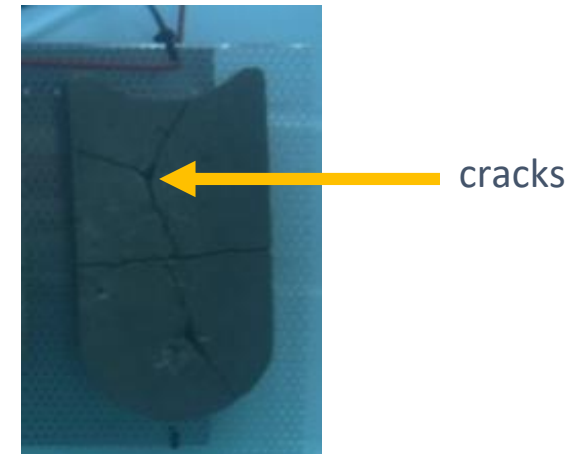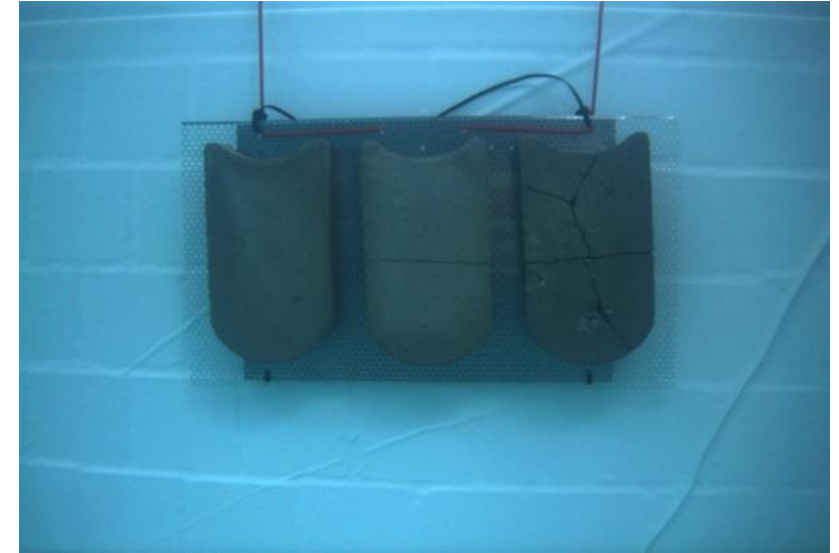# Detecting Cracks in Underwater Images

Context:

assist underwater infrastructure monitoring, e.g., bridges

i.e., detect cracks in concrete bricks in underwater image data
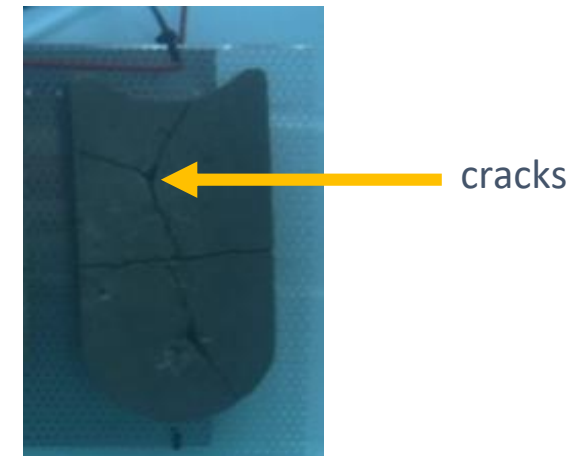

cracks

Detecting Cracks in Underwater Images

Tasks:
- use underwater image enhancement methods like dehazing & contrast enhancement
- test different edge detection methods
- use a heuristic that distinguish cracks from normal boundary edges, e.g., the textures on both sides of a crack are similar
- measure the length of the cracks (in pixels)

Implementation:
- use OpenCV
- test and document the effects of different methods and their parameters

cracks

Detecting Cracks in Underwater Images

Topics for the Literature Survey (State of the Art) Part

- Underwater Infrastructure Monitoring and Maintenance
- Underwater Vision & especially Image Enhancement
- Image Segmentation
- Edge Detection

Detecting Cracks in Underwater Images

Dataset

http://robotics.jacobs-university.de/TMP/BScTheses/data/BricksCracksCamera/2016-08-23-15-30-35.bumblebee.avi