

Open Research Engineer or Postdoc Position Quantifying the efficiency potential of the Air Transport System

We are actively seeking a research engineer or a postdoctoral researcher to join our team on a project aimed at characterizing the additional efficiency potential of the air transport system, with a focus on air traffic management (ATM). This project will be carried out in collaboration with two components of the Thales Group, a world leader in aerospace technology and in the supply of ground and airborne products and services in the field of ATM. Academic collaborations, within ISA and beyond, will also benefit to the interdisciplinary conduct of this work and the academic ambition of the project.

Objectives:

- As an extension of the state of the art in this field, you will develop a multidimensional efficiency metric as a prerequisite to design optimal flight plans on a representative set of routes.
- You will develop and deploy a data-driven approach to efficiency quantification.
- You will characterize the nature of economic, environmental or climatic, organisational, regulatory and technological inefficiencies in fleet operations.

Profile sought:

- Master's degree or doctorate in aerospace engineering, industrial engineering, computer science, applied mathematics and data sciences or a related field.
- Advanced skills in modelling and simulation, data analysis, programming (Python) and the use of simulation tools.
- Ability to work independently, to take part in complex research projects and to collaborate effectively with industrial partners.
- Written and oral scientific communication skills in English (and French if native French speaker).
- Previous research experience in the field of air traffic management (ATM) is not necessary but would be a plus.

Working conditions:

- 18-month contract – Target start T12025.
- Place of work: ISAE-SUPAERO, THALES premises (Toulouse and Bordeaux).
- Competitive salary in line with the candidate's experience and qualifications.
- Opportunities for professional development and advancement in a dynamic and collaborative research environment.

Process of application: Interested candidates are invited to send their CV, a covering letter and the contact details of two academic references to Laurent Joly (l.joly@isa-toulouse.fr).

The deadline for applications is **March 31, 2025**, but early applications will be processed readily. Shortlisted candidates will be contacted for interviews.