# The MIT Sea Beaver Autonomous Underwater Vehicle (AUV)

The MIT Sea Beaver is a low-cost series of Autonomous Underwater Vehicles. These vehicles consist mostly of commercially available and 3D printed SLA and FDM parts. Altogether the vehicle costs less than $3,000 in material costs. The core objectives of this project are to:

- Reduce the cost of AUV research and development, and operational complexity.
- Develop a lightweight and one-man deployable platform which is easy to reproduce.
- Enable engineering and oceanographic education through high-school and professional workshops, and undergraduate/postgraduate courses which employ these vehicles.
- Work towards heterogeneous and multi-agent collaboration and sensing.
- Conduct and template scientific missions for applications which would be complemented by multi-agent sensing, with a special interest in coastal regions and estuary habitats.
- Develop plug-and-play scientific and actuation payloads which can be joined via a standardized physical and electrical coupling system by extending the length messages.
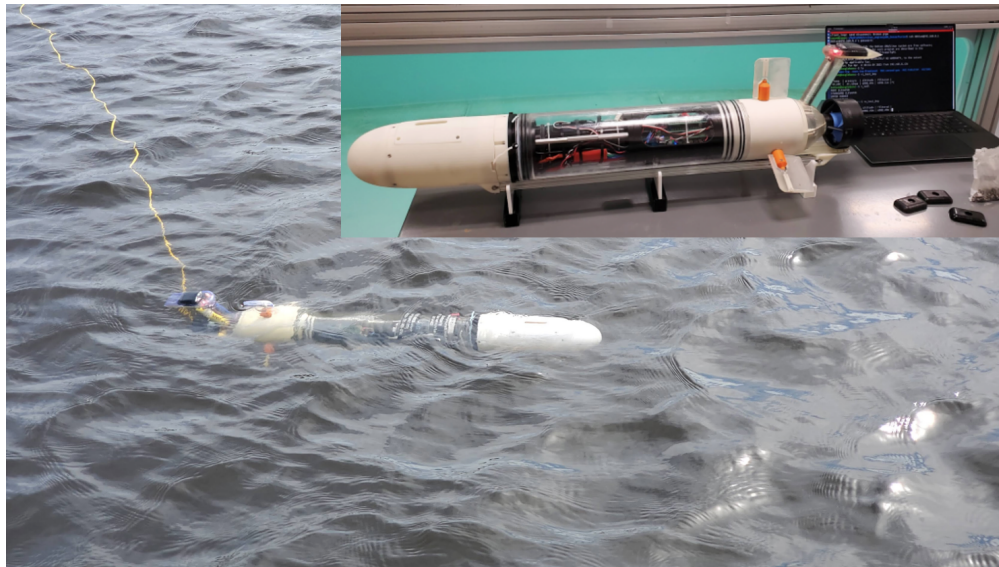
Dimensions (min)(LxD):	36" x 4.5"
Weight (min):	16 lbs
Depth rating (est):	150'
Frontseat computer:	BeagleBone Black (AM335x 16GHz ARM Cortex-A8)
Thruster:	Modified Blue Robotics T200
Status:	Ongoing since Sep 2022
Sponsor(s):	DARPA TTO, Saab
People:	Supun Randeni, Ray Turrisi, Michael Sacarny, Tyler Paine, Kevin Becker, Mike Benjamin (PI)
Software:	MOOS-IvP public codebase, Swarm Autonomy Toolbox, Hydroman, MIT Frontseat

Event Photos:	