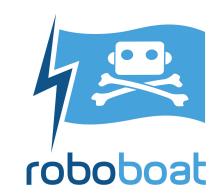# Welcome 2022 RoboBoat Community!

GET STARTED

1 Edit your name to "Name | Team Name"

2 Let us know in the chat:
💬 Has your team started testing your ASV yet?

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ROBOBOAT TEAM TIME

AGENDA

[19:05-19:10]	Welcome and Announcements
[19:10-19:15]	The Competition
[19:15-19:35]	Autonomy Challenge Update
[19:35-19:45]	Important Dates
[19:45-19:50]	Data Sharing
[19:50-20:00]	Q&A / Wrap Up

●REC

The Competition

Autonomy Challenge

Build an ASV to showcase autonomous performance.

Live Demonstration

Video Demonstration

Design Documentation

Prepare documentation showcasing ASV design and competition strategy.

Design Documentation
- *Team Website*
- *Technical Design Report*
- *Competition Strategy Video*
- *Design Presentation*

in-person   online

Autonomy Challenge

Live Demonstration
In-Person Teams

- Showcase vehicle performance through autonomous completion of **a range of tasks onsite at the competition site**
- Live judging/scoring
- Eligible for ranking and awards

Video Demonstration
Online Teams

- Showcase vehicle performance through autonomous completion of **a range of behaviors through a video demonstration**
- Videos shared online with the community
- Not scored
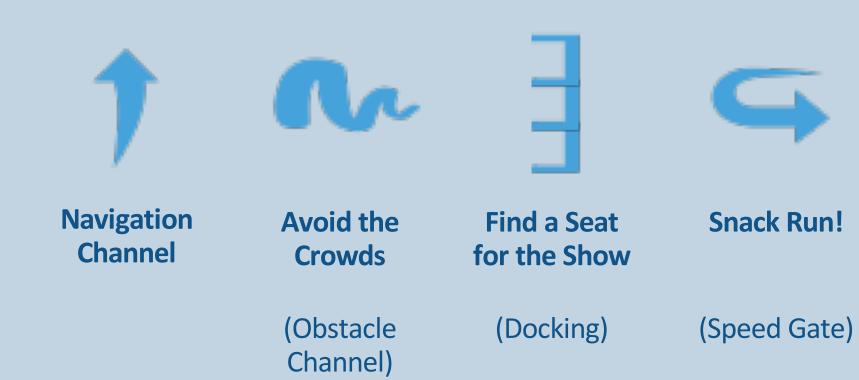- Eligible for special awards and recognition

in-person   online

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Autonomy Challenge Update

Navigation Channel

Avoid the Crowds

(Obstacle Channel)

Find a Seat for the Show

(Docking)

Snack Run!

(Speed Gate)

NEW

Skeeball

NEW

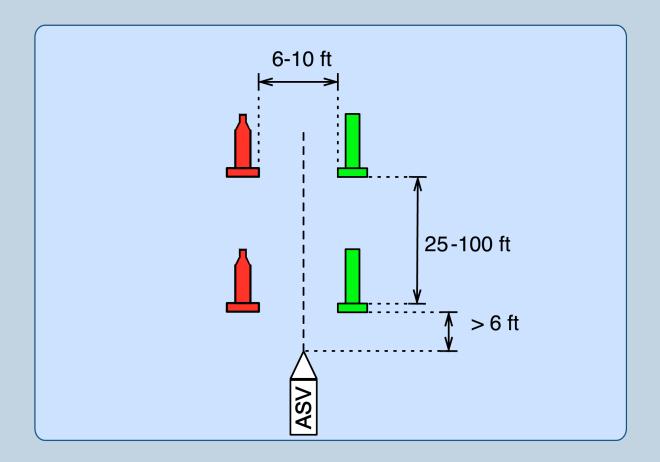**Bottle Knockdown**

Return to Dock

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Navigation Channel

- Mandatory before attempting other tasks.

- ASV passes through two sets of gates.

