

As a worldwide technology leader solving critical issues, ALTRAN brings customers' ideas and projects to life and increases their performance, through technology and innovation. Created in 1982, ALTRAN has today more than 23000 employees worldwide, with a strong position in Aeronautics, Defence and Space area.

Altran Flight Physics team participates to Aircraft Loads Calculation for a major aircraft manufacturer in Toulouse area. To reinforce this team, Altran proposes a permanent contract in Aircraft Loads:

## Permanent Contract – Aircraft Loads – M/F

### Mission

Within our Flight Physics team, you will deal with Aircraft Loads topics. Your main missions will be to:

- Calculate & analyses all external loads acting on the aircraft due to
  - manoeuvres,
  - flight in turbulence,
  - landing impact and ground-handling,
  - sustained engine imbalance
  - failure casesthrough modelling & simulation of aircraft aerodynamics, inertia, flexibility, landing gear, control systems, and flight mechanical behavior.
- Ensure that the aircraft is free of flutter phenomena through the entire operating envelope.

### Profile

With an aeronautical engineering education, the candidate should have the following skills :

- Autonomy/rigor/team player/creativity/Good communication skills
- Willingness to learn new skills, self-development, problem-solving orientation
- Advanced knowledge in Aircraft Loads and structural dynamics
- Good knowledge in Flight Mechanics and aerodynamics
- Knowledge in CS-25
- English language: professional level
- French language: level B2/C1 requirement
- Knowledge in Unix/linux, Matlab/Simulink, programming (Fortran, Python, ksh/bash, C, VBA) would be a plus
- Knowledge in PATRAN/NASTRAN (SOL 101, 103, 111, 112, 129) would be a plus

Send your application to the following email address:

[patrice.tajan@altran.com](mailto:patrice.tajan@altran.com)

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Altran Flight Physics team participates to some Flight Dynamics activities for Airbus in Toulouse area. To reinforce this team, Altran proposes a permanent contract in Flight Dynamics and Aircraft Performance:

## Permanent Contract – Aircraft Performance – M/F

### Mission

Within the Flight Physics team, you will deal with Aircraft Flight Dynamics and Aircraft Performance topics. Your main missions will be:

- To model Aircraft Performance
- To adjust aircraft models used for Aircraft Performance studies
- To study High Speed and Low Speed Aircraft Performance in simulation
- To develop on-board applications which aims at improving/optimizing operational Aircraft Performance
- To assess real Aircraft Performance based on Flight Test data
- Continuous improvement: To challenge current development and validation methods used for the development of these Performance Models. For example, increase/improve the use of existing Flight Test data

### Profile

With an aeronautical engineering education, the candidate shall have the following skills:

- Advanced knowledge in Flight Dynamics, Aerodynamics modeling
- Good knowledge in TurboJet Aircraft Performance and Aircraft Performance modeling (Flight, engine, braking)
- Knowledge of JAR25/CS25
- The following would be an advantage:
  - Private pilot license and/or Piloting experience
  - Some knowledge on Flight Operations (ex. a 1<sup>st</sup> experience as an airline Flight Ops engineer)
  - Knowledge of OSMA, SIMPA, IFP, MISSION, OCTOPUS, P\_SIMU, OGEMA tools and AP2633 norm
  - Some knowledge in Unix/Linux, Matlab/Simulink, coding (Python, ksh/bash, C, VBA)
  - Applied Mathematics and Optimization knowledge
- English language: professional level
- French language: level B2/C1 requirement
- Good communication skills /Autonomy / Rigor / Reactivity / Creativity
- Willingness to learn new skills / Self-development

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Altran Flight Physics team participates to Flight Testing for a major aircraft manufacturer in Toulouse area. To reinforce this team, Altran proposes a permanent contract as Data Scientist:

## Permanent Contract – Data Scientist – M/F

### Mission

Within the Scientific Computing department of the Flight Physics Technical Unit, you will contribute to the definition of new ways to analyze Flight Test Data using innovative Big Data Methodologies.

Your main missions will be to:

Through a strong partnership with a major manufacturer based in Toulouse suburbs, Altran is highly involved in the analysis of flight test and simulation data. Given the massive volume that needs to be processed and the different format of the data (both structured and unstructured), traditional data processing are limited. This complexity calls for new technologies that enable to effectively corral and optimize large sets of data.

The development of such technology allows studying several fields:

- Modeling and simulation
- Flight physics and flight test
- Data management
- Big Data analytics

A first mission concerns flight test data storing, processing and analysis. This falls within a wider ambitious flight test cost reduction process. Indeed, when the need of a flight test arises, it is laborious to find-out if the flight test data available could pertain to the need. The objective of this mission is to find innovative solutions to address this difficulty. The main steps of the job will be to:

- Understand existing methods and tools
- Analyse data architecture
- Handle existing tools
- Based on Big Data technology (informatics and mathematic treatment), specify data management and analysis for a smarter approach.
- Define and Prototyping a technical solution
- Documentation

The consultant shall apply his knowledge of Big Data technologies in the frame of a multinational large-scale industrial project for which the notion of Big Data analysis is a challenge.

