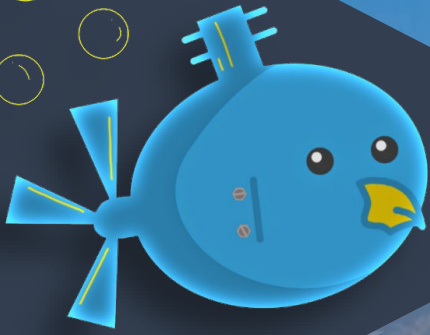
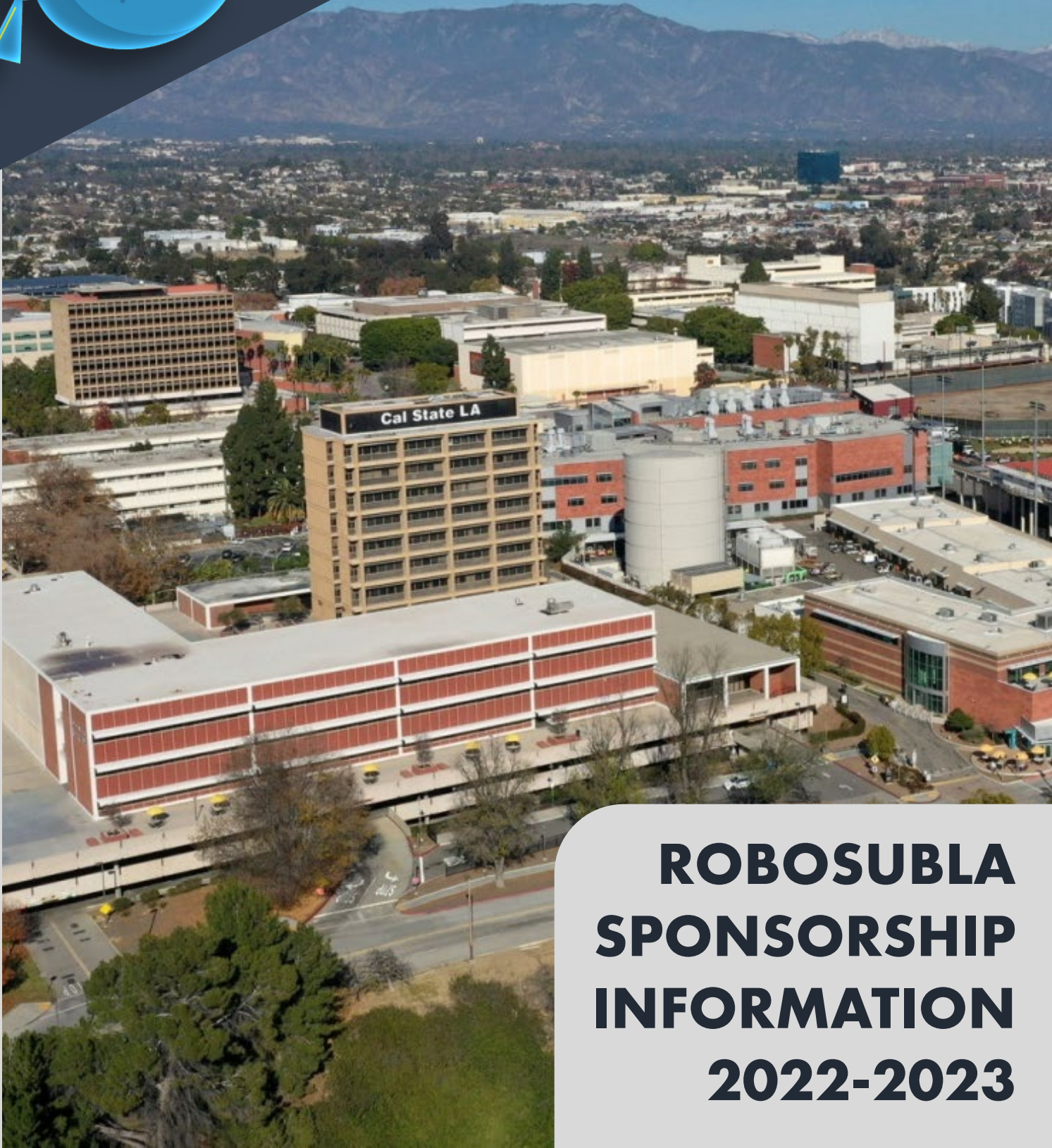