  – Gate: pair of red and green buoys

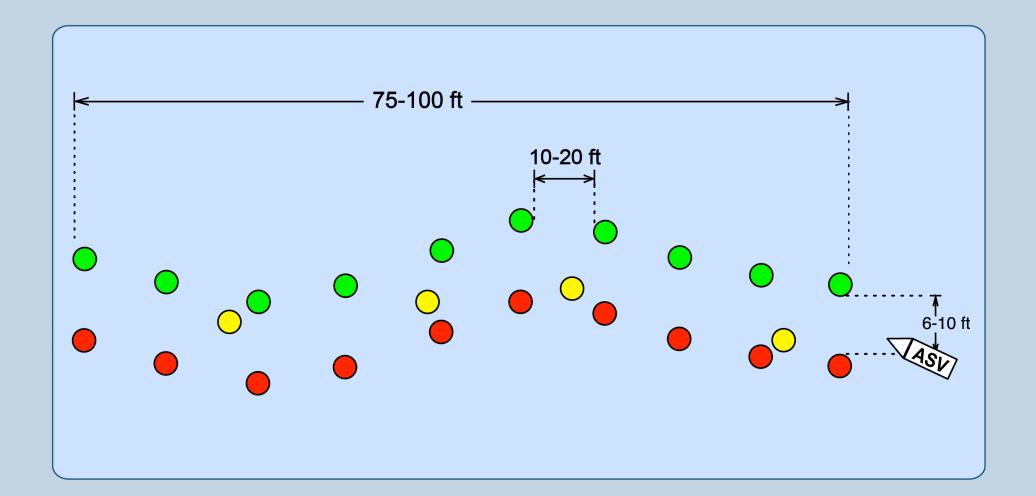 – ASV starts autonomous navigation at a minimum of 6 ft. before the set of gates.

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Avoid the Crowds

- ASV passes through between multiple sets of gates and avoids intermittent yellow buoys.
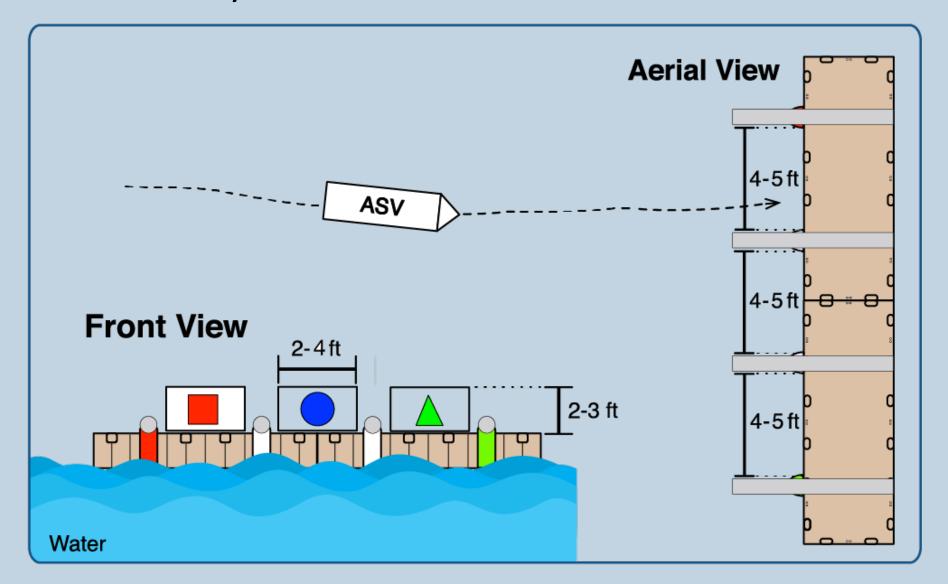
  – Gate: pair of red and green buoys

Find a Seat at the Show

- Before the time slot starts, teams are given a "bay of the day" assignment to dock in.