## Profile

With an education and at least a first significant experience in Big Data, the candidate should have the following skills:

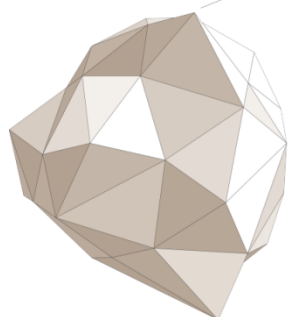
- **Advanced knowledge in Data Analytics**
- Programming/computational skills
- Knowledge of Methods used for physical data analysis (SVD, POD, surrogate modeling, etc...)
- Creative, out-of-the box minded
- Autonomy/rigor/team player/Good communication skills
- Willingness to learn new skills, self-development, problem-solving orientation
- Knowledge in Aircraft Development would be a plus
- English language: professional level
- Knowledge in Unix/Linux, Matlab/Simulink, programming (Fortran, Python, ksh/bash, C, VBA)

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INNOVATION MAKERS



# Permanent Contract – Flight Dynamics and Control specialist

## Mission

ALTRAN is recruiting a specialist in the field of aircraft flight dynamics for our Flight Physics Department, based at Toulouse. Our department works with all the major actors of the aeronautical industry in France.

Overseeing a team of 2–4 consultants, the flight dynamics specialist is the primary technical interface with the customer. He is directly involved in the production of deliverables and guarantees the quality of those produced by others. Displaying strong communication and relational skills, he trains junior consultants and provides support to senior project managers whenever necessary.

The Flight Dynamics specialist has a large scope of activities, which varies depending on customer needs. These include:

- Preliminary Overall Aircraft Design
- Development and tuning of Flight Dynamics and Aircraft Performance models
- Computation of Aircraft High Speed and Low Speed Performance
- Flight Controls sizing. Handling Qualities assessment
- Flight Test follow-up and assessment of real Aircraft Flight Dynamics and Performance based on Flight Test data
- Support to aircraft certification (subpart B – Flight)
- Analysis of in-service events in the aircraft fleet
- Aircraft Loads and structural dynamics analysis

## Profile

Master of Engineering or PhD, with at least 3 years of experience in the field of Flight Dynamics and/or Flight Operations.

Skills in the following domains represent an asset:

- Project management
- EASA CS–25 regulation
- Control Theory
- Programming and software tools: C/C++, C#, Unix/Linux, Matlab/Simulink, JAVA, Python

- PPL Private Pilot Licence

The candidate should display good relationship skills, proactivity, rigor and above all motivation to work in a highly challenging environment.

**Languages:** English

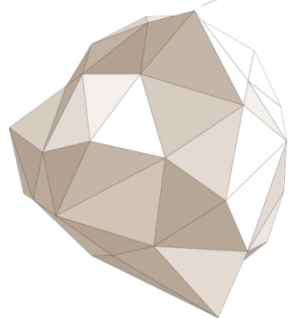
French language is not mandatory for hiring. However, since the position is based at Toulouse, the candidate will need to achieve a good level in French during the first 2 years in the position.

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Altran Flight Physics team participates to some Flight Operations activities for two major aircraft manufacturers in Toulouse area. To reinforce this team, Altran proposes a permanent contract in Flight Ops:

## Permanent Contract – Flight Ops – M/F

### Mission

Within the Flight Physics team, you will deal with Aircraft Flight Ops topics. Your main missions will be to:

- Calculate and Optimize aircraft trajectory
- Analyze Flight Operations and performance from Airlines
- Answer Airline inquiries
- Manage Aeronautical Database (NavDB, RunwayDB, etc)
- Design/Update operational procedures (SOP, MMEL, STAR/SID, Engine out SID)
- Support Flight Operations and Navigation teams from Customer Engineering Office
- Participate to Flight Ops solution development (Software, Apps on Tablet, etc...)

