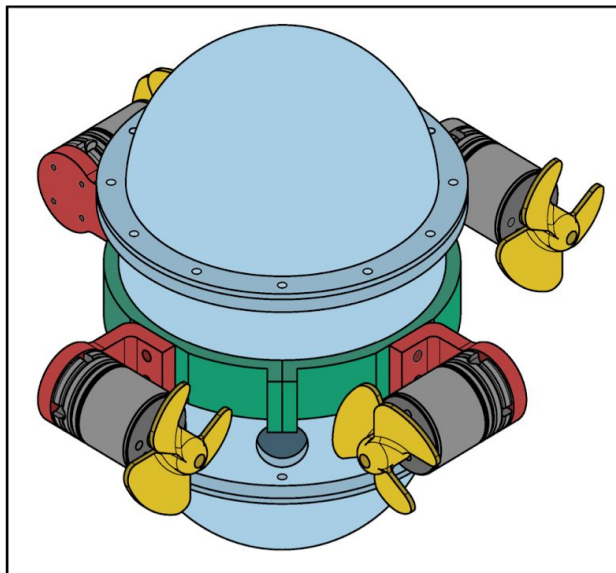


Optical Communication in Unmanned Vehicles to Revolutionize Underwater Wireless Networking

With current technology, even planets that are light years away had been mapped out with higher resolution than most of the seafloor on Earth. Limited by low bandwidth underwater communication, sonar is the traditional approach for underwater communication. Our team aims to use optical communication to create low cost, high bandwidth means of underwater networking between swarms of Unmanned Underwater Vehicles (UUV) for wireless communication. By modulating lasers at high frequencies, and through advanced control methods, we aim to transmit data across large stretches of open ocean at vastly faster speeds than traditional methods. Specifically, our group has been building onto our research lab's existing UUVs to design, build, and integrate a wireless means of communicating through lasers in open ocean environments.



Above: CalSat UUV

Right: Swarm of CalSat UUV, relaying information optically across a span of water

