UCDAVIS
C-STEM Center

RoboPlay

Call for Participation
2014 RoboPlay Challenge Competition

Registration deadline: April 18, 2014
C-STEM Day: May 31, 2014
http://c-stem.ucdavis.edu

The RoboPlay Challenge Competition is designed for students to showcase their real-world problem solving skills in a competitive environment. This competition simulates an unexpected problem occurring at a remote location such as a space station or planetary habitat, where a robotic solution must be quickly developed and deployed, using only existing resources. The competition challenges students to creatively use modular robots and accessories to complete various tasks. The competition arena and specific challenge will be kept secret until the day of the competition. Using their math, programming, and problem solving skills, students try to most efficiently get the highest score for each task.

Divisions:
- Junior Teams with students from middle schools
- Senior Teams with students from high schools
- Community College Teams

Challenge Competition Awards:
- Awards will be given to the first, second, and third place winners for each respective division at each of the C-STEM Day Locations
- Statewide awards will also be awarded to the first, second, and third place winners for the middle school and high school divisions
- Three additional Judges Awards will also be decided by the judges for each division at each C-STEM Day location:
  - Perseverance Award – This award goes to the team that improvises and overcomes a difficult situation while still managing to maintain a high level of performance.
  - Spirit Award– This award celebrates a team that displays extraordinary enthusiasm and spirit.
  - Teamwork Award– This award recognizes a team that fluidly works together with strong communication, tasks delegation, and excellent time management.

Last Edit:	5/27/2014	Change number of snap connectors allowed from 14 to 15

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Rules for Challenge Competition:

- All team members must be students in K-14 schools
- Each team must use Linkbot, a reconfigurable modular robot available from Barobo, Inc. for the competition
- Each team must use the following set of pieces

Linkbot-I	5	Bridge Connector	2
Linkbot-L	1	Gripper	1
Snap connector	15	Cube Connector	1
Caster	2	Soccer Scoop	2
3.5" wheel	8	Hackysack	1

- Each team must bring its own robots and accessories for the competition
    - Accessories include:

Protractor	Ruler
Writing Utensils	Measuring Tape (min. 8 feet)
Compass	Extension Cord
Timer/Stopwatch	Skiva PowerFlow Four Port
String	USB Charger (Qty: 2)

- Each team is allowed to bring one extra Linkbot as a backup, but no more than the Linkbots listed above can be used at one time.
- Teams cannot use custom-made parts.
- Each team must use their own laptops. Each member can bring one laptop for use in the pit area, but each team can only bring one laptop into the competition arena at a time.
- Use of other electronics during the competition, including other computers, calculators, cell phones, and other computing devices is not allowed.
- All challenge tasks must be completed using a computer program.
- Programs for controlling the robots must be written in Ch from SoftIntegration, Inc.
- There will be no internet access during the competition. If a team is caught using the internet during the competition, the team will be disqualified.
- Once the competition has begun, the teams may speak to the Judges for clarification on problems, but should not talk to anyone else outside of their team.
- The Competition will last six hours split into two portions.
    1. The first three hours are for students to build and program their robots to complete the challenges presented at the start of the competition. The solutions must be completed during the first three hours.
    2. The last three hours are for teams to compete against each other to determine the winners of the Competition.

Team Registration for Challenge Competition

- Each team must consist of 3 to 5 students
- Each teacher can sponsor up to two teams
- Teams must register before the deadline to assure that there is enough time and space for all teams on the day of the competition

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- The registration fee is $80 per team
- T-Shirts may be purchased separately for $15 a piece

Organizer

UC Davis Center for Integrated Computing and STEM Education (C-STEM)

Co-organizer

UC Davis Integration Engineering Laboratory
UC Davis Computing and Robotics Outreach Club (CROC)

Contact

RoboPlay Competitions Coordinators
RoboPlay Video Competition Coordinator:
RoboPlay Challenge Competition Coordinator:

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