1. What I learnt when preparing for the visit
The biggest uncertainty is if I could get the Schengen visa for the short stay in Spain. I have such experience before when I would attend an international conference in Finland. However, this time the visa must cover much longer time, and I ordered a shared apartment in Airbnb instead of a hotel room. So I still felt uncertain about it. The results turn out to be good since I got the visa issued within 15 days. So I made an observation that an entry visa to EU countries is very easy to obtain as long as I have Osaka University as my patron. Therefore, I will not feel upset when applying for a Schengen visa for future academic activities. Finally, thanks a lot to dear Humanware office staffs for getting everything on track for me.

2. Aims of the internship and achievement
During the internship, I learnt a lot of things in terms of research. The meaning is three-fold. Firstly, I cooperate with researchers who care more physics (i.e. geosciences) than computer science. So I must learn some fundamentals about the topic such as wave propagation and staggered grids, which are physics conceptions I merely hear about in my own research. Therefore, I think this is related to one of the key ideas of Humanware, interdisciplinary research. Secondly, I had a taste of applying the research achievement to solve real world problems. There were many pitfalls to overcome when making business sense of research achievements. It is very hard to develop a killer product as my doctoral dissertation like Dr. Yangqin Jia’s Caffe, however, I will try my best to work this way. Thirdly, I practiced the way to draw people’s attention in order to call for help. I gave a talk in BSC and I did my best to attract the researchers’ interest so that I could have opportunity to further cooperate with and get help from them in the future.

3. What I learnt via communication
I had many communications with the researchers who hosted my internship via email, especially when preparing for this visit. The most important thing I learnt is to be appropriate and polite. For instance, some tips for writing an email such as assuming everyone in the academic world has doctoral degree.

4. What should be improved in the future
This was the first time I did research in a research institution as a guest, which made me feel a misfit compared to a comfortable environment as in Osaka University. What’s worse is that the researchers chat in Spanish instead of English, which made me feel even left out. Therefore, to be frank, the willingness to talk to them in English was quite low. This also reflects my unconfident personality because, for example, most Americans I know speak nothing more than English, but they still have the passion to communicate with non-English speakers. Therefore, I think this is one of the biggest challenges for me to face as a researcher in the future.

5. Experience obtained by working in a different field.
As I explained before, the researchers in the department where I had my internship care more geosciences than computer science. Although my laboratory have developed a promising framework for accelerating large-scale stencil computation applications, this is the first time to test it with real world use cases. My laboratory does not have fundamental courses and textbooks for geosciences, so I must fill myself with some fundamentals in a short time. For this purpose, I read many papers written by the researchers in the department, which helped me understand some basic conceptions. Moreover, I was provided with the source code from BSC researchers so I could learn more details about the wave propagation physics. The source code was composed very well so I also improved my coding ability by reading and analyzing it. Finally, I must
reconstruct the code so that I can apply the framework to it. Frankly speaking, the
code I modified was not as good as the original one, which alarmed that I must try
harder to hone my programming skills.

6. About the daily life during the internship
The life in Europe seems to be more relaxing than in Asia. Due to the budget, I rent a
shared apartment on Airbnb. As far as I saw, the price for purchasing an apartment is
not very high in Barcelona but the rent price is really expensive. Moreover, a meal
here is almost twice as expensive as one in Japan. For example, one normal meal served
in the canteen of University of Barcelona costs 7.9 euros. As for the safety issue,
what I feel was much better than that in news. People are very friendly. One story is
that my friends and I were trying to find a good tavern and passing by a block not so
developed. The street is for both pedestrians and cars. Suddenly a dog sprang out, and
one of my friend was very near a car (although moving slowly) due to avoiding the dog.
At that moment, a stranger came out at a very fast speed, and protected my friend from
the car. This makes me to regain the belief that most people are inherently
benevolent. That night we also witnessed a demonstration in favor of Catalonia
referendum, and the protesters were disciplined.

(a) a normal dish served in UB canteen (b) researchers of BSC (c) in the front of Sagrada Familia

7. Other meaningful Things
During the internship, some friends of mines who are studying in Lund University came
to Barcelona to visit me. I learnt a lot of things about the study life in Lund
University as well as the daily life in Sweden. We also talked about the possibility
for Chinese researchers to work in Lund University and other prestigious institutions
in Sweden. We also compared the work situations for researchers in main European
countries. This discussion is very help for me to make career decisions (e.g. where to
get a post doctorial position) in the future.

Friends from Lund Univ. who seduced me to drink 89.9% alcohol, with no chaser