# CALIFORNIA STATE UNIVERSITY LOS ANGELES



Autonomous Underwater Vehicle Project



**ROBOSUBLA  
SPONSORSHIP  
INFORMATION  
2022-2023**

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## ABOUT US

The goal of the RoboSubLA team is to design, build, test, and deploy an autonomous underwater vehicle from scratch using a mix of commercial off-the-shelf components and custom in-house manufacturing. Our team is run by undergraduate students and is open to members from all major programs, and all levels of degree completion. We are committed to bringing real-world experience to students of all walks of life as they learn to solve complex problems in a strongly team-based environment, as well as providing professional development opportunities to prepare our members for their entry to the workforce. We strive to provide a safe and fun environment for the development and deployment of autonomous systems.



# OUR TEAM

**2016**

Founded

**47**

Members

**6**

Subteams

**45+**

Late Nights



RoboSubLA in the AUV lab space, Fall 2022

Our team is committed to improving the performance of our vehicles' hardware and software daily. All subteams work towards the same end goal, and most tasks are interdisciplinary in nature. We believe that collaboration between engineering disciplines leads to stronger ideas and more effective solutions.

## FALL

From the start of the year, each subteam runs workshops and holds design meetings to bring our new members up to speed. Mechanical and electrical teams start work on our new design, and software teams begin testing.

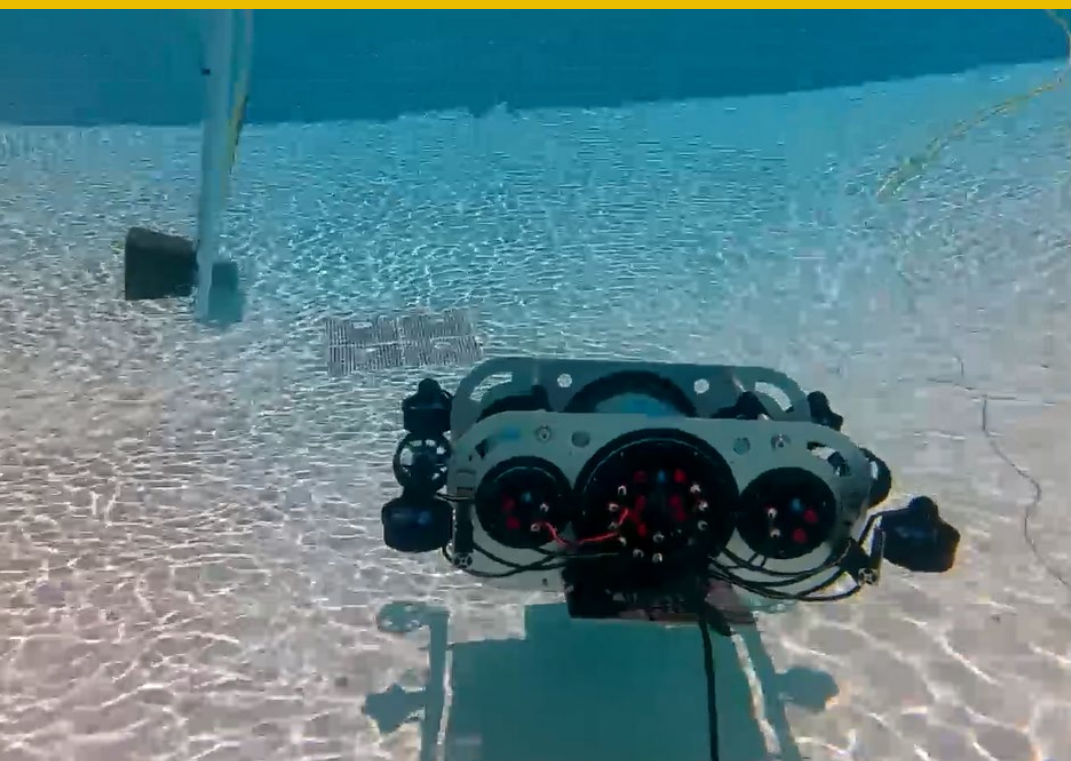
## SPRING

Hands-on activity ramps up as we come back from winter break, and our mechanical teams assemble our new vehicle. Software teams begin testing in the real vehicle environment, and preliminary pool testing can finally begin!



