

# **2019 CAD Clinic**

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# What is CAD

- Computer Aided Design (CAD)
- Really just a fancy drawing program
- Originally was just a replacement to a drawing board
- Now a full development environment

# CAD Programs

- Solidworks [www.solidworks.com](http://www.solidworks.com)
- ProE [www.ptc.com](http://www.ptc.com)
- Siemens NX Designer [www.plm.automation.siemens.com](http://www.plm.automation.siemens.com)
- Autodesk [www.autodesk.com](http://www.autodesk.com)
  - Autocad
  - Fusion360
- FreeCAD [www.freecadweb.org](http://www.freecadweb.org)
- Lots of others...

# CAD Online/Cloud

- OnShape [www.onshape.com](http://www.onshape.com)
  - Free to use for non-commercial / shared designs
- Tinkercad [www.tinkercad.com](http://www.tinkercad.com)

# Parametric Design

- Not just drawing any more
- Now you sketch and parameterize
- Then extrude or rotate
- Repeat

# FreeCAD

- Open source
- Multi platform Mac, Windows, Linux...
- <http://www.freecadweb.org>

# Demonstration