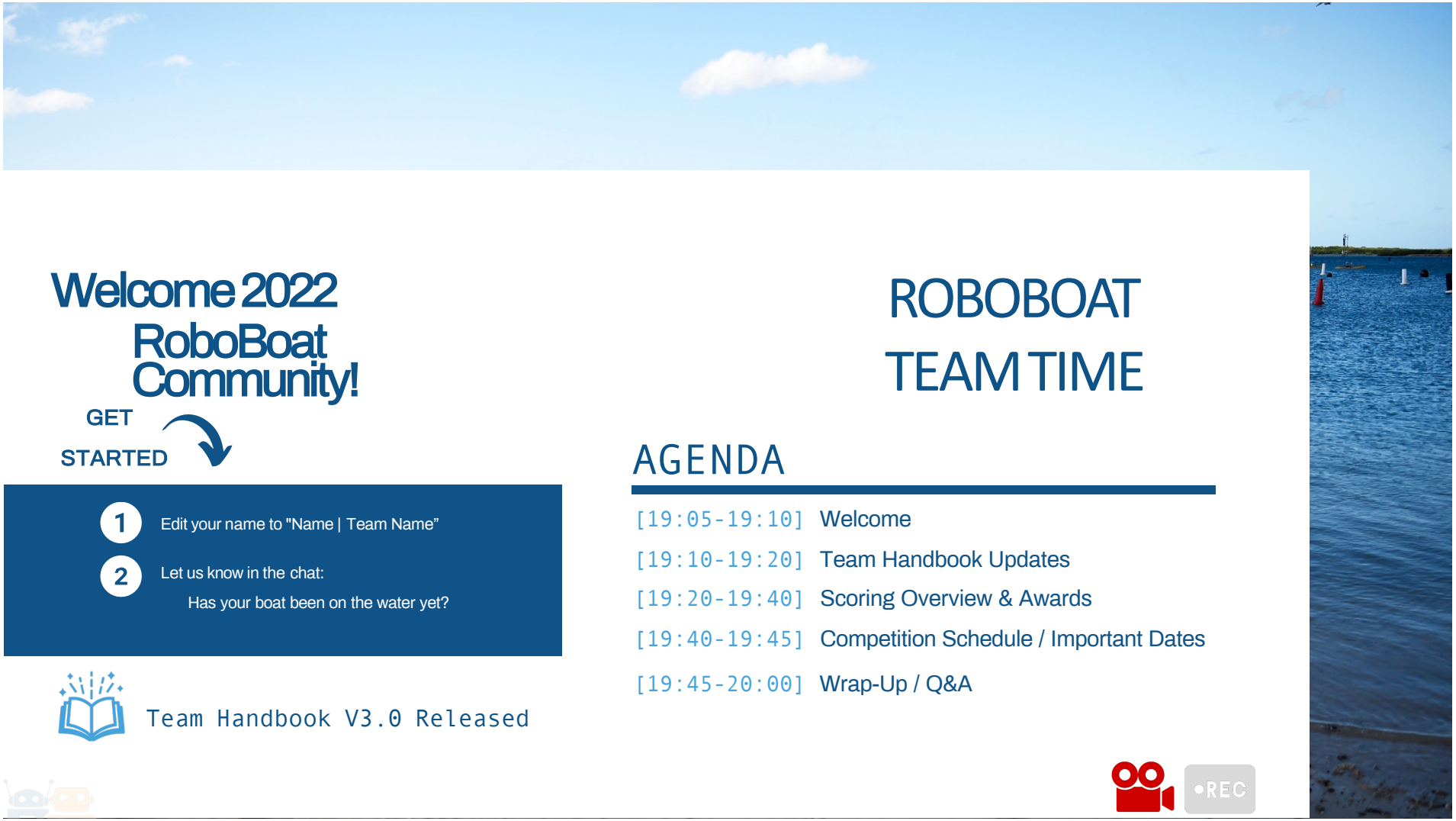
ROBOBOAT TEAM TIME

Thursday, May 19, 2022 | 7:00 PM Eastern Daylight Time

A Day at the Carnival

Nathan Benderson Park
Sarasota, Florida, USA
June 20-25, 2022



Welcome 2022 RoboBoat Community!

