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Me on an ice floe, outside Hopen spring 2019. Polarsyssel in the background

This spring (2020) I am finishing my Master degree at the University of Oslo. I am studying Fluid Mechanics (Energy, environment and safety), where I am specializing in fluid- and wave mechanics.

At the same university I took my undergraduate degree in Mathematics, Informatic and Technology. Here I figured out that I could take my last semester abroad at the University Center in Svalbard (UNIS) specializing in Arctic Technology: Ice Mechanics (AT-211) and Frozen Ground Engineering (AT-205). After reading about the learning outcomes and activities, I felt like this was meant for me, and applied at once! And I do not regret it! The first time I came to this wonderful place on earth, was 5th of January 2018. During these 6 months (January-June), I got to know myself better, breaking limits I though I would never put my self in. I figured more out what I wanted to study further in my life, and that ice mechanics was going to be a part it.

In Ice Mechanics (AT-211), I was introduced to ice growth, ice interaction with offshore construction, basic physical-mathematical models to describe rheological properties of fresh and saline ice, and much more. The course was both theoretical and lab + field work. This gave us the opportunity to go Svea and out on the ocean with Polarsyssel. I really enjoyed getting first-hand experience of conducting research in field, that I ended up doing a lab+fieldwork experimentally master thesis.

The base camp at Svea in 2018 with AT-211. The whole week we where there, this was the weather we had!

In my master thesis I am working on a new methodology to conduct a feasibility study to investigate the velocity field below an ice cover in the Arctic. My setup consist of an remote operative vehicle (ROV) with frontal lights and camera, to light up and record the velocity of the water. As tracer particles, I am using bubbles. I my master I have conducted field experiments both spring 2019 and spring 2020 at Svalbard in collaboration with UIO, UNIS and Arctic offshore and coastal engineering in changing climate (AOCEC). This have been a lifetime full of experiences that I will be a huge part of me the rest of my life.

Spring 2019 I joined Polarsyssel with AT-211 class, down to Hopen, where we found an ice floe to do the experiments on, and we also found a beautify iceberg! Here I got to test my setup for the first time. I studied the water velocity close to the ice floe. I also took video of the ice floe and ice berg underneath them, to see the structure and depth.

Outside Hopen, April 26th 2019. The ROV is deployed in the water.

The magnificent ice berg that we found outside Hopen.

In spring 2020 I went to Kapp Amsterdam (Svea), to study the flume underneath the ice when an ice floe hits the ice edge. This was one comprehensive setup. It took us 3 days just to make the pool and have an ice floe floating in it. Here we met the cuties little seal, that was not afraid of use, and spent several day helping us keeping the water to not freeze up to much during the nights. This year we had a huge tent that we could perform our experiments in, and that was a lifesaver many days.

The setup of our experiment.

The seal that kept us with company

Autumn 2019, I and Yiyi Whitchelo (PhD at UIO), was asked to join AT-332 and Aleksey Marchenko to participate in an experiment at UNIS. The experiment was to submerge a pendulum that was hanging "freely" down into the water. Then we sent in waves with a pendulum to investigate the motion of the pendulum. In another experiment we submerged a plexiglas box in front on the pendulum, with acoustic emission sensor to record the sound when the pendulum interact with the box under the influence of waves and when we dropped the pendulum from a certain angle.

I want to give a special thank to Aleksey and Nataly Marchenko for yours hospitality and making this journey for me possible! I will never forget this.

At the top of Trollstein, to see one of the first glimpses of the sun after the dark period.

Now that I am soon finished with my master, there is two things that I will miss, the wonderful view everywhere you go and the people! The student life at Svalbard is something that I can write and write about because there is never one boring moment. There is always something new to experience or to discover, and you are never alone.

Dinner with everyone living in the house, 2018.