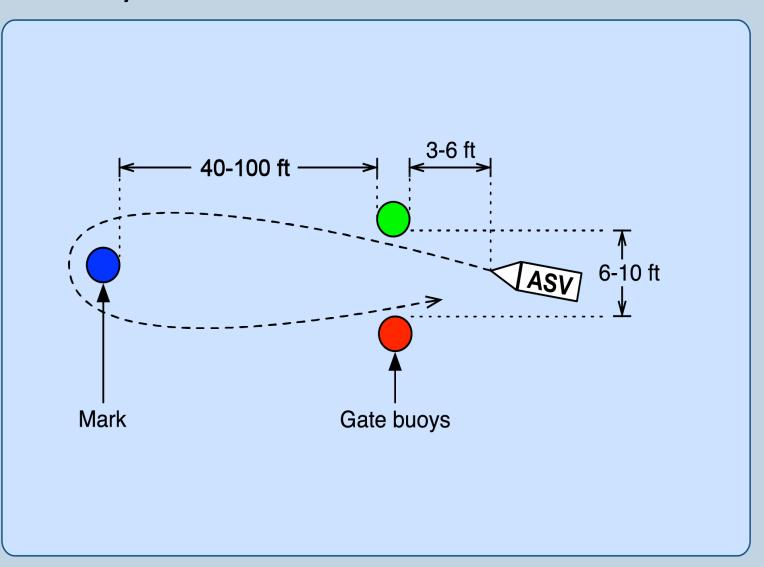- ASV detects and enters the docking bay corresponding the shape/color of the day.

Snack Run!

- ASV enters the gate buoys, maneuvers around the mark buoy, and exits thought the same gate buoys, as quickly as possible.

- The timer starts when the bow (front) crosses the gate buoys and stops when the stern (back) crosses the gate buoys.

  – Gate buoys: 6-10 ft apart
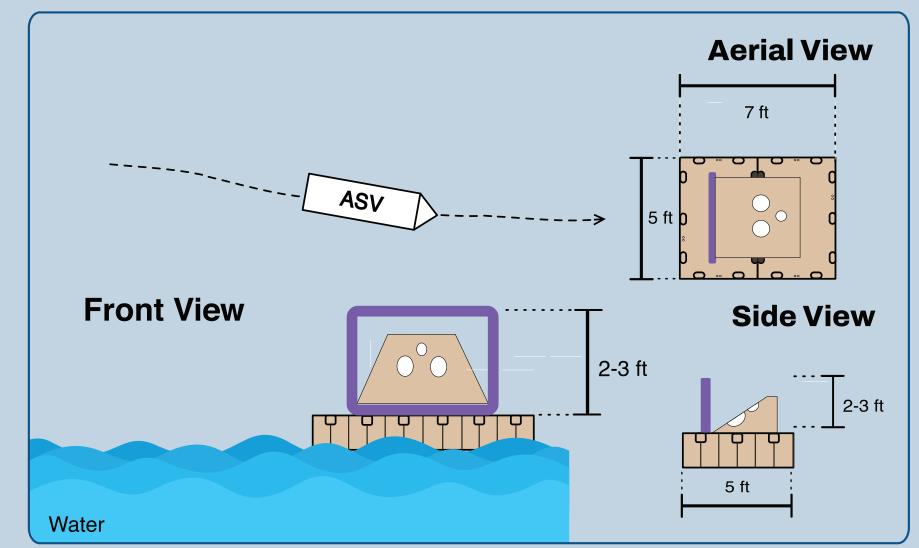
  – Mark buoy: 40-100 ft from gate buoys

Skeeball Game

- ASV detects shooting gate.
- Line up and deliver/shoot three balls.
- More points if sunk in smaller hole in back.
- Some points for just making ball on deck.

