Section 3

2. Sensors Calibration

1 Co-location Measurement (not in this workshop)

Detect and log local air temperature, relative humidity, and air pressure with 5 GeogSTEM sensor box & Professional Sensor (i.e. Kestrel / HOBO / Davis , etc.)

2 Linear Regression

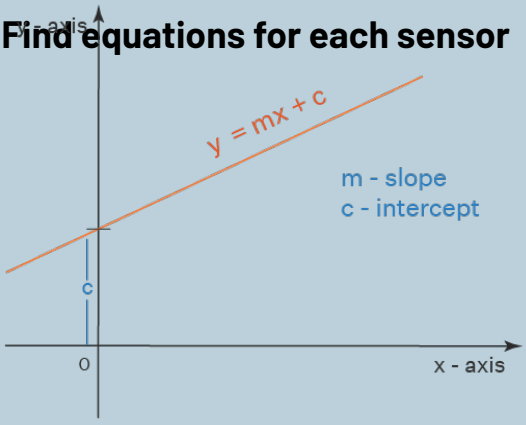
Use Professional Sensor as reference, as:

y = GeogSTEM Sensor Box Measured Values

x = Professional Sensor Measured Values

Use Excel to plot a x-y plot with GeogSTEM sensor box and Professional Sensor's readings

3 Find equations for each sensor



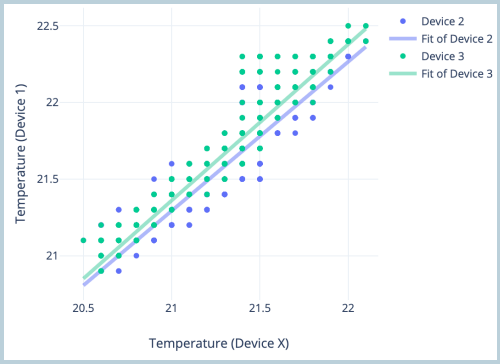
3 Data Post-processing

After fieldwork study, you may use Excel Equation to easily adjust the measured data

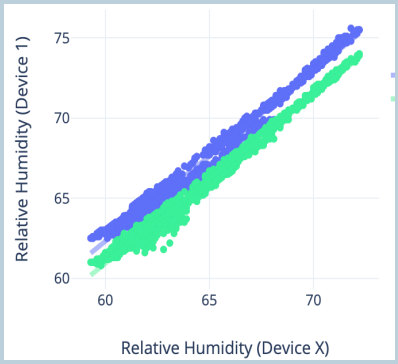
Slope Intercept Form: y = mx + c

y = Calibrated value
x = Measured value
m = Slope found from x-y plot
c = Intercept from x-y plot

Air Temperature (°C)



Relative Humidity (%)



Air Temperature Time-series Analysis