GET STARTED

1. Edit your name to "Name | Team Name"
2. Let us know in the chat:
   Has your boat been on the water yet?

Team Handbook V3.0 Released

ROBOBOAT TEAM TIME

AGENDA

[19:05-19:10] Welcome

[19:10-19:20] Team Handbook Updates

[19:20-19:40] Scoring Overview & Awards

[19:40-19:45] Competition Schedule / Important Dates

[19:45-20:00] Wrap-Up / Q&A

•REC

32 Days to A Day at the Carnival

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June 20 – 25, 2022

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Team Handbook Updates

- Road to the Show (Navigation Channel) is now Task 1
- Striking the Dock, no penalty
- Qualifying / Semi-Finals / Finals
- Scoring breakdown

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Handbook Updates

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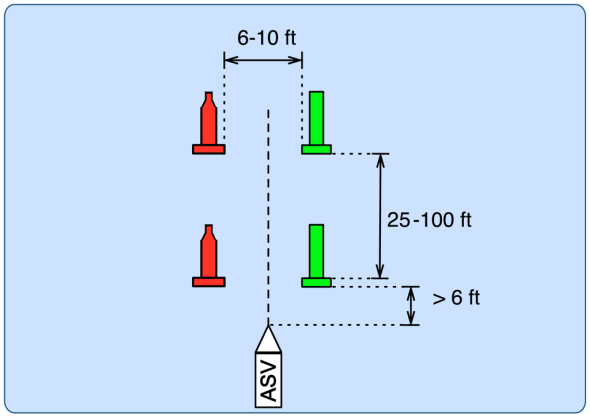
Road to the Show

(previously Navigation Channel)



NEW: Navigation Channel has transitioned to be **TASK 1** and has been renamed to ***Road to the Show***. No longer required during Qualifying Round but is required in Semi-Finals and Finals Rounds.

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Pages 12, 14, 15

Striking the Dock

NEW: No penalty for striking/touching the dock.

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Qualifying Round

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Pages 16-17

Qualifying Round

- **Advance to Semi-Finals:**

  Demonstrate proficiency on 3 tasks = earn 150 points per task

- Multiple teams may be on a Qualifying & Practice Course at a time

Road to the Show		The ASV must pass through both sets of the gates and attempt to avoid striking any buoys. The ASV must start its autonomous navigation a minimum of 6 ft. before the first set of gates.
Avoid the Crowds		The ASV must maneuver through the gates and attempt to avoid striking any buoys.
Find a Seat at the Show		The ASV must enter any docking bay.
Snack Run		The ASV must enter through the gate, circle the blue buoy, and exit back through the entry gate.
Skeeball	NEW	The ASV must launch a ball in the vicinity and the direction of the Skeeball Game platform
Water Blast	NEW	The ASV must shoot/deliver water in the vicinity and the direction of the Water Blast task platform.
Return to Dock		This task cannot be used toward qualifying.

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Semi-Finals Round

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Pages 17-18

Semi-Finals Round

- **Advance to Finals:** Determined by the judges, based on Semi-Finals standings
- Road to the Show is mandatory in Semi-Finals Round
- Only one team on a course at a time
- When judged, autonomous only. RC allowed for practice runs.

Road to the Show		This task is mandatory for advancement to the Finals Round. The ASV must pass through both sets of the gates, without touching the buoys. The ASV must start its autonomous navigation a minimum of 6 ft. before the first set of gates. If the ASV strikes a buoy the maneuver must start over.
Avoid the Crowds		The ASV must maneuver through the gates in one sequence, without striking any buoys.
Find a Seat at the Show		The ASV must detect the designated color/shape and dock within the corresponding bay. The color/shape is determined by the Technical Director.
Snack Run		The ASV must enter through the gate, circle the blue buoy, and exit back through the entry gate, without touching any buoys. This task is timed from start to finish.
Skeeball		The ASV must launch balls within frame, landing in any of the (3) three holes.
Water Blast		The ASV must deliver water into target/bottle, raising the ball to the green line.
Return to Dock		The ASV must return to home at the end of the run, after attempting all tasks.

Finals Round

- Road to the Show is mandatory in Finals Round
- Only one team on a course at a time
- Autonomous always, no RC runs

Road to the Show		This task is mandatory for the Finals Round. The ASV must pass through both sets of the gates, without touching the buoys. The ASV must start its autonomous navigation a minimum of 6 ft. before the first set of gates. If the ASV strikes a buoy the maneuver must start over.
Avoid the Crowds		The ASV must maneuver through the gates in one sequence, without striking any buoys.
Find a Seat at the Show		The ASV must detect the designated color/shape and dock within the corresponding bay. The color/shape is determined by the Technical Director.
Snack Run		The ASV must enter through the gate, circle the blue buoy, and exit back through the entry gate, without touching any buoys. This task is timed from start to finish.
Skeeball		The ASV must launch balls within frame, landing in any of the (3) three holes
Water Blast		The ASV must deliver water into target/bottle, raising the ball to the green line.
Return to Dock		The ASV must return to home at the end of the run, after attempting all tasks.