### Profile

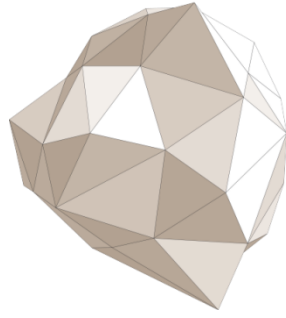
With an aeronautical engineering education, the candidate shall have the following skills:

- Advanced knowledge in Flight Ops:
  - Flight Ops documentation (FCOM/QRH/MMEL/AFM/AHM560, etc...)
  - Route studies (trip time, range, fuel, payload, RAD/CRAM/CDR, etc...)
  - Knowledge of PANS-OPS/TERPS
  - Navigation / ATM / ATC / FMS DataBase
  - Take-off chart calculations
  - Flight Data Monitoring / Flight Operation Analysis (FDM/FOA)
- Good knowledge in Aircraft Performance
- Private pilot license and/or Piloting knowledge would be an added advantage
- English language: professional level
- French language: level B2/C1 requirement
- Good communication skills /Autonomy / Rigor
- Willingness to learn new skills / Self-development
- Knowledge in Unix/Linux, Matlab/simulink, Programming (Python, C, VBA) would be an added advantage

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# INNOVATION MAKERS



Altran Technologies Société Anonyme au capital de 87 375 660€ – Siège Social 54/56 avenue Hoche – 75008 Paris – France  
702 012 956 RCS Paris – TVA FR 03 702 012 956 – Certifiée ISO 9001 par l'AFAQ

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Altran Flight Test team participates to the Flight Testing of a major aircraft manufacturer in Toulouse area. To reinforce this team, Altran proposes a permanent contract in Aircraft Physics:

## **Permanent Contract – Flight Test Engineer- Aircraft Physics – M/F**

**Reference FR-ALTSOU-EV\_AP\_01**

### **Mission**

Within our Flight Test team, you will deal with Aircraft physics topics, namely:

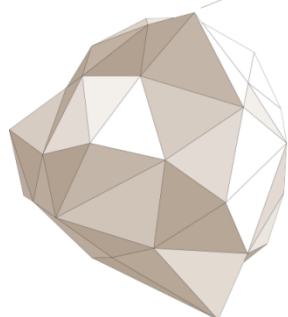
- Prepare, follow and analyze flight tests performed to analyze aircraft aerodynamic
- Prepare, follow and analyze development and certification flight tests regarding Aircraft Performance and Handling Qualities
- Prepare the anemometric and clinometric tests, including calibration
- Prepare, follow and analyze ground and flight tests allowing Design Office to check/improve the accuracy of their Flight Simulation models
- Prepare, calibrate, follow and analyze Aircraft Loads tests performed on ground and in flight
- Specify and validate improvement of client tools used in Flight Test area (visualization tool for real time monitoring, post-treatment tools for differed-time analysis)

### **Profile**

With an aeronautical engineering education, the candidate should have the following skills :

- Reactivity
- Autonomy/rigor/team player /creativity
- Advanced knowledge in Flight Testing
- Advanced knowledge in Handling Qualities and/or Aerodynamic and/or Aircraft Performance and/or Aircraft Loads
- Knowledge in CS-25 certification will be a plus
- English language: professional level
- French language: level B2/C1 requirement
- Knowledge in Unix/linux, Matlab/Simulink, programming (Python, ksh/bash, C) will be a plus
- Knowledge in Flight Operation will be a plus

## INNOVATION MAKERS



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Altran Flight Physics team participates to some Mass properties activities in Toulouse area. To reinforce this team, Altran proposes a permanent contract in Mass Properties and Weight and Balance:

## **Permanent Contract – Mass properties – Weight and Balance – M/F**

### Mission

Within the Flight Physics team, you will deal with

- 1. Weight Estimation and Weight Management topics.** Your main missions will be to:
  - Create and validate weight data banks for Flight Test
  - Manage weight data bank modifications and updates
  - Control weight evolution in the development phase with respect to risks and opportunities
  - Contribute to the guarantee the conformity of delivered aircraft to airlines contracts
  - Contribute to the operational aircraft weight and CG documentation
  - Ensure that methods and tools and R&T activities related to Mass properties
  - Participate in the aircraft section weighing at Final Assembly Line stations to provide with weighing analysis to customer
  - Perform mass and cg estimation when required
- 2. Flight Operation / Weight and Balance activities.** Your main missions will be to:
  - Developing technical information for the Weight and Balance Manual
  - Ensuring airlines support for any weight and balance and Load and Trim Sheet related questions
  - Estimating effects that certain aircraft customization could have on the weight and balance

### Profile

With an aeronautical engineering education, the candidate shall have the following skills:

- Knowledge of the aircraft structure and systems
- Knowledge in Weight & Balance Manual (WBM)
- Good understanding of the flight physics (Weight and balance for aircraft operation)
- Knowledge of Microsoft Office, CATIA v5 (Trend Module), 3DXML Player
- Knowledge in tools like GILDA, ImageMaster (ZAMIZ), DOCMaster, Airn@v, ICC, LTS tool, would be a plus
- English language: professional level
- French language: level B2/C1 requirement
- Good communication skills /Autonomy / Rigor
- Willingness to learn new skills / Self-development

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