

# *Robotics and Computer Science*



## **Physical Design**

Good physical design may refer to mechanical functionality and/or UI (User Interface).

- Sensors and/or operator input is appropriate and understandable for the planned purpose(s)
- Manipulators and/or displays are used as needed to accomplish the needed tasks
- Physical or interface construction is appropriate and elegant

## **Operational Functionality**

Several operability concepts are used to help define the capability of an entry.

- Operational methods of the software or robot are complete and appropriate for the purpose
- Design allows for variables in the operating environment and error handling
- Operation is repeatable and consistent with the planned function

## **Display, Documentation and Software**

The project display should show the following and may include a paper with more information.

- A working robot or sub-assembly or, if software, the working software should be presented
- The function or purpose of the robot or software should be described
- The description and clarification of any sub-components should be explained
- A description of the methodology used to operate the robot or software may be included

Additional items that may be explained as part of the entry include:

- Considerations for alternative operation based on variations in operating parameters
- Documented code or design information
- Efficiency of design (software code and /or mechanical design)

## **Entry, Review and Judging**

An entry in this category will be reviewed and judged on the following:

- Entry rules and general requirements judging points
- Physical design and/or operational functionality
- Software source code evaluation (if applicable) (note: this can be confidential if desired.)
- Display and documentation provided

## **Additional Items Which Will Affect the Review and Judging Conclusions**

- Entry relates to real-world applications
- Robot or software and/or the associated purpose is original or innovative
- Illustrations, images, or other media that is presented as supporting information