

Session Title

Turning Your Robotics Ideas into Reality with Onshape

Presenters

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Elevator Pitch

Whether it be assembling your car, delivering your groceries, or cleaning your living room floor, robotic systems are becoming a larger part of our everyday lives. Every robot has to be designed before it can be made, so let's take a look at how robots are designed with Onshape! You'll make some parts of your own and then get to see some real robots in action.

Materials

Laptops preferred; wired or wireless mouse (highly recommended) Onshape EDU account created before the conference

Overview

In this session, students will be introduced to Onshape, a 3D Computer Aided Design software that runs in an internet browser. After a quick walkthrough of why companies use 3D CAD and why they may choose Onshape, students will design a simple component that could be 3D printed at a later date.

Once the exercise is complete, 3D models of different robots will be presented, and then we'll show off the real robot. Bucksport High School's award-winning FRC Robot from the 2023 season will be on display so students can watch it operate, ask questions, and check it out!

Teacher Expectations

The teacher will need to ensure that students have created and activated a free Onshape account at onshape.com/edu prior to the event - this will require that the students have an active email address and can receive emails from senders outside of the school's system. Teachers are free to discuss robotics in industry with their students, or if they're looking for a more "fun" approach, they can show off videos of FIRST Robotics Competition robots or VEX Robotics Competition robots. During the session, teachers will be expected to help students log into their accounts and assist if students are having difficulties. I'll do my best to keep the instructions simple!