield-Jackson Atlanta International Airport. *International Journal of Aviation, Aeronautics, and Aerospace*, 10(4). <https://doi.org/10.58940/2374-6793.1857>

Wang, S. & Gao, Y. (2021). A Literature Review and Citation Analyses of Air Travel Demand Studies Published Between 2010 and 2020. *Journal of Air Transport Management*, 97, 102135, <https://doi.org/10.1016/j.jairtraman.2021.102135>.

Gao, Y., Hao, Y., **Wang, S.**, & Wu, H. (2021). The Dynamics Between Voluntary Safety Reporting and Commercial Aviation Accidents. *Safety Science*, 141, 105351, <https://doi.org/10.1016/j.ssci.2021.105351>

Wang, S., & Gao, Y. (2021). Can Covid-19 Data Be Used to Guide Airline Stock Trading During the Pandemic? Proceedings of the 24th Air Transport Research Society Conference. Sydney, Australia.

TECHNICAL REPORT

Gao, Y., Wei-Kocsis, J., Kong, N. N., **Wang, S.**, Duncan, G., Skwarek, D., & Anstine, L. (2023). Toolkit for Establishing Airport Catchment Areas. *ACRP Web-Only Document*, (ACRP Project 03-62).

WORKING PAPERS

Wang, S., Dou, Z., Liu, J.Y., Gao, Y. The Ripple Effect of Airport Dehubbing: A case study of Cleveland Hopkins International Airport and Akron Canton Airport (Under review by *Journal of Air Transport Management*).

Wang, S., Karanki, Fecri., Dou, Z., Gao, Y. The Economic Role of Low-Cost Carriers and Ultra-Low-Cost Carriers in Non-Aeronautical Revenue Dynamics (Manuscript in preparation).

Wang, S., Liu, J.Y., Dou, Z., Gao, Y. Airline Dominance Advantage: Exploring the Relationship Between Airline Dominance and Taxi-out Time (Manuscript in preparation).

CONFERENCE PRESENTATIONS & ACTIVITIES

2024 **Wang, S.**, Dou, Z., & Gao, Y. (2024). The Ripple Effect of Airport Dehubbing: A case study of Cleveland Hopkins International Airport and Akron Canton Airport [Presentation]. 27th Air Transport Research Society Conference 2024. (July 1-4, 2024, Lisbon, Portugal)

Wang, S., Dou, Z., & Gao, Y. (2024). Investigating Temporal Relationships Among US Commercial Airports with Similar Commercial Flight Delay Patterns [Presentation]. 27th Air Transport Research Society Conference 2024. (July 1-4, 2024, Lisbon, Portugal)

Wang, S., Gao, Y. (2024). Determinants of Airport Parking Revenues: An Econometric Analysis [Paper & Presentation]. *Transportation Research Board Annual Meeting 103rd* (January 7–11, 2024, Washington, D.C.)

2023 **Wang, S.**, Dou, Z., Liu, J.Y., & Gao, Y. (2023). Spatial Determinants Behind the Seasonal Variations of Commercial Flights Across the United States [Poster & Presentation]. 2023 GIS Day Conference. (November 9, 2023, West Lafayette, IN)

Wang, S., Dou, Z., & Gao, Y. (2023). Riding the Wave of the Future: Forecasting Urban Air Mobility Demand with Mobile Location Data [Presentation]. 2023 UAA Collegiate Aviation Education Conference. (September 29, 2023, St. Petersburg, FL, USA)

Curriculum Vitae - Sen Wang

- Wang, S.,** Gao, Y. (2023). How Does Mobile Location of Airport Passengers Tell and Predict Airport Catchment Areas: A Case Study of the New York Metropolitan Multi Airport Region [Poster & Presentation]. *11th National Aviation System Planning Symposium* (May 15–18, 2023, Irvine, California)
- Wang, S.,** Zheng, Y. C., & Gao, Y. (2023). Airport Access Choice Equilibrium Between Uber Rideshare and Driving-Parking: A Case Study of Hartsfield-Jackson Atlanta International Airport [Paper & Presentation]. *Transportation Research Board Annual Meeting 102nd* (January 10, 2023, Washington, D.C.)
- 2022 **Wang, S.,** Kong, N.N., & Gao, Y. (2022). The Use of Mobility Data in Estimating Airport Catchment Areas: A Case Study of A Multiple Airport Region in Texas [Poster & Presentation]. *2022 Applied Geography Conference* (October 22, 2022, Online)
- Wang, S.,** Liu, J.Y., Xie, H.Z., & Gao, Y. (2022). What is Aviation Research Talking About? A Bibliographic Analysis of Three Aviation Journals during 2011 – 2021 [Poster & Presentation]. *Purdue University School of Aviation and Transportation Technology Poster Symposium* (March 25, 2022, West Lafayette, IN)
- Wang, S.** (2022). Overview of Past Aviation Studies [Presentation]. *Industry Advisory Board*. (March 25, 2022, West Lafayette, IN)
- 2021 Gao, Y., & **Wang, S.** (2021). Show Me the Data: An Introduction of Public Datasets for Empirical Aviation Studies [Presentation]. *2021 UAA Annual Collegiate Aviation Conference & Expo*. (October 6, 2021, Memphis, TN)
- Wang, S.,** & Gao, Y. (2021). Using Data Analytics and Visualization to Facilitate Academic Literature Review [Poster & Presentation]. *2021 UAA Annual Collegiate Aviation Conference & Expo*. (October 6, 2021, Memphis, TN)
- Wang, S.,** & Gao, Y. (2021). Can COVID-19 Data Be Used to Guide Airline Stock Trading During the Pandemic? [Paper & Presentation]. *24th Air Transport Research Society Conference 2021*. (August 27, 2021, Online)
- 2019 **Wang, S.** (2019). Correlation Study of Socio-Economy and Mainland Non-Hub Primary Airports Enplanements [Poster & Presentation]. *2019 GIS Day Conference*. (November 7, 2019, West Lafayette, IN)
- Wang, S.,** Can, J., & Mendonca, F A. C. (2019). Seasonal Wildlife Strikes at Orlando International Airport [Poster]. *Purdue University School of Aviation and Transportation Technology Poster Symposium*. (April 26, 2019, West Lafayette, IN)

AWARDS & SCHOLARSHIPS

- Second Place, University Design Competition
Airport Cooperative Research Program, Transportation Research Board 08/2023
- Best Poster for Map Use/Information Graphics
2022 Applied Geography Conference 10/2022

11th National Aviation System Planning Symposium Scholarship The National Academies of Sciences, Engineering, and Medicine	05/2023
Graduate Research Award Airport Cooperative Research Program, Transportation Research Board	08/2022
First Place, Graduate Student Poster Contest 2021 University of Aviation Association	10/2021
Academic Scholarship (\$6,000 × 5) Fall 2018, Spring 2018, Fall 2017, Spring 2017, Fall 2016 (Five Times)	

TEACHING EXPERIENCE

AT 10200–Aviation Business (Purdue University) 01/2021 – Present

Course Overview: This course aims to provide a broad contextual background of both early and modern air transportation, resulting in awareness of “how” and “why” the global air transportation system looks and operates as it does today while inviting the student to think about and offer their own opinions for meeting today’s air transportation challenges. The course also gives students an introductory glimpse at some of the latest trends and efforts in modernizing the future air transportation sector.

Role: Course Instructor

Tasks:

- In-person, remote, hybrid lecturing/tutoring (Class sizes: 66 - 205 students)
- Instructional design
- Assessment design
- Grading

AT 54800–Aircraft Asset Management (Purdue University) 08/2022 - 12/2022

Course Overview: This course provides the student with a detailed exploration of aircraft asset management programs in both airlines and business aviation organizations. Students analyze and study the critical components of an asset management program, the financial methods in aircraft asset management, and development plans for aircraft acquisitions.

