

## CURRENT POSITION

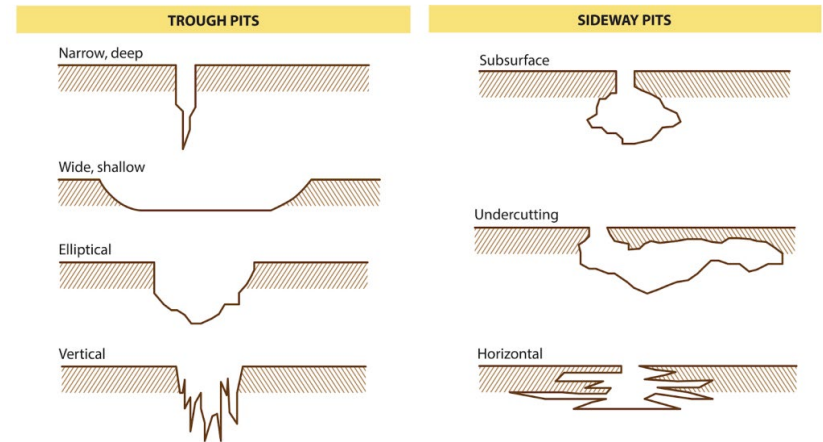
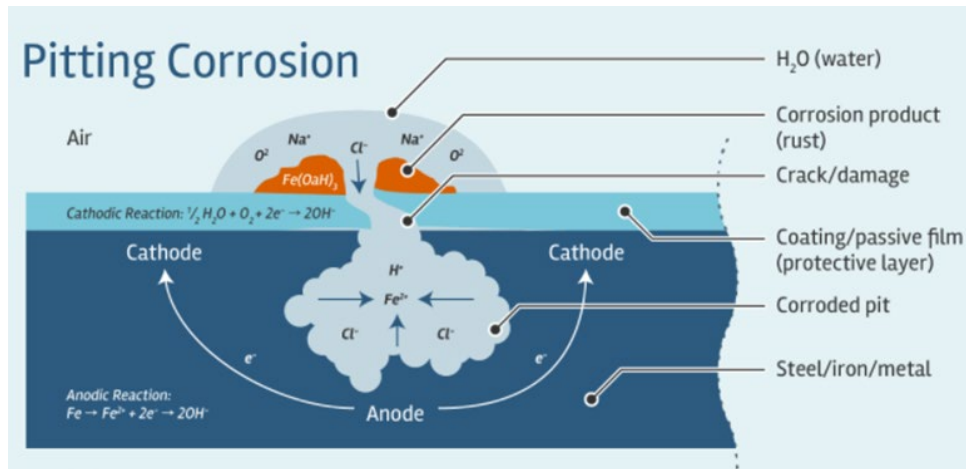
- Cal Poly, SLO, 2020 – Current
  - ❖ Assistant Professor
  - ❖ Civil and Environmental Engineering Department

## EDUCATIONAL BACKGROUND

- University of California, San Diego, 2019
  - ❖ Ph.D. in Structural Engineering
- University of California, Davis, 2016
  - ❖ M.S. in Mechanical & Aerospace Engineering
- University of California, Davis, 2015
  - ❖ M.S. in Civil Engineering
- Dalian University of Technology, China, 2014
  - ❖ B.S. in Port, Waterway, and Coastal Engineering



- Pitting corrosion is a localized form of corrosion, which creates cavities in the metallic materials that are difficult to detect, predict and design against.
- Pitting corrosion damage (i.e., 'pits') can take many different forms.



Schematics of pitting corrosion (Source: D&D Coating Ltd)

