Developing the OysterBot for oyster cage retrieval

Molly Curran[1] and Dale Leavitt[2]
[1] Applied Ocean Physics and Engineering, Woods Hole Oceanographic Institution, 53 Water Street, Woods Hole, MA 02543
[2] Blue Stream Shellfish, 53 Goulart Memorial Drive, Fairhaven, MA 02719

Handling and retrieving bottom tending oyster cages in deeper water is a challenge, especially when license conditions restrict the use of vertical lines to mark cage locations due to risk for entanglement with marine megafauna. In collaboration with a marine robotics engineer, Blue Stream Shellfish is developing a remotely operated vehicle (ROV) to aid in bottom oyster cage retrieval. Following identification of cage location using sidescan sonar, the OysterBot ROV will transport a lifting line with hook to the selected cage and attach the line to a short lifting bridle. The ROV will release the lifting line and move away while the cage is retrieved by the surface vessel for servicing. A preliminary design discussion and initial trial runs information will be presented. This project was supported by USDA Northeast SARE Farmer's Grant – Project # FNE22-018.