

**From:** Michael Jones mdj@phys.hawaii.edu  
**Subject:** 2020 Physics Olympics  
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**To:** aaphawaii-l@lists.hawaii.edu

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31st Annual Hawaii Physics Olympics & Regional Bridge Building Contest  
sponsored by  
American Association of Physics Teachers, Hawaii Chapter  
Engineering Club at UH Kapiolani  
Society of Physics Students, Univ. of Hawaii Chapter

WHEN: Saturday, Feb. 1, 2020  
WHERE: UH Manoa, Watanabe Hall and Physical Science  
(maps at <http://manoa.hawaii.edu/campusmap/>)  
ENTRY DEADLINE: January 28, 2020  
CHECK IN TIME: 8:00 to 8:30 a.m. in Physical Science 217 for bridges  
EVENTS: 8:30 a.m. to 11:00 a.m.  
AWARD CEREMONY: 11:30 a.m. to 12:00 noon in Physical Science 217

The 2020 Physics Olympics will be held at Watanabe Hall and the Physical Science Building on the UH Manoa campus in Honolulu. Teams of high school students are invited to participate in five fun events based on concepts in physics. The specific events will be announced on the day of the Physics Olympics and will be based on some of the following concepts:

Electric circuits    Vectors    Motion    Experimental methods  
Magnetism    Pendulum motion    Waves    Optics  
Gravity    Friction    Energy    Heat

\*\*\* CART JOUST \*\*\*

One of the five events will be a cart joust event. Each team should make and bring to the competition a cart with wheels capable of derailing an opponent's cart in a head-on collision. The cart must satisfy the following specifications:

- 1) mass less than 1 kilogram
- 2) must fit inside a box of dimensions 20 cm x 20 cm x 20 cm
- 3) can be propelled only by gravity down a ramp of height 90 cm
- 4) must be certified by judges for safety; no sharp edges or points or other features that might risk injury to participants or spectators will be allowed

Repairs may be made to carts between jousts and are recommended, but the repairs must be done quickly so that the cart is ready for its next scheduled joust. For more details, look at

<http://www.phys.hawaii.edu/~aapt/P.O./Joust.html>

\*\*\* CART JOUST \*\*

Schools may register a maximum of 6 teams. However, only 30 teams may participate so we may have to limit the number of teams from any one school. After the entry deadline, schools with multiple teams will be notified of the final number of teams that will be allowed. All teams must have at least 3 members and can have no more than 5 members. Submit one entry form (see below) per team via E-mail or FAX to Michael Jones at the address/number below. Each student entering the Bridge Building Contest should have a separate entry form. Bridge building information and contest rules are available at the following website:  
[http://bridgecontest.phys.iit.edu/public/international/2020/international\\_rules](http://bridgecontest.phys.iit.edu/public/international/2020/international_rules)

There will be five events and awards will be given for 1st, 2nd, and 3rd places in each event but there will be no overall awards. Also, teachers and other observers are welcome to watch the events and take pictures but they may not answer questions or help students.

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31st Annual Hawaii Physics Olympics entry form (one for each team)

SCHOOL:  
TEACHER:

TEACHER:

PHONE:

TEAM NAME:

TEAM MEMBERS:

- 1.
- 2.
- 3.
- 4.
- 5.

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Bridge Building Contest entry form (one for each contestant)

SCHOOL:

TEACHER:

Bridge Building Contestant: