

Electronic design of a High Voltage Power Processing Unit for Electric Propulsion systems

Code: 18/49

Company: AVS UK

Location: Harwell campus, Oxfordshire

Company Description:

OUR SUCCESS IS OUR PEOPLE

AVS is proud to be one of the world's leading companies in the design and development of bespoke equipment for large science and research infrastructure across the globe. Our success is based on our people. We build trust through our technological and scientific competencies, strong dedication to our work, and are conscious about the importance of these qualities to enable our clients to achieve scientific and technical breakthroughs.

AVS UK conceives and develops unique mechanisms, instruments and robotics for Earth Observation, Exploration, Telecommunication and Science missions as well as Ground Support Equipment and In-orbit servicing applications. We are also working towards a new, extensive catalogue of space products covering thermal applications, mechanisms and Electric Propulsion systems, which enhance and create mission opportunities and capabilities. The variety of engineering and scientific knowledge at AVS allows us to work with exceptional teams and incredible technologies worldwide. This currently includes development of two instruments on the NASA M2020 Rover, innovative thermal control solutions for telecommunication satellites, the first European water plasma thruster and new ion thrusters for CubeSats.

In order to deliver such complex solutions, AVS UK seeks for highly qualified and technology passionate candidates to join our team in Oxfordshire in a permanent basis.

Project Description:

AVS is developing a wide range of new Electric Propulsion systems that will enhance the UK capability of Spaceflight and in-orbit space propulsion. The selected candidate will work in the design of new circuitry, power conversion units and electronic systems for Power Processing Units (PPU) for a wide range of propulsion devices and for different applications.

Some of his/her tasks will be:

- State-of-the-art analysis of High Voltage (HV) Power Processing Units (PPU) in CubeSats.
- Design and selection of a HV analogue architecture for a CubeSat electrospray thruster
- Modular detailed design and performance functional computer simulations of the PPU

- Analogue, digital and COTS components selection of a HV PPU for Cubesats.

The selected candidate will collaborate with top UK universities and research centres, and will experience the work at the forefront of space technology developments in a UK SME.

Applicant Specification:

Minimum Requirements:

- Or:
 - o 2:1 Bachelor's degree in Electronic Engineering
 - o 2:1 Master's degree in Physics, Space, Astronautics or Engineering
- Electronic and/or Electronic Engineering background
- Availability to work in the UK.

Preferred Additional Requirements:

- First degree
- MSc with honours in Electronic Engineering.
- PhD in Electronics for Space
- Other courses will be an advantage.

Further details:

3-4 months placement.

Salary £3,500-5,500

Closing Date for Applications:

Monday 5th of November 2018

Start date: ASAP