  – Shooting Gate: purple frame

Aerial View

7 ft

5 ft

ASV

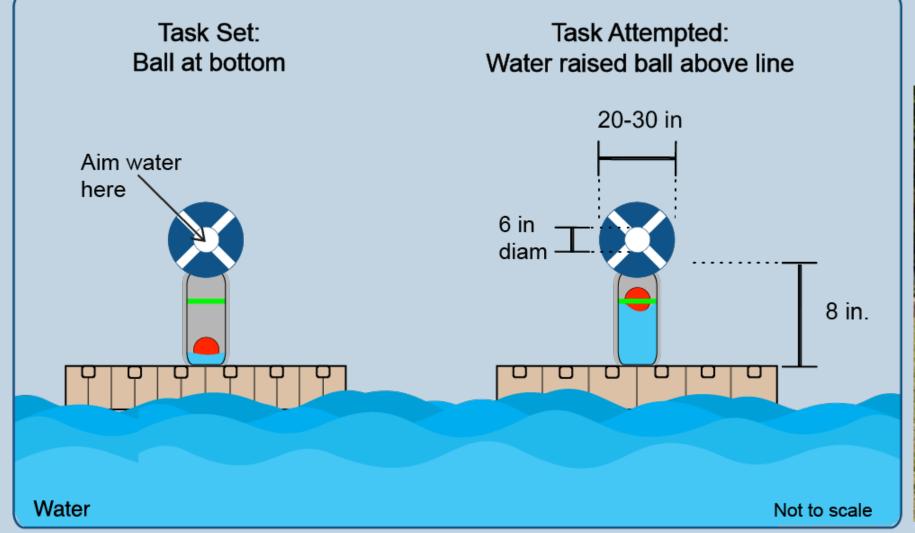**Front View**

2-3 ft

Side View

2-3 ft

5 ft

Water

Water Blast

- ASV detects target face.
- Shoot water through the target, raising the ball in the pipe.
  - Goal: shoot enough water in the target to raise the ball above the green line.

    – Target: 1-3 feet above the surface of the dock

    – Target face: blue/white striped

Task Set:
Ball at bottom

Task Attempted:
Water raised ball above line

20-30 in

6 in diam

8 in.

Aim water here

Water

Not to scale

Return to Home

- ASV returns to dock in autonomous mode and avoids all obstacles and task elements on the way back.

- ASV comes to a full stop within six feet of the dock.

Autonomy Challenge Task Review

Navigation Channel

Avoid the Crowds

(Obstacle Channel)

Find a Seat for the Show

(Docking)

Snack Run!

(Speed Gate)

NEW

Skeeball

NEW

Bottle Knockdown

Return to Dock

Important Dates

March 31 | Registration Deadline
All registration fees must be collected by March 31.

Team Time Meetings
- *Thursday, April 28 @ 7 PM ET*
- *Wednesday, May 18 @ 7 PM ET*
- *Thursday, June 9 @ 7 PM ET*

Pre-Competition Deadlines
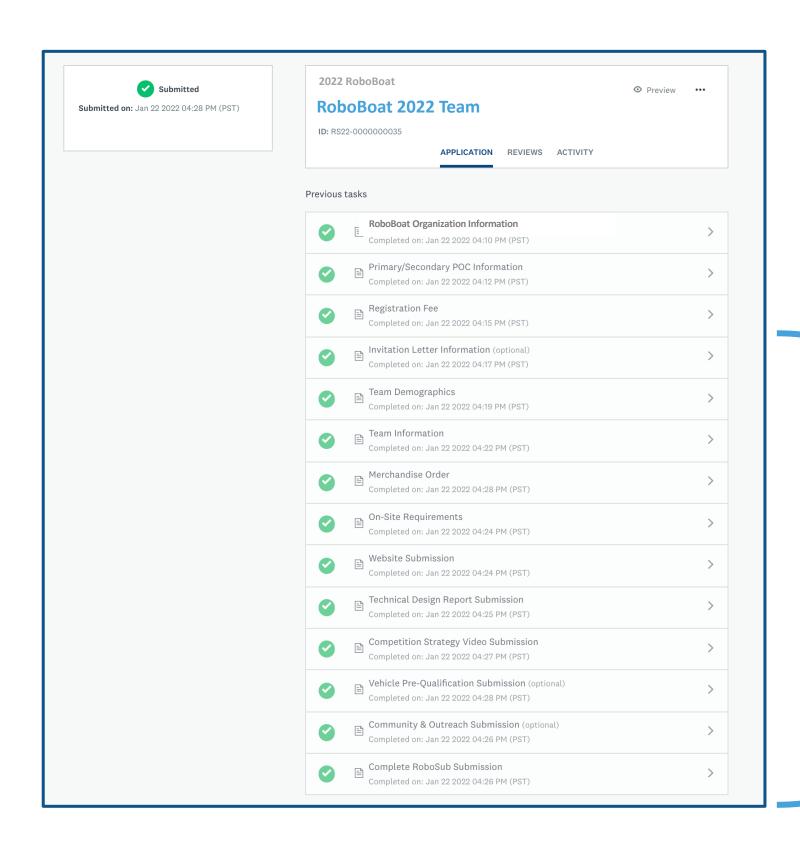- *April 24 Deadline*
- *May 15 Deadline*