Scoring Overview

- **All decisions of the judges are final.**
- **Autonomy Challenge Scoring**
  - **Qualifying, Semi-Finals, Finals Rounds**
    - All teams that meet the minimum Qualifying Round requirements will be eligible to compete in the Semi-Finals Round.
    - Upon completion of the Semi-Finals Round, the judges will announce the top-scoring teams who will progress to the Finals Round. The judges have the discretion to select the number of teams advancing to the Finals Round.
    - Final Standings are released after the competition. Any team accepted into the Finals Round will be ranked ahead of all teams that did not participate in the Finals Round.
- **Design Documentation Scoring**
  - Final standings are released after the competition, including standings for each category.

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Scoring - Overview

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Autonomy Challenge

Task/Measurement	Performance Measures	Points	Point Range
Weight measurement	Weight (W)	See Table 3	149
Thrust measurement	Generate pounds of thrust (in lbs) (Th)	100*(Th / W)	∞
Task 1 - Road to the Show (Navigation Channel)	ASV navigates through two sets of gates		0,200
Task 2 - Avoid the Crowds	ASV maneuvers through gates (G), without striking buoys (S)	25*G – 25*S	0-250
	ASV maneuvers through gates, in one sequence	25*G	0-250
Task 3 - Find a Seat at the Show	ASV enters any docking bay (points awarded once)		0,50
	ASV enters correct docking bay on first attempt		0,400
Task 4 - Snack Run!	ASV navigates through gate, without touching buoy		0,50
	ASV circles blue buoy, without touching buoy		0,100
	ASV exits through gate, without touching buoy		0,100
	Task completion time (T)	250-T	0-250
Task 5 - Skeeball Game	ASV launches ball(s)(B), up to three, within frame	50*B	0-150
	ASV launches ball(s)(B), up to three, and successfully lands in any hole (OR, see next line)	125*B	0-375
	ASV launches ball(s)(B), up to three, and ball stays on table in lip	50*B	0-150
Task 6 - Water Blast	ASV shoots water (near task platform)		0,100
	ASV delivers water into target/bottle		0,150
	ASV delivers water into target/bottle, raising the ball to the green line		0,300
Task 7 - Return to Home	Return to home after attempting tasks (Nt)	100*Nt	0-600
	Bonus for attempting all tasks and returning to home		0,100
	Seconds left on the clock (T)		T

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Scoring - Overview

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Design Documentation

Submissions	Category	Point Range
Technical Design Report	Abstract	0-20
	Competition Strategy	0-50
	Design Creativity	0-40
	Experimental Results	0-40
	Acknowledgements	0-10
	References	0-10
	Adherence to Formatting Guidelines	0-10
Competition Strategy Video	Team Introduction	0-5
	Task/Behavior Overview	0-15
	Competition Strategy	0-30
	Development Testing	0-20
	Video Format	0-5
	Visual Quality	0-25
	Effective Communication	0-40
Website	Team Information	0-30
	ASV Design Documentation	0-50
	Website Quality	0-50
Design Presentation	***Score breakdown being finalized.***	

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Awards

- **Design Documentation**
  - Website
  - Technical Design Report
  - Competition Strategy Video
- **Autonomy Challenge Final Standings**
  - Teams are awarded prize money reflective of their overall ranking after scores are calculated.
- **Judges' Special Awards**
  - Throughout the competition, judges and staff are always on the lookout for exemplary behavior from teams to acknowledge with special awards.

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Competition Schedule & Important Dates

- Design Presentations
- Competition Schedule
- Important Dates

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DESIGN PRESENTATIONS

- 30-minute time slots
  - Team presentation (20 min.)
  - Judges Q&A (5 min.)
  - Judges' inspection of vehicle (5 min.)
- Online and in-person teams
- Schedule available prior to competition
- May include visual aids (e.g., PowerPoint or poster)
- Sessions recorded and provided to Teams post-competition

