Questions:

1. You're currently a researcher studying Jupiter's moons, could you tell us more about it? How's your day-to-day, at work?

Europa, my favourite moon, might have an ocean of liquid water under its surface. Where there is liquid water, life might exist. That's what makes it such a fascinating object. Water might even be venting into space through cracks in the ice. A major topic of my research is investigating what happens to the particles that are ejected into space, and what we can do to detect those particles with spacecraft. I think that's really important, because by sampling these particles we might eventually be able to tell if *Europa*'s ocean is suitable for life. *Europa* is not the only fascinating moon of Jupiter. I also study particles around *Io*, which is a moon covered with active volcanoes, and *Ganymede*, the only moon with its own magnetic field.

I am not a scientist that works in a lab. My daily work involves a lot of computer programming. I build computer models that simulate how molecules (vented from a moon for example) move around in space. I also analyse data from particle detectors on spacecraft that have visited Jupiter's moons from nearby. The research I do is too complex for a one person job. Therefore, I work together with scientists in different countries that have scientific skills that are complementary to mine. I also help out with the scientific preparations of the JUpiter ICy moon Explorer (JUICE), a European space mission that will study some of Jupiter's most fascinating moons. Besides research I also train students in research, write popular science articles, and give public talks.

2. How did you decide to become a scientist? Did you get inspired by anyone or anything in particular?

From a young age I was fascinated by science, from archaeology to zoology. However, Space was always my favourite subject. Three events particularly inspired me during my childhood in the 90s. First, the sighting of Comet Hale Bopp from my backyard. Second, the landing of the first Mars rover Sojourner and third, the launch of the Cassini-Huygens probe to Saturn.

As a teenager and an early university student I never thought I would be scientifically contributing to the exploration of space. Becoming a scientist seemed like a pipe dream, especially at the beginning of university when I failed many courses. Eventually, I did find my way, but the road was long and winding.

After high school, my interest in space led me to study aerospace engineering at university. That is where I learned how to design space missions. I gradually discovered that I didn't just want to design a satellite to Jupiter, but that I also wanted to be the person that does the research once the satellite gets there. This led me to pursue a PhD on the topic of Jupiter's moon Europa, during which I practised the skills of a scientist.

3. What's your favourite part of your everyday work?

What motivates me is the feeling whenever a project progresses. This occurs when I have a (small) new result or resolve a problem. I don't have a new result every day, so often I have to push through tougher periods where progress is not immediately apparent.

Though part of the time I work alone, I also work togethers with others. I get to work with many collaborators in other countries, as well as students in the places I work. Being part of a team to tackle a problem together is very stimulating and rewarding.

I also love giving public talks! Whenever I give a talk, the interaction with the audience energises me for a few days afterwards.

It is easy to forget how unique my experience is to be part of the exploration of space, especially once it is your daily job. However, remaining mindful of the uniqueness of this opportunity is motivating for me.

4. What's the biggest challenge you feel that you (and/or people in similar positions to yours) face today?

I think one of the main challenges that early career scientists in space science face is the lack of good job opportunities. The number of jobs in space science are very limited, making it difficult for space science graduates to further pursue a career after completing their PhD.

Besides that, job conditions for early career researchers are not ideal because of the contracts that are regularly no longer than two years. You often have no choice but to take these short term jobs and move to another country multiple times if you want to pursue a career in space science. Moving countries can be exciting, but it is very time consuming and can be complicated if you have a partner with a career of their own. Not to mention if you have kids or are a caretaker of any kind.

Because of these challenges and the overall job uncertainty, many very capable researchers find themselves with no option but to pursue another career.

5. What's the most important lesson you've learnt so far?

One very important lesson I have learned is to always keep trying and to get over failures by seeing them as opportunities to get better. It sounds almost too trivial to say, but when you are in the situation it is easy to forget. This lesson applies to doing research itself, but also when pursuing other projects like science communication.

6. Why are you interested in communicating science to students?

At a young age I was really interested in space science. However, prior to my university studies I would rarely or never speak to a scientist. In hindsight, the actual day to day work of a scientist remained quite a mystery to me. By making myself available for Lecturers Without Borders I can give pre-university students a chance that I didn't have. I also consider communicating about my science as a part of my job as a researcher. Not unimportant in this matter, I also just really enjoy communicating about space.

7. Are you involved in any other projects, apart from Lecturers Without Borders, related to science outreach? If so, could you tell us more about them?

I regularly give public talks and write popular science articles. These activities are not linked to any particular organisation. In addition to Lecturers Without Borders, I also give talks for Skype as a Scientist. I think it's an easy way for any scientist to get in touch with interested schools, because it cuts the effort from your side to establish connections with schools.

8. Outside your career, what do you enjoy doing?

There are many things I enjoy and I often find myself regretting that there are only 24 hours in a day. I enjoy exploring the world with my partner. We love visiting new places, exploring museums, historical sites, nature and local food. When I travel I often take pictures of wildlife. I am also a bit of an amateur botanist, I try to grow plants from all over the world. Though I don't live in the right place for it now I have some unusual 'night based hobbies', I love using my telescope to explore the night sky and I have a 'bat detector' which I use to find different species of bats.