



Publications

Updated 10/12/2025

Conference papers:

- Delgado L., Bolic T., Cook A., E. Zarein, Gregory E. and Paul A.(2023, July 3-5) [Modelling Passengers in Air-Rail Multimodality](#), EuroSim 2023, Amsterdam, The Netherlands
- Besinovic N., Szymula C. (2023, September 4-7) [Vulnerability envelopes for railway transport networks](#). ODS2023 International Conference on Optimization and Decision Science, Ischia, Italy.
- Besinovic N., Kraut M. (2023, October 15-18) [Optimizing the Routing of Wagons During Disruptions in Single Wagonload Transport](#), INFORMS Annual Meeting, Phoenix, USA.
- Buire C., Delahaye D., Mongeau M., Marzuoli A., Bueno-Gonzalez J., Artime R., Cantú Ros O., Burrieza-Galán J. (2023, November 27-30), [Leveraging passengers' mobile network data for an integrated air-rail frequency planning in Spain](#), SESAR Innovation Days 2023, Seville, Spain.
- Weiszer M., Delgado L., Gurtner G., (2024, July 1-4) [Multimodal air-rail simulation model for evaluation of tactical disruptions](#), 27th World Conference of the Air Transport Research Society (ATRS), Lisbon, Portugal.
- Bueno-González J., de Boissieu M., Garcia Cantú-Ros O. and Herranz R.(2024, November 12-15) [Identification and characterisation of passenger archetypes based on annual long-distance travel patterns](#), SESAR Innovation Days 2024, Rome, Italy.
- Weiszer M., Delgado L., and Gurtner G. (2024, November 12-15). [Evaluation of Passenger Connections in Air-rail Multimodal Operations](#). SESAR Innovation Days 2024, Rome, Italy.
- Szymula, C., Liu, B., and Besinovic, N. (2025, April 1-4). [Multimodal Passenger-Centered Network Vulnerability Assessment using a Path-based Disruption Management Model](#). RailDresden 2025: 11th International Conference on Railway Operations Modelling and Analysis, Dresden, Germany.
- Liu, B., Szymula, C., and Besinovic, N. (2025, April 1-4). [Air-Rail Timetable Synchronization with Itinerary-Based Passenger Flow](#). RailDresden 2025: 11th International Conference on Railway Operations Modelling and Analysis, Dresden, Germany.



- Szymula, C., Liu, B., and Besinovic, N. (2025, July 1-4). [*Multimodal Network Vulnerability Assessment using a Path-based Disruption Management Model with Timetable Sensitive Passenger Routing*](#). CASPT 2025: Conference on Advanced Systems in Public Transport and TransitData 2025, Kyoto, Japan.
- Liu B., Szymula C., and Besinovic N. (2025, July 1-4). [*Integrating Air and Rail Services with Rerouting Strategy*](#). CASPT 2025: Conference on Advanced Systems in Public Transport and TransitData 2025, Kyoto, Japan.
- Delgado L, and Weiszer M. (2025, July 8-11) [*MultiModX - An approach for the strategic and tactical evaluation of multimodal networks*](#), Beijing, China.
- Delgado L., and Weiszer M., de Boissieu M., Bueno-Gonzalez J., and Menéndez-Pidal L. (2025, September 1-3) [*Strategic Multimodal Evaluator for Air-Rail Networks*](#). Euro Working Group on Transportation 27th Annual Conference, Edinburgh Napier University, UK
- Delgado L., Weiszer, and Menéndez-Pidal L. (2025 November 16-20), [*Performance Framework for the Assessment of air-rail network*](#), 65th AGIFORS Annual Symposium, London, UK.
- Delgado L., Weiszer, and Menéndez-Pidal L. (2025 December 3-5) [*Air-rail multimodal disruption management: Rail network supporting air disruptions*](#). SESAR Innovation Days 2025, Lake Bled, Slovenia.

Workshops, Presentations, Round Tables, Posters:

- Pérez V., (2025 March 10-13) MultiModX Poster, UIC Sustainable Week, Paris, France.
- Kamath R., (2025, July 1-4), Agile development and prediction of passenger profiles, 28th World Conference of the Air Transport Research Society (ATRS), Hong Kong. [The 28th Air Transport Research Society World Conference - Programme Booklet](#)
- Plötner K., (2024 May 16) Keynote speech. ARC Annual Spring Conference, Vantaa, Finland.
- Liu B. (2025, May) *Passenger-Centric Scheduling for Integrated Air-Rail Networks*. Workshop on Smart Rail-backed Multimodal Systems. Beijing Jiaotong University, Beijing, China.
- Besinovic N.(2025, October 11-12), [*Linking Modes Leads the Change: Rail-Centric Approaches to the Multimodal Transport Future*](#), Keynote talk. IEEE ICIRT 2025, Beijing, China.



- Eric Tchouamou Njoya (2025, November 10-12), MultiModX poster, [European Civil Aviation Conference \(ECAC\)](#)– Research Day (EAC25), Warsaw, Poland
- Cook, A. and Delgado, L. (2024, November 12-15). [Multimodal performance assessment – where next?](#) 14th SESAR Innovation Days. Rome, Italy 12 - 15 Nov 2024 SESAR.
- Pérez V., Minary B. (2025, November 25-27) [Unlocking seamless multimodality in Europe: Enabling passenger-centric air-rail integration through policy, data and collaboration](#), Round Table, Rail Live!, Madrid, Spain.
- Cantú O., Identification and characterisation of Passenger archetypes based on annual long-distance travel patterns. Poster presentation at NetMob 2024 in Washington D.C. USA, 7-9 Oct.
- Gendrot, C., Covrig, A., Herranz, R., Delgado, L. and Ploetner, K. 2023. MultiModX - Integrated Passenger-Centric Planning of Multimodal Transport Networks. 13th SESAR Innovation Days. Seville, Spain 27 - 30 Nov 2023 SESAR.
- Cook, A.J., Delgado, L., Tanner, G., Gurtner, G. and Bolic, T. 2023. *European performance assessment –challenges and concepts*. Presentation for FAA New and Emerging Aviation Technologies series.

Journal Papers:

- Montlaur A., César Trapote-Barreira and Luis Delgado (2025, September), [Analytical Models of Flight Fuel Consumption and Non-CO2 Emissions as a Function of Aircraft Capacity](#), Applied Sciences
- Luis Delgado, Gérald Gurtner, Tatjana Bolić, Cesar Trapote-Barreira and Adeline Montlaur 2023. Airlines' network analysis on an air-rail multimodal system. *Journal of Open Aviation Science*. 1 (2). [Airlines' Network Analysis on an Air-Rail Multimodal System](#)

Other

- Tchouamou Njoya, E., Kamath, R., Weiszer, M., Delgado, L., Cook, A.J., Besinovic, N., Szymula, C., Liu, B., Menéndez-Pidal, L. and Perez, V. 2025. *MultiModX - Technical Summary*.
- Delgado, L., Weiszer, M., Cook, A.J. and Bolic, T. 2025. *MultiModX - Open Multimodal Performance and Evaluation Tools - Technical Summary*.



Explore the **MultiModX open-source tools** here: [GitHub - UoW-ATM/MultiModX: Repository for MultiModX project](#) – Release v1.0.0 – [Release v1.0.0 - Intra-Spain mobility](#) - used for final ERR deliverables · [UoW-ATM/MultiModX](#)

Multimodal and Passengers Experience Performance Framework - Digital Catalogue of Indicators: [Multimodal and Passengers Experience Performance Framework](#) - [Digital Catalogue of Indicators](#)