



SDSU
presents
MS Computer Science
THESIS DEFENSE

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Underwater Probes

Abstract

The cost of underwater probes can be prohibitive for hobbyists or researchers looking to use them for various small-scale experiments. With the starting price for commercial grade probes starting in thousands of dollars, other ways of obtaining the data needed for study and experiments are constantly sought after.

With the advent of micro-controllers and open source projects such as the OpenROV, we designed and created our own underwater probes at a fraction of the cost of commercial solutions. Using local hardware store bought materials along with specialized hobby circuits and probes, we constructed our own underwater probes, looking to reduce the overall cost to further our studies.

Modeled after the various projects in the open source community we fabricated an underwater probe for use in both freshwater and saltwater. These probes can also be constructed to sit on top of the water's surface as well as be submerged indefinitely.

The biggest hurdle that we currently face is ensuring the accuracy of the probes. We are developing improved software and calibrations to deliver a product that anyone can build and use for their own studies and experiments for a fraction of the cost of commercial probes.

Thesis Committee

Robert Edwards, Thesis Chair, Department of Computer Science
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