# SUMMER

As the academic year ends and summer arrives, our team shifts into high gear and begins a fast-paced development and test program to get the vehicles ready for their debut at competition. Cal State LA's on-campus pool facilities give us the chance to thoroughly and repeatedly test our vehicles before the time comes to travel to competition.





# VEHICLES | BLASTOISE (2022)

*Blastoise* was the first robot completed by RoboSubLA after the return to in-person instruction and competition in the 2021-22 season. Its primary structure is built from two sets of waterjet-cut 1/8" aluminum, retained by custom handle rods and 1010 extrusion. *Blastoise's* software suite relied almost entirely on its computer vision capabilities and surpassed all design expectations in the 2022 RoboSub competition, securing a spot in the finals and placing 8<sup>th</sup> overall.



**DRY MASS:** 38.1 lbs. (17.3 kg)

**DIMENSIONS:** 2'x1.5'x2'

**TOP SPEED:** 0.5 m/s

**RUNTIME:** 2 hours

**TOTAL POWER:** 1000 W

**SENSOR PACKAGE:** 9DOF IMU,  
Barometric Altimeter, 2x Wide-FOV  
Cameras

# VEHICLES | WAILORD (2023)

In preparation for the 2023 RoboSub competition, RoboSubLA is designing a new vehicle from the ground up, with systemwide improvements to mechanical, electrical, and software architecture. *Wailord* will enable a more robust control system implementation, carrying more sensors and more powerful onboard electronics than any RoboSubLA vehicle before.

**PLEASE NOTE:** The specifications below are subject to change during the continued development of RoboSubLA's 2023 competition vehicle.

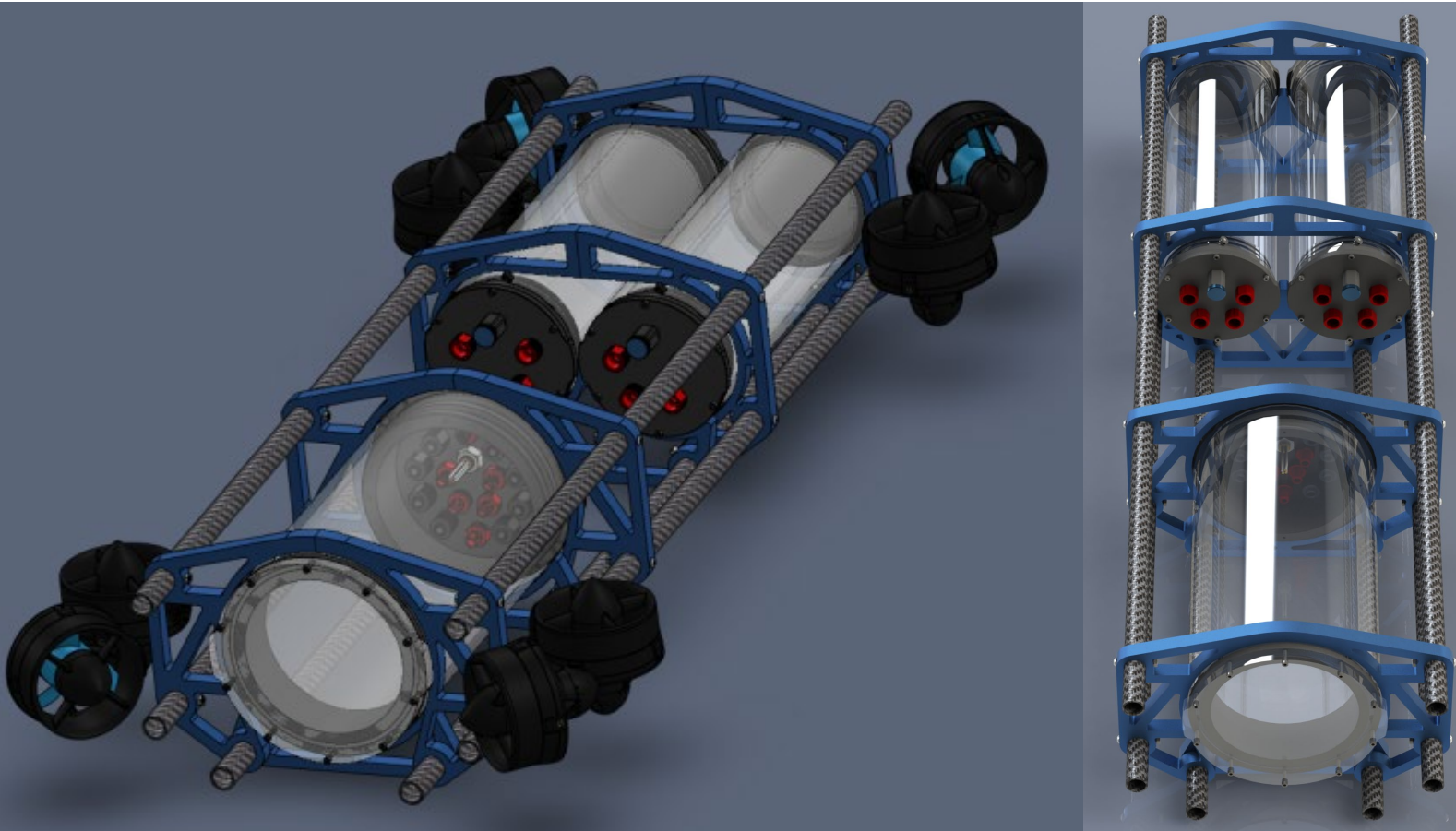
**DIMENSIONS:** 1.5'x1'x3'

