

RoboSensei
Simulate Download Play

RoboRAVE
International
A Collaborative Robotics Program

RoboRAVE International

ONLINE 2020

Virtual Challenge Rules

RoboRAVE is very proud to partner with RoboSensei to offer our challenges virtually. Where students can learn by Simulating... Downloading... & Playing

Registration: In general, participants can register a team through the RoboRAVE International website at www.roboraveinternational.org On occasion, Event Directors may chose to have teams register through their specific websites.

Teams: Event Directors chose the number of participants allowed on a team for their event. It might be all individuals, or it could be teams up to 4 players. Each paid entry allows for one entry into a single challenge. If you want to compete in more than one challenge, simply register another team.

ROBOSENSEI CHALLENGE FORMAT:

The format of our Virtual challenges is 100% online. Choose a challenge, code your robot to complete the challenge, download your code to your virtual robot, and compete against all the other teams/players.

General Play: Teams compete openly as often as you want during General Play period.

CHALLENGE AND DIVISIONS:

Divisions: As a general rule of thumb, the following divisions are defined on the the RoboSensei platform: Elementary School (8 to 10 years); Middle School (11 to 13 years); High School (14 to 18 years; and the University/Professionals (19 years and older). *Occasionally the HS and UP divisions will compete together in a Combined Division.*

Challenges:

- **A-MAZE-ing** – Typically open to Elementary School and Middle School divisions only
- **FastBot** – Typically open to all divisions
- **Line Following** – Typically open to all divisions

Note: *Event Directors can determine which challenges to offer for their event, and which divisions are offered for each of the challenges.*



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SCORING:

RoboSensei Challenges are score automatically via small, numbered bubbles along the Challenge track. Some challenges are also timed events.

TIME BONUS is awarded if the challenge is completed before the time limit runs out.

Virtual Challenges:

A-MAZE-ING:



ES MAZE Example Track

Code a virtual robot to follow a MAZE from start to end as fast as possible earning points along the way.

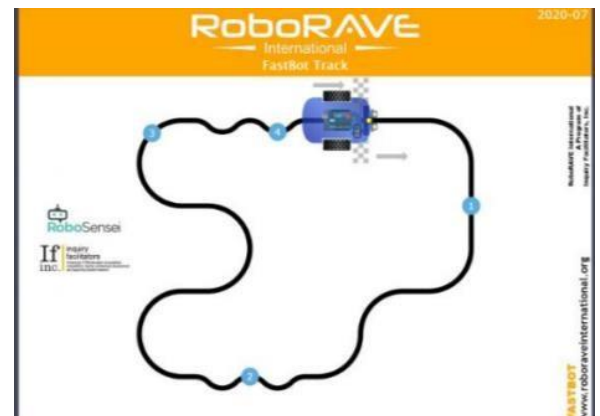
A Time-Bonus consisting of the remaining time will be added if the challenge is finished prior to the time running out.

FASTBOT:

Code a virtual robot to follow a closed (racetrack style) line-following track from start to finish as fast as possible earning points along the way. The MS, HS, & UP Division tracks could include intersections

FastBot Race Laps per Division:

- Elementary Division = 2 laps
- Middle School Division = 3 laps
- High/Up Division = 5 laps





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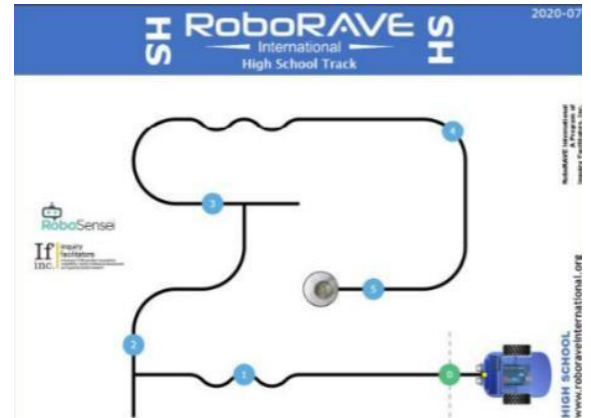
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LINE FOLLOWING:

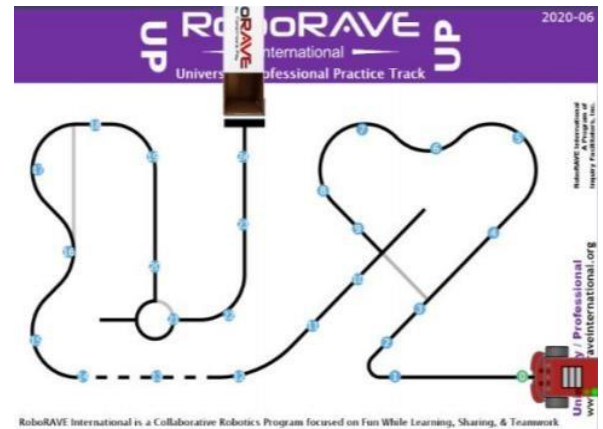
Code a virtual robot to follow a line from the “Home” position to the “Tower” and back to “Home” as fast as possible earning points along the way.

A Time-Bonus consisting of the remaining time will be added if the challenge is finished prior to the time running out.



HS Example Track

- ES Division is a thick line with no intersections
- MS Division is a thick line with one intersection
- HS Division is a thin black line with two intersections
- UP Division is a thin line, can contain gray line shortcuts, and or dashed line hazards, and can have multiple intersections.



UP Example Track