



## **Testimony of Georgia Markham** **Bachelor student, University of Sydney, Australia**

Research internship at ISAE-SUPAERO, Toulouse, France.

**Topic:** *Embedded software engineering for nano satellite*



### **Where do you come from (university, nationality) and what did you study just before coming for your internship at ISAE-SUPAERO?**

My name is Georgia Markham and I am an Australian undergraduate student from the University of Sydney. After completing my internship at ISAE-SUPAERO, I will be commencing my final year of a combined Bachelor of Mechatronic Engineering, majoring in Space Engineering, and Bachelor of Science, majoring in Applied Mathematics and Computer Science.

### **Why did you choose ISAE-SUPAERO?**

My main motivation behind choosing ISAE-SUPAERO is that it is an institution which is world renowned for aerospace engineering research and education, and I knew that the experience and knowledge I would gain from this once in a lifetime opportunity would be extremely valuable and highly regarded in my future endeavours.

### **What was the purpose of your visit to ISAE-SUPAERO? What was the research internship topic you worked on?**

My internship at ISAE-SUPAERO involved working as a part of the "Centre Spatial Universitaire de Toulouse" (CSUT, <http://www.csut.eu/>) team, developing embedded software for the on-board computer of their future Cubesat missions. Specifically, I developed a driver which facilitates communication between the on-board computer and transceiver of the Cubesat. From this, I gained knowledge in areas relating to RF communication, data-link protocols, and data encoding and decoding techniques, which was unexpected, but extremely interesting.

**What can you say about the teachers supervision, the material means made available, the general atmosphere in the school, clubs and associations and also in Toulouse city?**

Being surrounded by a passionate Aerospace community at ISAE-SUPAERO and working in a team full of like-minded individuals was inspiring and drove me to work my hardest. I learned a lot from my Supervisor and the CSUT team Director, both of whom were extremely supportive and provided excellent technical expertise. A highlight from my time at ISAE-SUPAERO was being able to participate in their International Day, where the diversity of the School is celebrated and students bring typical items from their home countries such as foods, clothing and games. We made vegemite toast and fairy bread to share! Toulouse is a beautiful city, and the people were incredibly nice and polite, and were especially patient with my very poor French speaking ability! My accommodation was near the city centre and the excellent public transport system made travelling to and from ISAE-SUPAERO on weekdays, and all over the city on weekends while exploring, very convenient and easy.

**What were your objectives for this internship? What did it bring you?**

Through this internship, I have gained technical and non-technical skills which will be beneficial to my future endeavours, where I hope to pursue a career in the space industry. Within the Aerospace community, I have been fortunate enough to make invaluable connections with professionals and like-minded people whom I will remain in contact with, and by living in a different country and experiencing a new culture I have gained a broader international perspective and a new level of independence.

**Do you have any advice for an Australian student coming to France?**

My advice to any Australian student who is thinking about applying for a Nicolas Baudin internship is to go for it! Take advantage of this once in a lifetime opportunity! I almost didn't apply because I was doubting myself, but I have had the most incredible experience and gained so many skills, from both the workplace and daily life living abroad in France. Once in France, my advice would be to make the most of any extra opportunities offered to you, whether that is taking a language class, joining a club or association which aligns with your interests, participating in university organised events, or travelling and exploring on weekends, it will certainly make your time living abroad in France even better!