National Aeronautics and Space Administration

KIBO Robot Programming Challenge 3rd Mission

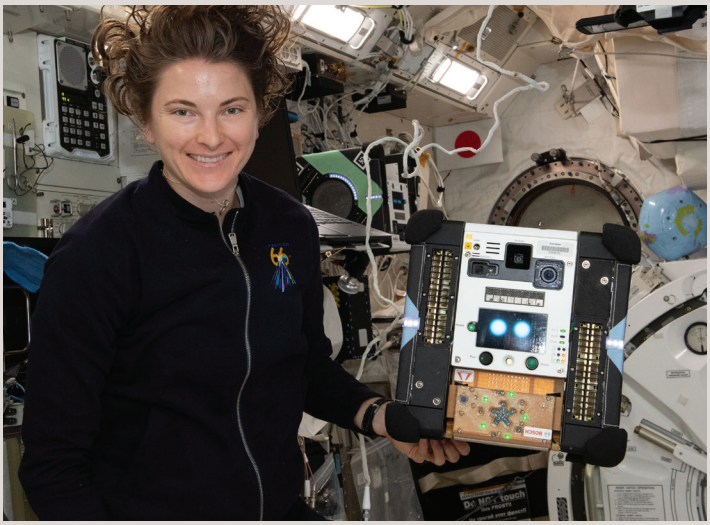
Code and Compete Internationally to BEE Programming Champions!

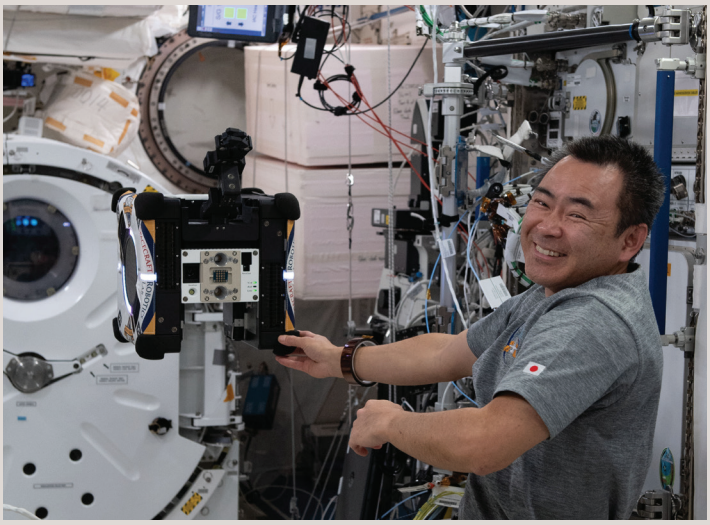
What is KIBO-RPC?

The Kibo Robot Programming Challenge (Kibo-RPC) is an educational program in which students solve various problems by moving free-flying robots (Astrobee) with students' programs on the International Space Station (ISS).

The competition presents tasks/obstacles for students to solve using the Kibo module as a game space. The competition includes a time requirement and problem-solving ability.

Teams who win the preliminary round (domestic round) held in their country using the simulator for this competition on the ground can participate in the Final Round which will be held on-board the International Space Station in the Kibo module.





Event Schedule (Tentative)

- Call for participation: February 22 – May 16, 2022
- Preliminary Round: July 2022 simulation tests begin. U.S. teams will be hosted at NASA's Johnson Space Center in Houston on-site and virtually for the final team selection announcement. Teams may participate in tours of NASA facilities and may hear guest speaker presentations during the onsite and virtual experience.
- International Space Station Final Round: September 2022. Selected teams will have their code sent to and tested aboard the space station utilizing Astrobee. The Tsukuba Space Center will also virtually participate in testing from Tsukaba, Japan.

Entry Qualifications

- High school students enrolled in U.S. schools or undergraduate students enrolled in U.S. 2 or 4-year higher education institutions may register to participate on a U.S. team.
- All team members must be U.S. citizens or legal Permanent Residents.
- Teams must consist of at least (3) members.
- Teams may consist of collaborations between high schools and higher education institutions, whereby some members within a team are high school students and others are undergraduates, or members on the same team represent multiple high schools or multiple higher education institutions.
- No individual may be a member of more than one team.
- Teams cannot add new members after the Preliminary Round
- It is strongly recommended that teams have an advisor (teacher, faculty member, parent, or mentor), but all programming must be performed by students.
- Each team must have a leader who is responsible for team management. A student in a team or guardian can be the representative.
- Teams must have access to hardware and software that meet system and software requirements outlined in the application process.

The following skills and knowledge are recommended but not mandatory:

✓ Android programming and image processing with Java

✓ College-level knowledge of physics or mathematics

Optional Team Travel to JSC for the U.S. Preliminary Round

- Any team member under the age of 18 accompanying the team to Houston must provide a signed JSC parental consent form. Any team member under the age of 16 must be accompanied by a parent or legal guardian.
- Current NASA COVID-19 policies stipulate that visitors to the Johnson Space Center in Houston must complete a form to attest their vaccination status, and to keep the form on their person while onsite. Should visitors not be fully vaccinated, they will need to provide a negative COVID-19 test within 72 hours prior to entrance on site.

  These policies are subject to change.

To participate, register here or use the QR code!

For questions about this opportunity, please email:
jsc-stem-engagement@mail.nasa.gov

QR code directs students to the application in the NASA STEM Gateway:
https://go.nasa.gov/3lSB7jv