Role: Graduate Teaching Assistant

Tasks:

- Developing syllabus (assistant role)
- Inviting guest speakers
- Lecturing (*Financial Methods Used in Managing Assets*)
- Tutoring and counseling

SPONSORED RESEARCH PROJECTS

Project 11-04: Determinants of Airport Parking Revenues – An Econometric Analysis

Role: Principal Student Investigator

Amount: \$12,000

Sponsor: Airport Cooperative Research Program (ACRP), Transportation Research Board (TRB), National Academies of Sciences, Engineering, and Medicine (NASEM)

Contract Period: 09/2022 - 07/2023

Project Scope:

- Summarized existing literature and collected the data for considered variables
- Adopted Tableau and R to visualize the overview of parking revenues of hub primary airports in the United States
- Applied regression-based methods to identify the determinants of airport parking revenues
- Suggested insights for improving airport parking revenue management based on the findings

Project 03-62: A Toolkit for Establishing Airport Catchment Areas

Role: Lead Research Assistant

Sponsor: Airport Cooperative Research Program (ACRP), Transportation Research Board (TRB), National Academies of Sciences, Engineering, and Medicine (NASEM)

Contract Period: 07/2022 - 12/2022

Project Scope:

- Reviewed all catchment area-related studies and addressed the research progress
- Completed the case studies of US airports by analyzing socioeconomic and aeronautical data
- Utilized R to process and interactively visualize the raw mobile locational data (about 25GB dataset)

COMMUNITY & ACADEMIA SERVICES

Aviation Graduate Council, School of Aviation and Transportation Technology, Purdue University

President, Aviation Graduate Council (AGC)

09/2023 – Present

- Organized social events and professional workshops for graduate students
- Invited aviation faculties and industrial professionals to deliver professional workshops
- Moderated the "Data Days" workshops aimed at enhancing data analytical skills for both undergraduate and graduate students

Chair, Air Transportation Graduate Roundtable (ATGR)

10/2022 – Present

- Guest speakers from a variety of disciplines, such as air transportation, aeronautical engineering, computer science
- Organized and moderated graduate-level research seminars
- Designed and distributed recognition certificates for presenters and event volunteers

Treasurer, Aviation Graduate Council (AGC)

09/2022 – 09/2023

- Establish committees for each event and assigned tasks to committee members
- Planned research workshops and social networking events for graduate students
- Drafted the proposals to apply for an activity grant from Purdue Graduate Student Government (PGSG)
- Secured \$1,350 funding for organizing events from PGSG
- Reimbursed the charges for the events and activities held by AGC

Curriculum Vitae - Sen Wang

Secretary of Aviation Graduate Council	09/2021 – 08/2022
<ul style="list-style-type: none">• Helped AGC president or treasurer moderate the workshops• Using Canva to design posters and newsletters for events and activities	
Reviewer, Collegiate Aviation Review International	10/2021 – Present
<ul style="list-style-type: none">• Peer-reviewed the articles assigned by the editor• Provided research feedback to the editor• Suggested the decisions of acceptance or rejection to the editor	
Reviewer, Transportation Research Board (TRB) Annual Meeting 2024	08/2023 – 09/2023
<ul style="list-style-type: none">• Peer-reviewed articles assigned by the editors from four TRB committees• Suggested the decisions of acceptance or rejection to the editors of TRB committees	
Volunteer, West Lafayette Public Library	06/2023 – 08/2023
<ul style="list-style-type: none">• Shelved the returned books, CDs, and large prints in the assigned order• Assisted readers with borrowing or returning books	
Volunteer, Purdue for Life Foundation	10/2022
<ul style="list-style-type: none">• Gardened the main campus of Purdue University at West Lafayette• Helped local community offset carbon footprint	
Certified Member, American Association of Airport Executives (AAAE)	10/2023
Member, American Institute of Aeronautics and Astronautics (AIAA)	09/2023
Member, Association for Uncrewed Vehicle Systems International (AUVSI)	09/2023
Member, University Aviation Association (UAA)	09/2021
Member, Air Transport Research Society (ATRS)	08/2021

LICENSE

Certified Part 107 Remote Pilot	
Issued by Federal Aviation Administration	09/2023

SKILLS & LANGUAGES

Programming Languages

R, Python, Stata

Software

ArcGIS Pro, ArcGIS Online, AutoCAD, Tableau, SPSS, NVivo, VOSviewer

Languages

Mandarin, English