

Meet The Team





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Meet Fluidra

Fluidra: We have a long legacy of innovation and a history of providing quality pool and spa products, and we're still at it today — all in an effort to exceed our customer's expectations and deliver the perfect pool and wellness experience.

Acknowledgements

The team thanks Dr. Shaffar for advising this project. The team would also like to thank Mark Bruno for his assistance in the prototyping and development of the electronics. Additionally, we thank all Fluidra members who assisted in this project, including Mark Bauckman, Sarah Washington, Matt Nix, and Minas Minassian.

Laminar Water Jet with Microbubbles BUBBLESTREAM

Project Overview

In the swimming pool industry, there are various designs of water features that use water and light to accentuate the swimming pool aesthetics. One challenge is to bring enough light to a long stream of laminar flow to create a bright enough visual effect for the user. One proposed solution is to add small bubbles to this stream of water which shall refract the lighting and make the stream "glow" more brightly when viewed by the user. This project is to start with a basic water feature and design a method of creating the micro bubbles to create the desired effect. The bubble size and quantity shall need to be controlled and adjustable for testing to get the optimal effect.



Transducer Housing



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FUUDRA

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Exploded Jet



System Level Diagram



Manufacturing Pictures







Bubble Micro-Generation controlle System Supplies transducer with voltage to vary frequency to meet the requested specifications Transducer Accounts for stream length and velocity to produce requested bubbles Bubble Generation

