

# Analysis of ocean surface temperature over the past ten years

## Complex systems oral presentation proposal

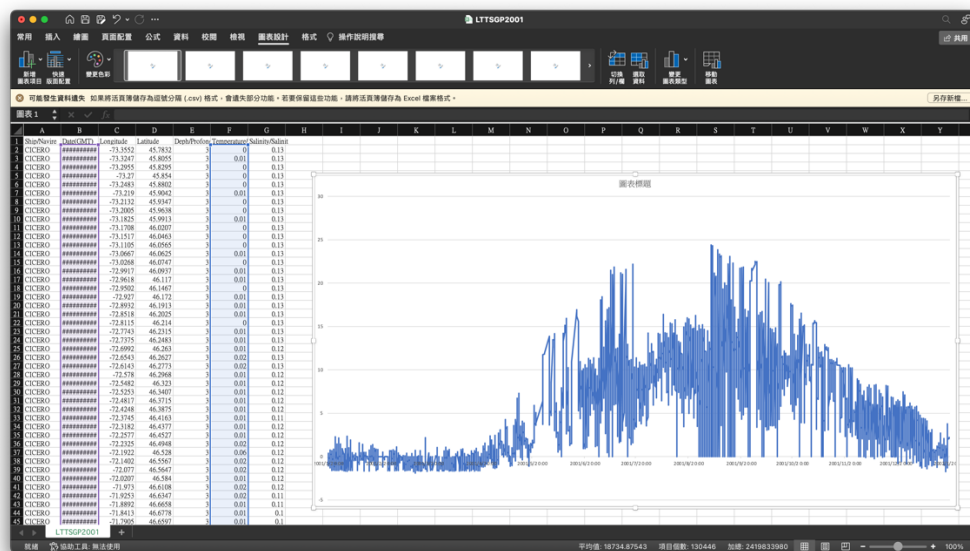
### Motivation:

In the past ten years, the temperature of the earth has been getting higher and higher. In addition, more than 70% of the earth's surface is ocean, which is composed of water with high heat capacity. Therefore, I used data from the Canadian government and data from Taiwan's Central Weather Bureau to analyze sea surface temperature at different latitudes.

### Analysis approach:

I expect to use Hilbert-Hung transform to find the distinct components in the data. For example, the temperature oscillations over four seasons or 12 months. Also, I'd like to see trends in the greenhouse effect, temperature differences between latitudes, and ocean temperatures in relation to major international weather events like hurricanes and forest fires.

Example data: the temperature of the ocean near Canada at 2001.



### Reference:

<https://open.canada.ca/data/en/dataset/8a3dc9e5-f3af-4270-8c09-43fa2c25848b?fbclid=IwAR1Hmu2HKftybmWz3BLcsgRhteHcWZuxC8SEcl5MF5RDCE4xqdxnXs9Qhww>

[https://ocean.cwb.gov.tw/V2/data\\_interface/download?dataset=Tide-his&title=潮位站歷史觀測資料&format=CSV&all\\_formats=TXT,CSV](https://ocean.cwb.gov.tw/V2/data_interface/download?dataset=Tide-his&title=潮位站歷史觀測資料&format=CSV&all_formats=TXT,CSV)

<https://www.storm.mg/amparticle/2201287>