Cancellation Deadlines
- *May 15| 100% refund*
- *June 20 | 50% refund*

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Submission Walkthrough

🔗 roboboat.org/2022

Once Registered...

Complete remaining task list with varying deadlines.
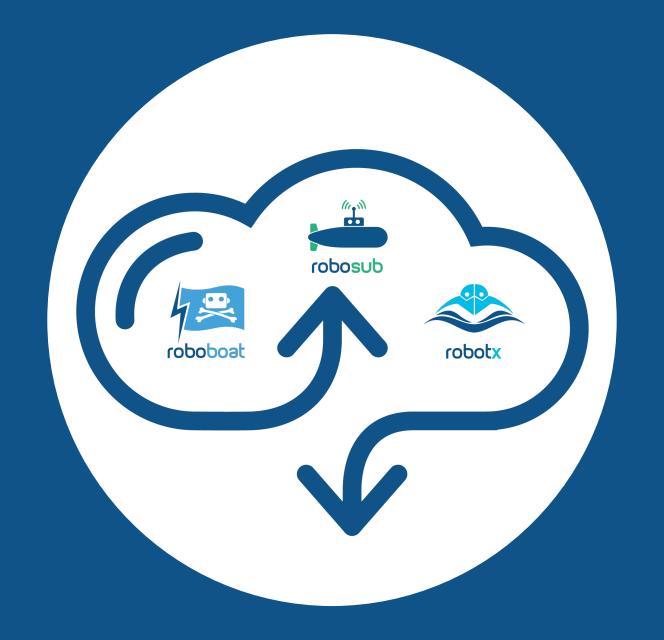
Task list includes:

- *Invitation Letter Request*
- *Team Information (Roster + Liability Waivers) – 04/24*
- *T-Shirt Orders – 04/24*
- *Design Documentation submissions – 05/15*
- *& more!*

Competition Schedule Preview

SUN, 6/19	MON, 6/20	TUE, 6/21	WED, 6/22	THU, 6/23	FRI, 6/24	SAT, 6/25
	Team Onsite Orientation					
	Safety Inspections					
	Autonomy Challenge Practice + Qualifying Round			NEW Semi-Finals Round		Finals Round
		Design Presentations				
NEW Midday Breaks						
NEW Team Check-in	Daily Team Meetings					
						Awards
Overnight Pool Testing						

Data Sharing

roboboat.org/data-sharing

What is Data Sharing?

🛢️	**Centralized Repository**
👥	**Community Driven**
✓	**Competition focused**

Vision
Acoustics
Mechanical Designs
Electrical Designs

DATA FOR ALL TEAMS

LARGE DOMAIN OF DATASETS

BETTER PLATFORM FOR NEW TEAMS

15th Annual
RoboBoat 2022

Questions?

🔗 Email
autonomy@robonation.org

🔗 Discussion Forum
robonationforum.vbulletin.net

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Next Team Meeting
Thursday, April 28 @ 7:00 PM EDT

Thank You!
See you again soon!

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