



D/TEC –ESTEC (Noordwijk, Netherlands) Opportunity

Propulsion Engineering

The Propulsion Engineering Section has the following tasks:

- provide technical support and consultancy in launcher propulsion (liquid, including storable and cryogenic technologies, and solid propulsion) and spacecraft propulsion (various chemical propulsion technologies) to the Agency project teams responsible for the development of launchers and spacecraft, throughout all project phases;
- contribute to the preparation of work plans in the areas of launcher and spacecraft propulsion in the Agency's technological programmes, with a particular contribution expected on systems and new propulsion aspects;
- prepare and manage, from a technical perspective, ESA contracts for studies, experimental investigations and engineering development activities in space propulsion.

As a National Trainee, you will support laboratory activities related to the current fields of research in the European Propulsion Laboratory (EPL)

- transient system aspects like priming peak assessments;
- water electrolysis propulsion;
- cube sat chemical propulsion.

For this, you will support the testing of those aspects within the laboratory and improve the capabilities to model and validate tests with numerical tools like EcosimPro.

You will provide support to section internal studies into innovative propulsion concepts and propulsion system applications.

Furthermore, you will support pre phase A studies, such as those performed in the CDF (Concurrent Design Facility) and will use these studies to improve the section internal analysis tools. Here you will have to perform the following typical tasks:

- performing trade-offs between different propulsion systems for given applications;
- analysis of end-of-life tank pressure evolution; assessment of trajectories and resulting Δv needs.

You should have just completed or be in the final year of your master's degree in (aerospace) engineering, physics or chemistry