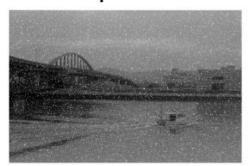# Week4: image mining2

1. Install Opencv, python, jupyter notebook  (or install winpython)

2. Write the functions to implement log, power-law and negative transformations.

3. Write the functions to add Gaussian, impulse and uniform noise on the image

4. Image de-noising



Original     with Impulse Noise     Median Filter

Note: use the **week2_test1.jpg and week2_test2.jpg** provided in the folder as an example

If you do not have python or opencv installed in your computer, try:

1, Download winpython
https://github.com/winpython/winpython/releases/download/5.3.20221233/Winpython64-3.11.1.0.exe

2, Install opencv
Pip install opencv-python

3, Run jupyter notebook

4, libraries needed

```
import numpy as np
import cv2 as cv
import math
import matplotlib.pyplot as plt
```