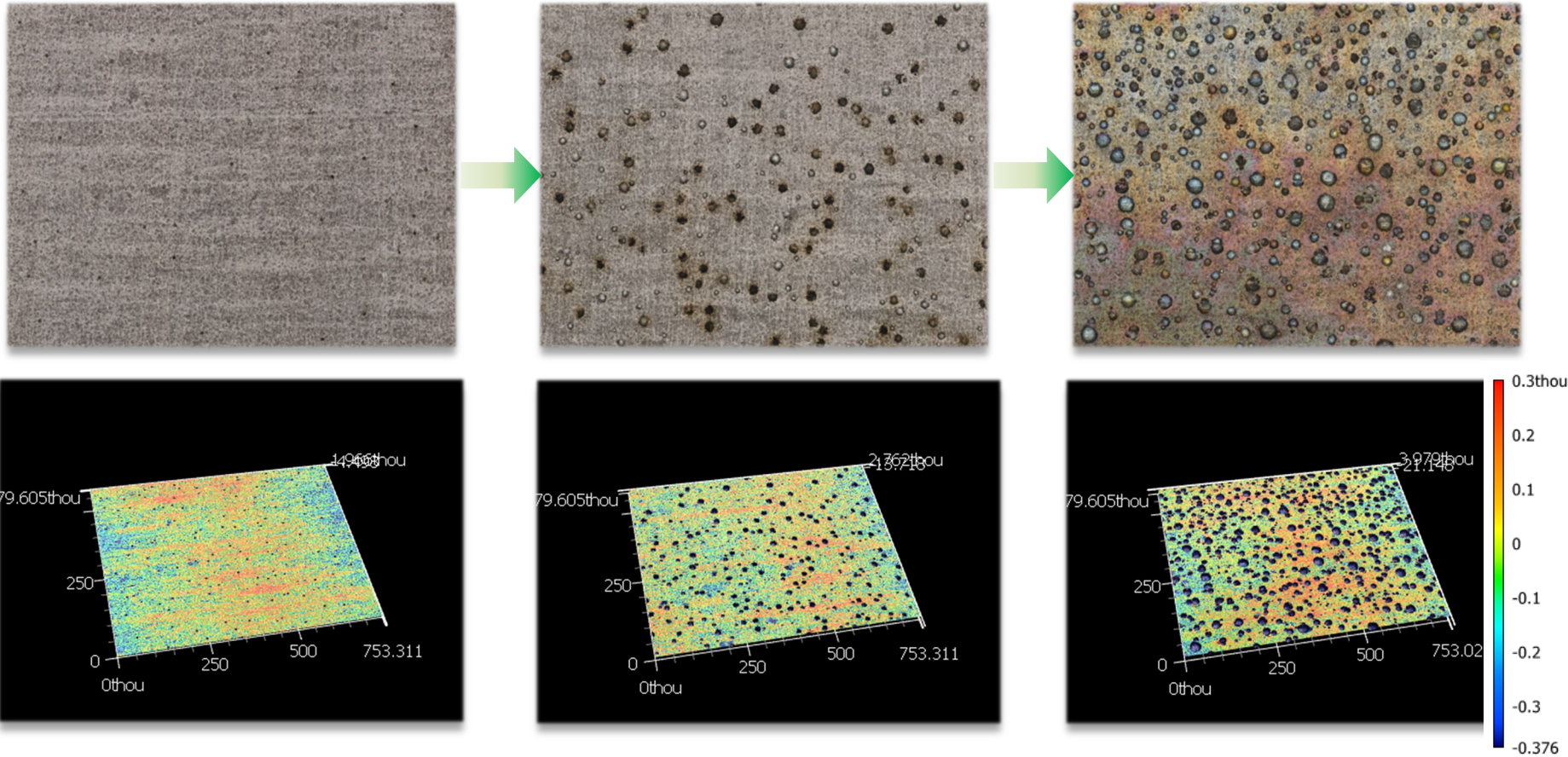
Common forms of corrosion pits (Source: AMARINE)

- Various types of structures can be subjected to pitting corrosion.
  - ❖ Examples include boat locks, metal pipes, aircrafts, and so forth.



# Corrosion Experiment and Detection

- We have designed experimental procedures to investigate corrosion damage development and have used machine learning technique to automate damage detection based on images.



Corroded stainless steel specimens. From left to right: 10 min, 1 hr, and 4.5 hr



# Research Benefits and Qualifications



## Research benefits for YOU:

- ❖ Hands-on experimental skills.
- ❖ Analytical skills for multi-scale imaging, image analysis, data analytics, machine learning, and etc.
- ❖ An opportunity to work closely with a highly multidisciplinary team within Cal Poly (e.g., BMED, ME, CE, and MATE) and with other Universities.
- ❖ Tangible research products to be added as a unique advantage on **YOUR** resumes.



## Qualifications:

- ❖ 2<sup>nd</sup> year and above, preferably 3<sup>rd</sup> year
- ❖ Good academic standing
- ❖ Underrepresented students and female students are highly encouraged to apply
- ❖ Long-term commitment to the projects (at least 2 quarters)
- ❖ Send your resume to Dr. Wang ([lwang38@calpoly.edu](mailto:lwang38@calpoly.edu))