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Competition Schedule

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DATE	TIME	EVENT	LOCATION
Sunday, June 19	All Day	Team Travel Day & Hotel Check-in	
	2:00 pm – 4:00 pm	Team Check-in	NBP – MEET
	9:00 pm – 2:00 am	Overnight Pool Testing	Hyatt Place
Monday, June 20	7:30 am – 7:30 pm	Facility Open to Teams	NBP
	8:00 am – 9:00 am	Team Orientation / Coffee / Donuts	NBP – MEET
	9:00 am – 12:00 pm	Safety Inspections & Autonomy Challenge Practice	NBP – Competition Courses
	12:00 pm – 1:00 pm	Break / Lunch	NBP – MEET
	1:00 pm – 5:30 pm	Safety Inspections & Autonomy Challenge Practice	NBP – Competition Courses
	6:00 pm – 6:30 pm	Daily Team Meeting *(Mandatory: 1 team representative)*	NBP – Team Village
	9:00 pm – 2:00 am	Overnight Pool Testing	Hyatt Place
Tuesday, June 21	7:30 am – 7:30 pm	Facility Open to Teams	NBP
	8:00 am – 12:00 pm	Autonomy Challenge Practice & Qualifying	NBP – Competition Courses
	11:00 am – 4:00 pm	Design Presentations & Team Photographs	NBP – Finish Tower
	12:00 pm – 1:00 pm	Break / Lunch	
	12:00 pm – 12:30 pm	Tech Talk	NBP – MEET
	1:00 pm – 6:00 pm	Autonomy Challenge Practice & Qualifying	NBP – Competition Courses
	6:00 pm – 6:30 pm	Daily Team Meeting *(Mandatory: 1 team representative)*	NBP - Team Village
	9:00 pm – 2:00 am	Overnight Pool Testing	Hyatt Place
Wednesday, June 22	7:30 am – 7:30 pm	Facility Open to Teams	NBP
	8:00 am – 12:00 pm	Autonomy Challenge Practice & Qualifying	NBP – Competition Courses
	9:00 am – 2:00 pm	Design Presentations & Team Photographs	NBP – Finish Tower
	12:00 pm – 1:00 pm	Break / Lunch	
	12:00 pm – 12:30 pm	Tech Talk	NBP – MEET
	1:00 pm – 6:00 pm	Autonomy Challenge Practice & Qualifying	NBP – Competition Courses
	6:00 pm – 6:30 pm	Daily Team Meeting *(Mandatory: 1 team representative)*	NBP – Team Village

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Competition Schedule

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DATE	TIME	EVENT	LOCATION
Thursday, June 23	7:30 am – 7:30 pm	Facility Open to Teams	NBP
	8:00 am – 12:00 pm	Autonomy Challenge Semi-Finals	NBP – Competition Courses
	9:00 am – 2:00 pm	Design Presentations & Team Photographs	NBP – Finish Tower
	10:00 am – 2:00 pm	Media Day	NBP
	12:00 pm – 1:00 pm	Break / Lunch	
	12:00 pm – 12:30 pm	Tech Talk	NBP – MEET
	1:00 pm – 6:00 pm	Autonomy Challenge Semi-Finals	NBP – Competition Courses
	6:00 pm – 6:30 pm	Daily Team Meeting *(Mandatory: 1 team representative)*	NBP - Team Village
	9:00 pm – 2:00 am	Overnight Pool Testing	Hyatt Place
Friday, June 24	7:30 am – 7:30 pm	Facility Open to Teams	NBP
	8:00 am – 12:00 pm	Autonomy Challenge Semi-Finals	NBP – Competition Courses
	10:00 am – 3:00 pm	RoboNation's STEM Demo	NBP – MEET
	12:00 pm – 1:00 pm	Break / Lunch	
	1:00 pm – 6:00 pm	Autonomy Challenge Semi-Finals	NBP – Competition Courses
	6:00 pm – 6:30 pm	Daily Team Meeting *(Mandatory: 1 team representative)*	NBP - Team Village
	9:00 pm – 2:00 am	Overnight Pool Testing	Hyatt Place
Saturday, June 25	7:30 am – 7:30 pm	Facility Open to Teams	NBP
	8:00 am – 12:00 pm	Qualifying Overflow Runs / Last Chance Qualifications	NBP – Competition Courses
	10:00 am – 3:00 pm	RoboNation's STEM Demo	NBP – MEET
	12:00 pm – 1:00 pm	Break / Lunch	
	1:00 pm – 5:00 pm	Autonomy Challenge Finals & Livestream	NBP – Competition Courses
	7:30 pm – 10:00 pm	Awards	*To Be Announced*

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Hotel Cancellation or Change

- **Full Refund:** 72 hours prior to reservation arrival date.
- **One night charge:** One night penalty will be charged if cancellation is within 72 hours of reservation check-in date.

Participation Change

- **Shift between In-Person and Online:** No penalty for changing from In-Person to Online or Online to In-Person participation.

