February - 2020

JOB OFFER

Description: Flight Mechanics Engineer

About Pangea Aerospace:
Pangea Aerospace is one of the most promising space start-ups in Europe and we are developing disruptive technologies for rocket launchers. The growing market of small satellites increases the need of low-cost access to space, and, at Pangea Aerospace we build the technology to contribute to this goal. We have patented a ground-breaking technology to recover and reuse the launch vehicle and we are developing a first-of-its kind space propulsion system.

We are highly motivated team and we are looking for open-minded, pragmatic and detail-oriented colleagues that want to create the new generation of technologies for rockets. We are looking for people who want to work in a high-tech and fast-growing company and that want to get things done. We offer very attractive job conditions and responsibility to the right candidates.

You will be joining an international team supported by a top advisory board and strong network of partners.

Headquarters are based in the innovation district of Barcelona (Poblenou – 22@), surrounded by international workers from all over the world.

Department: Recovery and Return-To-Base (RRTB)
Position: Atmospheric Flight Mechanics Engineer
Duration: Full-time position
Location: Poblenou, Barcelona
Starting Date: Q1 2020

Responsibilities:
Supporting the work for the launcher recovery system. You are expected to take a leading role in the aeroshape and GNC concept development, and you must be comfortable working independently and taking independent decisions. You will likely have to define your own work to a degree and determine which additional tools, if any, would need to be acquired by the company in order to complete your work.

The responsibilities will include, among others:

- Investigate and optimize the flight characteristics / flying qualities, stability & controllability of flying vehicles and lifting bodies at various flight envelopes, ranging from free-molecular low hypersonic flight to atmospheric subsonic flight.
- Support vehicle concept development considering an overall system perspective.
- Support the creation of vehicle requirements.
- Perform CFD studies to classify aerodynamic parameters & characteristics at reentry & flight.
- Development of the aerodynamic control surfaces layout including sizing, configuration and placement of aerodynamic control surfaces and other actuators, as well as placement of center of mass & aerodynamic center, optimization of aeroshape etc.
- Perform various numerical simulations to classify the vehicle's flying qualities at reentry & flight.
- Estimate mechanical and thermal loads on the vehicle's structure during reentry & flight.
- Validate the suitability of the design concept in regard to the requirements.

Required profile:

- Master's degree in aerospace engineering or related field
- 3+ years experience in aerodynamics and/or flight mechanics
- Good understanding of Flight Mechanics
- Programming skills in e.g. Python / Matlab / Octave, or in a similar high-level language
- CFD experience, preferably using Ansys
- Good understanding of Atmospheric Flight
- Knowledge of Supersonic Flight
- Basic understanding of Solid Mechanics
- Knowledge of hypersonics and/or aerothermodynamics is meritorious

Other desired competencies:

- Experience in working with VTOL vehicles and/or reentry vehicles
- Understanding of GNC / Control theory
- "Hands-on" experience with development of flying vehicles
- Capable of working in a flexible and open-minded environment
- Start-up mindset
- Creative and with experience in overcoming failure

- Fluent English

Benefits:
We offer competitive salaries. The salary can be negotiated according to the experience of the candidates.

How to apply: CV has to be sent to career@pangeaaerospace.com. Do not hesitate to also include a cover letter. Please include the offer description "Aerodynamics & Atmospheric Flight Mechanics" in the title.