**TOP SPEED:** 1 m/s

**RUNTIME:** 1 hour

**TOTAL POWER:** 3000 W

**SENSOR PACKAGE:** 9DOF IMU, Barometric Altimeter, 1x Wide-FOV Camera, 1x Stereoscopic Camera, DVL, Front-facing Sonar, Hydrophone Array







# COMPETITION

The annual RoboSub competition is held as the end of summer nears. Teams from universities around the world bring their newly-developed autonomous underwater vehicles for a high-stakes week of robot trials. The 2022 RoboSub competition was held at the University of Maryland and included 39 domestic and international teams.

The nature of the RoboSub community is inherently multidisciplinary and collaborative, bragging rights and prize money aside. Collaboration and friendly rivalries between competing teams lets students grow in a community that's just as AUV-obsessed as they are. Showing off your cool robot is nearly a requirement for attending!



# OUTREACH



RoboSubLA at the ECST Welcome Week

As an associated student organization on campus, RoboSubLA takes part in outreach events as often as possible. The goal of our outreach program is to get engineering students and prospective members excited about the possibility to join an engineering club on campus and work hands-on with the AUV project.

In addition to external outreach on campus, our club hosts internal outreach events often throughout the academic year. Workshops and professional development events give members a head start, growing their technical and professional skills before graduation.

## **EXTERNAL OUTREACH**

- ECST Open House
- Club Tabling
- AUV Lab Tours

## **INTERNAL OUTREACH**

- Weekly General Meetings
- Club-Wide Workshops
- Professional Development Events

# BECOME A SPONSOR

By sponsoring RoboSubLA, you will help provide Cal State LA students with opportunities to grow their classroom knowledge into real-world applicable skills for STEM-related fields. Our organization attracts hardworking students who are willing to dedicate their time to tackling the challenges that building AUVs presents. Students who participate in our project graduate with a strong multidisciplinary skill set and are often presented with internship or employment opportunities shortly after graduation..

## HOW CAN YOU HELP?

**HARDWARE DONATIONS**  
**SOFTWARE DONATIONS**  
**MONETARY CONTRIBUTIONS**  
**DISCOUNTED PURCHASES**

### BRONZE

\$100-\$500

- Company logo on team website
- Small company logo on team competition uniform

### SILVER

\$500-\$1,000

- Company logo on team website
- Medium company logo on team competition uniform
- Small logo on 2022 vehicle

### GOLD

\$1,000+

- Logo & statement on team website
- Large logo on team competition uniform
- Large logo on 2022 vehicle
- Sponsor spotlight on social media
- Opportunities for direct outreach



# CONTACT US

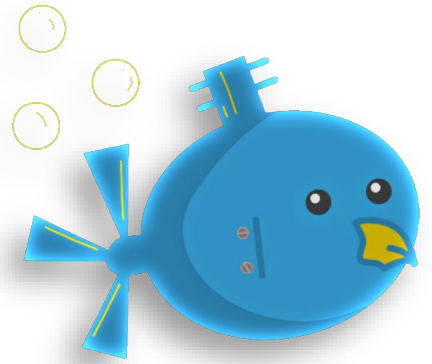
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## THANK YOU TO OUR SPONSORS!