Cancellations & Refunds

- **Full Refund, May 15:** Cancellations submitted on or before May 15, 2022, will receive 100% refund of registration fee paid.
- **50% Refund, May 16 – June 20:** Cancellations submitted between May 16 and June 20, 2022, will receive 50% refund of registration fee paid.

For more details: roboboat.org/cancellation-policy

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RoboBoat TeamTime Meeting

- **LAST TEAMTIME: Thursday, 9 June at 7 PM ET**

Band App for all the Updates

Hop on the RoboBoat Band(wagon)!

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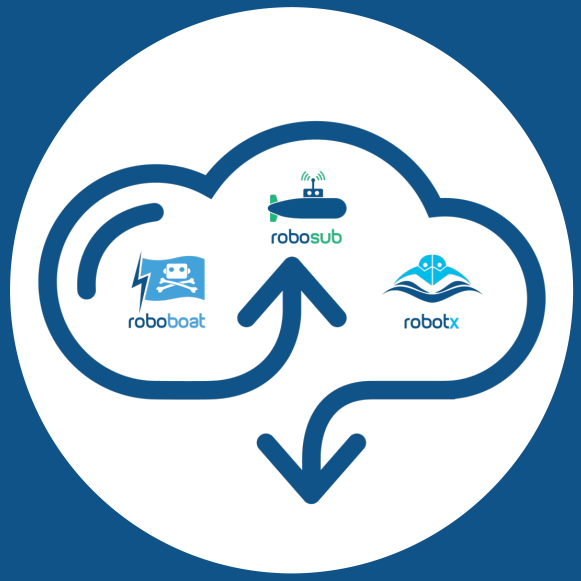

Data Sharing

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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

Got Questions?

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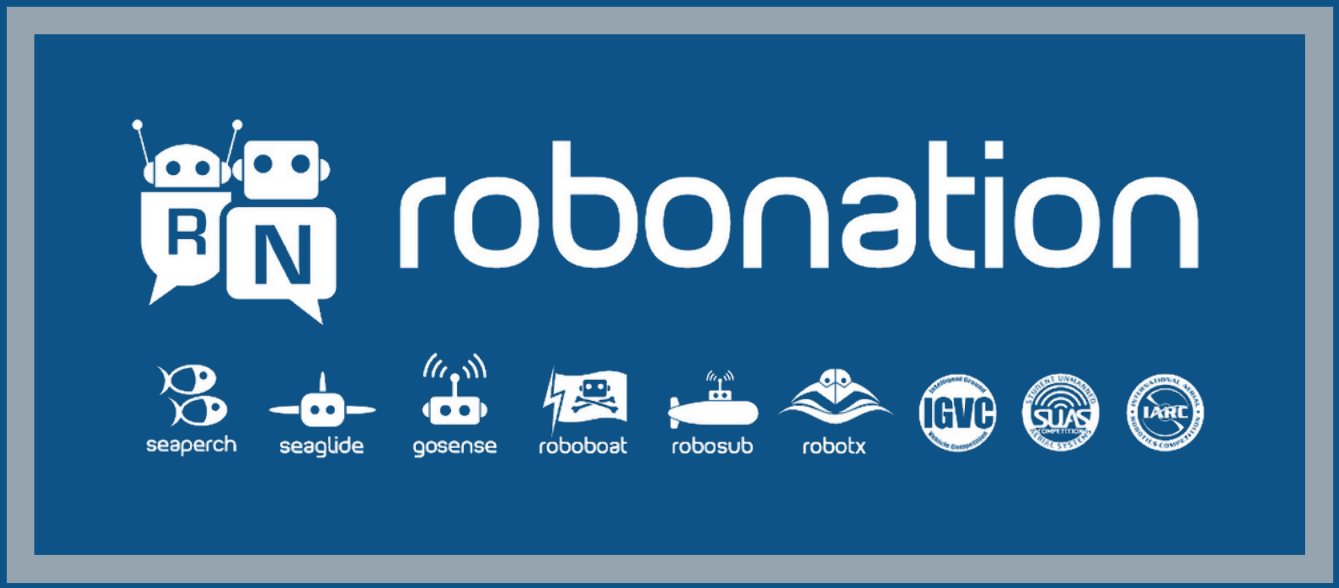

RoboNation is a 501c3 nonprofit organization whose mission is to provide a pathway of hands-on educational experiences that empower students to find innovative solutions to global challenges. Working together with the industry, research and educators, we have grown to include over nine student competitions and programs and engage more than 250,000 students per year.

For more information contact university-competitions@robonation.org