

# ROBOCUPRESCUE RAPIDLY MANUFACTURED ROBOT LEAGUE

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<http://comp.oarkit.org>

## Introduction:

- The RoboCupRescue Rapidly Manufactured Robot League (RMRL) is a competition for low cost, rapidly manufacturable small (30 cm width) robots and robotic components that enable responders to more safely and effectively perform hazardous mission tasks.
- 3D printing, laser cutting and low cost, common sensors, computation and other electronics lower the barrier of entry.
- Students from high school through to graduate students and early career researchers compete against the same challenges.
- Competitions, teaching camps and workshops advance the state of the science in response robotics.



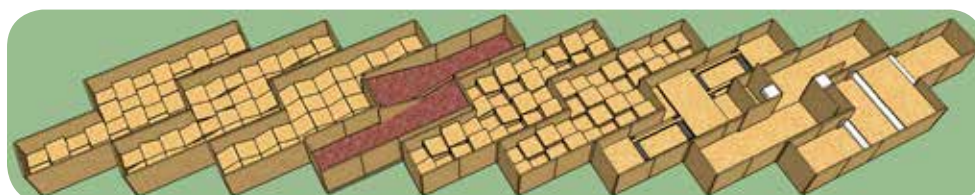
## Competition:

- Quantitative evaluation of capabilities using *DHS-NIST-ASTM International Standard Test Methods for Response Robots* provide repeatable, quantifiable evaluation of robot capabilities, reliability and operator proficiency.
- Tasks include mobility, manipulation, sensing and autonomy at differing scales and levels of difficulty for autonomous and/or teleoperated robots.



## Robots:

- The Open Academic Robot Kit (OARKit) provides a starting point for teams.
- All mechanical parts are 3D printable or laser cut, components are common off-the-shelf and all designs, source code and instructions are open source.
- Open source designs encourage sharing and facilitate ad-hoc collaboration.



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<http://workshops.oarkit.org>

## North American Kickoff Workshop

September 17-18, 2016

Robot Test Facility, Building 207  
National Institute of Standards and Technology  
100 Bureau Drive, Gaithersburg MD 20899



We invite high school teachers and mentors to participate in the North American Kickoff Workshop for the RoboCupRescue Rapidly Manufactured Robot League (RMRL) and Open Academic Robot Kit (OARKit). These are a new robotics challenge and open robotics initiative for high school and college students.

Attendees depart with all the information that they need to start a successful team. They may bring parts to build their own OARKit robot and receive assistance in assembling and programming. This event will be an opportunity to shape the upcoming events, refine the rules under which the competition will be administered and develop the message for this project going forward.

Those unable to attend in person may join our discussions online. This event will also be recorded.

### Draft Schedule:

#### September 17:

- Noon Arrival and lunch among the NIST robot test apparatuses.
- 1:00 pm Introduction to the test method process and RoboCupRescue, tour of the test facility.
- 2:00 pm Introduction to the RMRL and the OARKit.
- 4:00 pm Rules Q&A and Discussion.
- 6:00 pm Dinner.

#### September 18:

- 8:30 am Arrival and refreshments.
- 9:00 am Constructing the OARKit robot.
- 10:30 am Programming the OARKit robot.
- 12:00 pm Lunch, Q&A and Discussion.
- 1:30 pm End of Workshop.



### Registration:

All attendees must register by the 10th of September. No late or on-site registrations will be possible. Registration is free. All in person attendees must be US Citizens or Permanent Residents. Those unable to attend may join us online.

### For more information:

Please follow the links from <http://workshops.oarkit.org> for registration, accommodation and other details. Those wishing to assemble their own robot at the event can also find details, including a parts and vendor list, there. Join our mailing list at <http://list.oarkit.org> to join the discussion!