Tristan MAITRE

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11 September 1991
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AERONAUTICAL ENGINEER

Specialization - Systems Engineering

Driven by my curiosity and passion for aviation, I am a **problem-solver and questions-asker**, good at thinking in systems, communicating ideas, and adapting to change.

Holding a MSc in Aerospace Engineering and a BSc in Aviation, I have proven experience in the application of advanced methods in the fields of **requirements engineering, system design, verification & validation, and certification.**

My ambition is to **enable sustainable solutions to real-world problems**, with a special focus on the integration of innovative technologies in safety-critical domains.

EXPERIENCE

06/2020 — **Skyguide - Swiss Air Navigation Services Ltd.** Genève, Suisse
Business Analyst - **Operations Architecture & Portfolio Management**
Contracts ended due to the aftermath of COVID-19 pandemic on aviation sector

11/2018 - 06/2020 — **APSYS Product Assurance & Safety Aerospace** Toulouse, France
System Designer - **Airbus Surveillance (ATA34) Design Office**
Develop a new product for more integrated & automated cockpit functions (DAL-B)
- Technical analysis based on requirements, safety compliance and business case
- Specify and model future systems for traffic, terrain & weather avoidance
- Conduct architecture trade-offs to optimise SWAP-C and integration testing
- Liaise with flight operations, compliance, and suppliers to launch industrial phase

V&V Focal Point - **A/C Condition & Monitoring (ATA31) Design Office**
Coordinate acceptance testing for Aircraft Data Collection function (DAL-E)
- Implement fast-paced test strategy for each new embedded software standard
- Establish bench, simulator and flight test procedures to demonstrate compliance
- Follow-up of suppliers for system delivery to the defined requirements

04/2018 - 10/2018 — *MSc in Aerospace Eng.*
AIRBUS Operations SAS - Flight & Integration Tests Toulouse, France
Master Thesis - **Avionics / Flight Management Testing**
Assess the feasibility of Virtual Testing as a new test mean under DO-331
- Conduct feasibility study on integrating FMS software on virtual platforms
- Perform functional and back-to-back tests to assess representativeness
- Make recommendations to pursue virtual testing for system integration

09/2015 - 07/2016 — *BSc in Aviation*
Skyguide - Swiss Air Navigation Services Ltd. Geneva, Switzerland
Internship - **Innovation & Change Management (ICM)**
Support Head of ICM in defining new processes & methods at PMO level
- Develop a Company Roadmap to align functional and company strategies
- Propose a structure for the external funding in innovative projects
- Submit an White Paper on innovation in the Air Traffic Management area

01/2012 - 09/2012 — **RUAG Aviation Subsystems & Products** Interlaken, Switzerland
Internship - **Sales and Marketing**
Support product owners in producing factsheets, invoices, contracts and certification papers for MRO services and sub-systems for civil and military aviation.

TECH SKILLS

- Safety analysis — *FMEA, FTA, STPA*
- Modeling - MBSE — *UML, SysML, Capella*
- System design — *MATLAB-Simulink*
- Requirements Eng — *DOORS, IBM ALM*
- V&V Certification — *ARP & RTCA Standards*
- Product Development

SOFT SKILLS

- Solution-oriented system thinker
- Flexible & Open-minded
- Proactive Team Player

LANGUAGE SKILLS

FRENCH	**NATIVE SPEAKER**
ENGLISH	**FLUENT (C1+** - CAE Certified)
GERMAN	**PROFICIENT (B2)**

EDUCATION

08/2016 - 10/2018

Institut Supérieur de l'Aéronautique et de l'Espace Toulouse, France
Master of Science in **Aerospace Engineering** *(International Program)*
Track Aerospace Systems - **Major** Systems Engineering

04/2018 - 10/2018

Master Thesis
Airbus Operations SAS I Flight Management System Test Lab
FMS Virtual Testing Demonstrator
Assess the feasibility of Virtual Testing under DO-331*(see experience section)*

01/2017 - 04/2018

Research Project
ISAE-Supaero I Department of Complex Systems Engineering
Model-Based Approach for Safety Analysis of Human-Machine Interactions
Develop a Model Based System Engineering methodology to assess the overall reliability of an critical systems implying the human-in-the-loop, extending ARP4761
- Identify unsafe control actions in aircraft procedures (STPA, STAMP)
- Model human controller tasks in nominal/abnormal situations (Petri Nets, Event-B)
- Analyse human errors in task models as a tool for system architecture trade-off.

09/2012 - 07/2015

Zurich University of Applied Sciences (ZHAW) Winterthur, Switzerland
Bachelor of Science in **Aviation**
Major Technical Management & Engineering

01/2015 - 07/2015

Bachelor Thesis
Center for Aviation (ZHAW) & Meteomatics GmbH
Preliminary Study on a Passive Rescue System for UAVs
Assume the technical lead to develop a safe, robust and maintenance-free rescue system for drones: from concept to flight testing
(Flight dynamic analysis, Project Mgmt, MATLAB Simulink, CATIAV5, Arduino)

09/2014 - 12/2014

Project Thesis
Center for Aviation (ZHAW) & SilentFlight DESiE e.V.
Design of Control Surfaces for a Light Aircraft in Canard Configuration
Conduct feasibility study to investigate roll authority & lateral-directional behaviour
(Aerodynamic & Flight dynamic Analysis: MATLAB - Simulink, AVL)

09/2014

Flight Test Lab (Nordholz,DE)
Center for Aviation (ZHAW) - FH Aachen
Lateral & directional stability of light aircraft
Assess the stability of a Piper PA28 with flight tests
(MATLAB - Simulink)

09/2013 - 02/2014

Transport Engineering Project
Institute of Data Analysis (ZHAW) & Swiss International Air Lines
Study on optimum flight speed in case of slot delays
Demonstrate the fuel savings potential of reducing the cruise speed and thus avoiding holding patterns at destination.
(MATLAB, Java)

CERTIFICATES

EASA Flight Crew Licence (2018)
Private Pilot Licence (A)
Single-engine piston classrating

ATSEP Basic Training • Skyguide (2016)
Training designed to impart fundamental knowledge of the CNS-ATM environment

CS50x - Harvard University (2020)
Introduction to the intellectual enterprises of computer science and the art of programming

Forensic Engineering • TUDelftX (2020)
Learning how to investigate and take lessons learned from failures to prevent them in new designs and procedures.

INTEREST & HOBBIES

Flying (EASA PPL SEP)
Mountain Biking
Hiking
Digital Making
Cognitive Sciences
Architecture & Design

REFERENCES

Contact & further references available upon request

Raphaël Michel
Head of Operations Architecture & Portfolio Management | Skyguide - Geneva, CH

David Carlu
Senior Surveillance System Designer | AIRBUS Operations SAS - Toulouse, FR

Gabriel PINEDA
Aircraft Condition & Monitoring System Architect | AIRBUS Operations SAS - Hamburg, DE