

## Abigail Hutty MEng (Hons) CEng MIMechE MIET

### CASE STUDY

**Education and qualifications:** MEng (Hons) Mechanical Engineering

**Which Institutions are you a member of?** The Institution of Mechanical Engineers (IMechE) and the Institution of Engineering and Technology (IET)

**Current job title:** Senior Spacecraft Structures Engineer

**Company:** Airbus Defence and Space

**Length in current job:** 4 years

**Approximately how many people are employed by your company?** 1,000+

**Where are you based?** Stevenage, Hertfordshire

#### Please describe your current role:

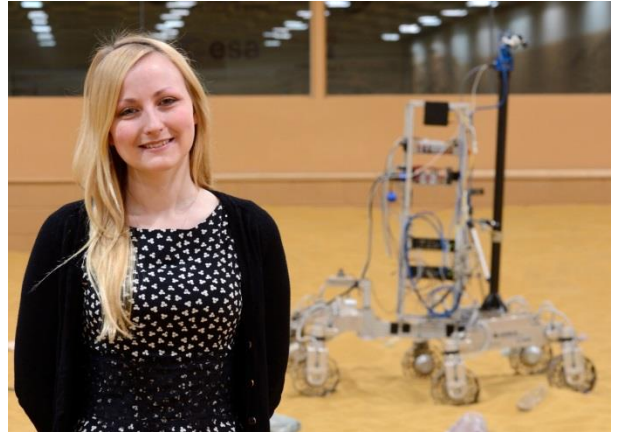
I am responsible for the design development of spacecraft structures, from concept design through to final manufacture and build. This process involves development, testing and qualification. In order to achieve designs that meet the pre-set requirements and can be feasibly manufactured I coordinate the activities of a team of specialists, including stress, design office, materials and processes, and manufacturing subcontractors.

#### Please provide a brief outline of your career so far:

Having spent my placement year at Surrey Satellite Technology (SSTL), I delivered my Masters' thesis on a project that I had conducted for and with the support of SSTL, which assessed the relative merits of a range of methods for establishing the design criteria for composite materials in satellite applications.

In 2010 I joined the Airbus Defence and Space graduate scheme where I focused on dynamic analysis as well as test and stress analysis. This involved carrying out calculations, spreadsheet and finite element analysis for a range of spacecraft components.

Upon completing the graduate scheme, I was offered a permanent post in the Spacecraft Structures Engineering Group where I began to work on the ExoMars Rover project, working to develop a vehicle that is scheduled for launch in 2018.



#### Have you worked on any unusual or high profile projects?

All of my work to date has been on space missions. These have included both low Earth Orbit satellites (Earth Observation) as well as some interplanetary missions (such as Bepi Colombo, a mission to Mercury). I am now working on ExoMars, Europe's first Mars Rover Mission.

#### What attracted you to become registered as a CEng?

The prestige and credibility associated with being formally recognised by a group of peers.

#### How did you become registered as a CEng?

I applied through the IMechE Monitored Professional Development Scheme (MPDS), which involved quarterly and annual report submissions over the period of four years supported by a professional mentor. Completion of the process came through submission of a final report and an interview by a panel of engineers at the IMechE.

**CASE STUDY****What advice would you give someone considering professional registration as a CEng?**

Keep going! The process can sound arduous but in reality only takes only a modest amount of further work beyond what you would already do as a working engineer. Start keeping a record of your work from the beginning of your career as most of what is required is to demonstrate what you have done and achieved, and the learning you have gained from the process.

**What are your future goals?**

My next career goal is to become a principle structures engineer before progressing into more of a systems role, and ultimately towards an engineering manager position on a future space mission.

**What is your employer's attitude towards professional registration?**

My employer did not have any requirement for me to pursue professional registration and it was not a pre-requisite for career progression. However, they acknowledged that it was positive and worthwhile thing for me to work towards.

**Were they supportive while you were working towards professional registration as a CEng?**

My employer did not at the time have an accredited training scheme set up to support my application. However I was able to find a mentor within the company who was very supportive and happy to read and sign off the reports that were integral to my application.

**How does your employer benefit from you being professionally registered as a CEng?**

As a Chartered Engineer, my employer can have confidence in my ability to undertake engineering projects.

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Registered: 2014