# INTERNSHIP: ZRi, consultancy firm, The Hague

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Internship period: from September 2014 until December 2014

## How did you get this internship?

During the Extreme course which I was following in Q4 of 2014-2014 Martin Tenpierik send an e-mail to all the students about the internship position, focussing on Building Physics, that was available at ZRi. Since I was quite interested in learning more about building physics I replied to the e-mail and was invited for an interview at ZRi a few weeks later. I turned out to be one of two candidates and a few weeks later, just before the summer break, I got an e-mail that they wanted me as their intern.

#### What was your general impression?

I really enjoyed this internship because I was able to experience quite some different aspects of building physics. While my main focus was on my research into acoustics I also got to work on some other projects like fire simulations, daylight and sustainability calculations. I got to work on such a variety of tasks mainly because the company isn't that big. It has about 30 employees which all have to have some knowledge on these various topics.

#### What was your main activity?

I was mainly focussing on a research into the acoustics of



sports halls. For sports halls the so called reverberation time is generally used as the most important parameter to define the acoustical quality. During my research I compared the methods to calculate this parameter with the actual value of this parameter. I did this by doing measurements in fourteen halls and comparing the measured values to the calculated values.

From this research followed that there was a possible improvement for the calculation methods, especially in the lower frequencies. In the last few weeks of my internship I was able to write a draft version of an improved method. While this method is far from proven I was really satisfied, and even surprised, with the fact that I was able to come up with something like this.

#### What was the most important thing you learned?

I think the most important thing I learned was that you're never done learning. Before I started with my internship I was afraid that I wouldn't have enough background knowledge about building physics since the education at the TU is more design oriented. However, it turned out that the background knowledge I had was more than enough to learn myself how to do the more complicated tasks. Of course I also got enough help from my colleagues when I wouldn't understand some things, but I never had the idea that I was missing important background knowledge.

### What would you recommend other students?

I would recommend everybody to do an internship if possible. You can really learn a lot from it and it personally helped me to become more certain about the master track I had chosen. If you've the opportunity I would recommend doing an internship just before or after you start with your master programme, this way you can get a good idea about what your job can possible be when you're finished. To help you even more with this a broad internship would be the best, so be sure you will not be stuck to just one project or research, but also ask if you can do some other, perhaps smaller, projects or tasks.

# Do you have any final remarks?

When you try to find an internship, don't only focus on the type of internship you want, also try to find a nice company. While I really enjoyed my internship for the research I was doing, I also really enjoyed working together with my colleagues: the atmosphere was very nice. This was highly motivating for me and really helped me to stay productive even when I would be stuck on a certain part of my research.





