

My Final Year Project

An investigation of the nitrate inflows into a humic lake using high-frequency monitoring data.



- Using a **high frequency optical sensor** to measure NO_3 instead of traditional **wet chemistry methods**.
- Can the SUNAV2 function in a **low nutrient environment** and what factors are **interfering** with it?
- Use RStudio to perform statistical analysis (**Spearman's rank correlation** analysis) on 2 years' worth of data

- There is a significant positive relationship ($p < 0.05$) (correlation coefficient = 0.43) between the **sensor** NO_3 readings and **grab sample** NO_3 readings?
- There is a significant positive relationship ($p < 0.05$) (correlation coefficient = 0.34) between sensor NO_3 readings and **colour**.
- SUNAV2 does **work efficiently** in a humic environment but requires **post processing** to cancel out colour interferences.



VS

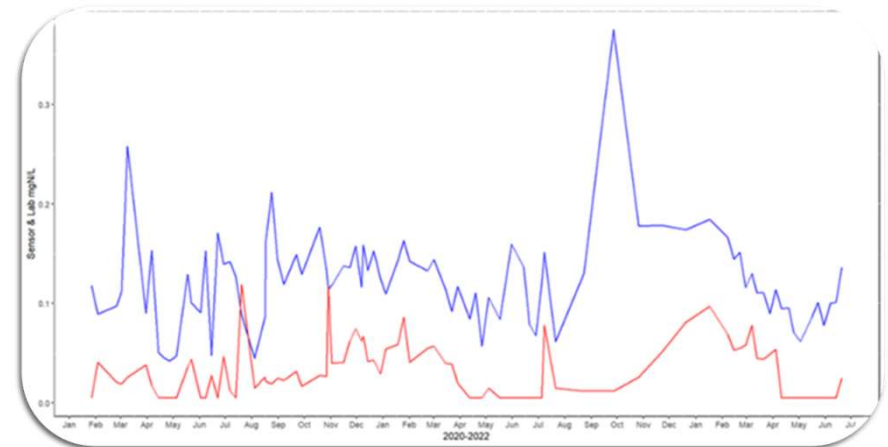
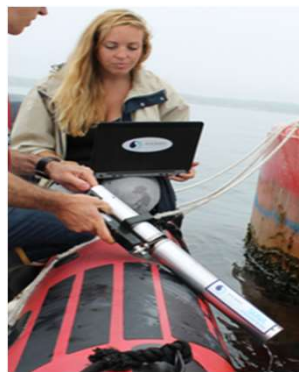


Figure 1. SUNAV2 is reading NO_3 efficiently but it's also facing interference from coloured substances in the water causing it have higher, false readings

How to Complete an Awesome Final Year Project

Work AWAY From Home



Bedroom = Sleeping time



Sitting room = Relaxing time



Kitchen = Eating time

**My place to Work
AWAY From Home....**



Benefits:

- Motivation from seeing others working.
- Computers available if you don't have a laptop.
- Difficult to procrastinate – Less distractions and interruptions.