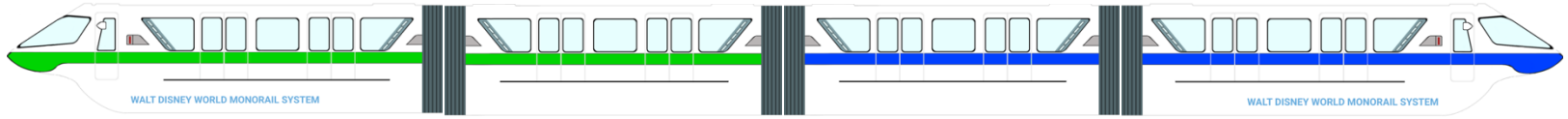
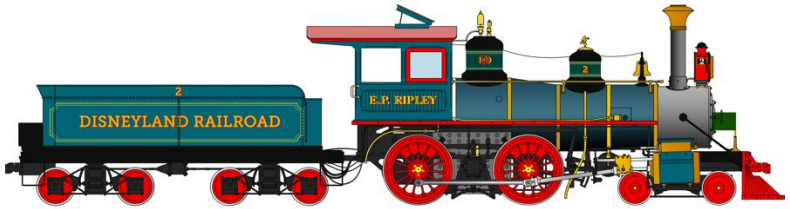
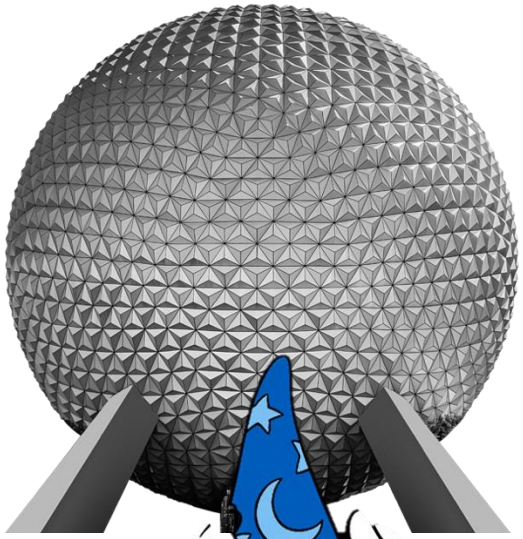
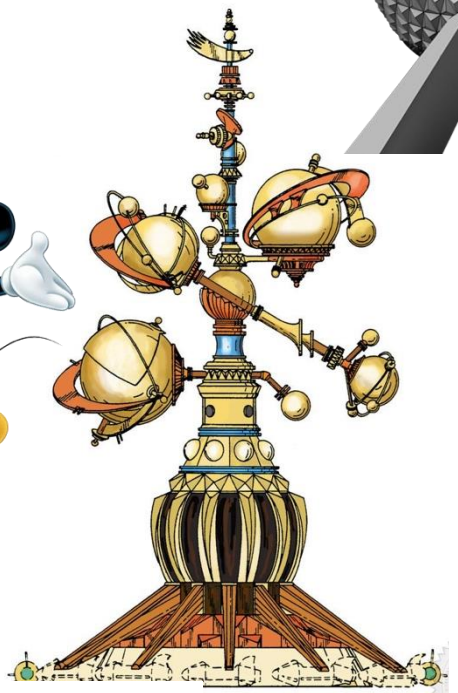


SOLIDWORKS



How to CAD almost anything!





MIT Summer ‘25

Instructor: Andy Eskenazi

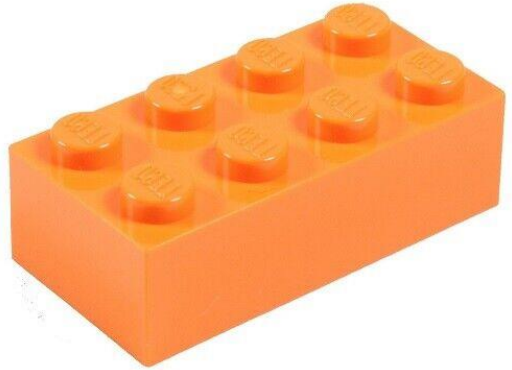
Session 1

MIT AEROASTRO

MIT

Agenda

- Quick intros!
  - Why CAD?
- Workshop logistics and important info
  - Overview of sessions and projects
- Session 1:
  - Demo of the session's Solidworks commands
  - Demo of projects: Sorcerer Mickey mug, commemorative Disneyland coin
- Questions?
- Preview of Session 2



Quick Intros!

Me
(Andy)

You (in IAP 2025)!

1) Name, major, year
   - Eg: Andy, AeroAstro, PhD Y3
2) Hometown
   - Eg: Buenos Aires, Argentina
3) Spirit animal
   - Eg: Angus Aberdeen cow
4) Why CAD almost anything?
   - Eg: I think it's cool to look at a random object and imagine how to cad it

Why CAD?

Advanced modeling

Assemblies with multiple (moving) parts

Personal projects

Design proficiency

CAD the chameleon from Tangled

CAD microfluidic devices

Improve knowledge of CAD

CAD Sisu (the dragon)

Practice organic shapes

Anything space related

Refreshing Solidworks muscles

CAD the Disney Castle

CAD Mulan, Moana, Olaf

CAD the Iron Man mask

CAD the Cinderella Castle

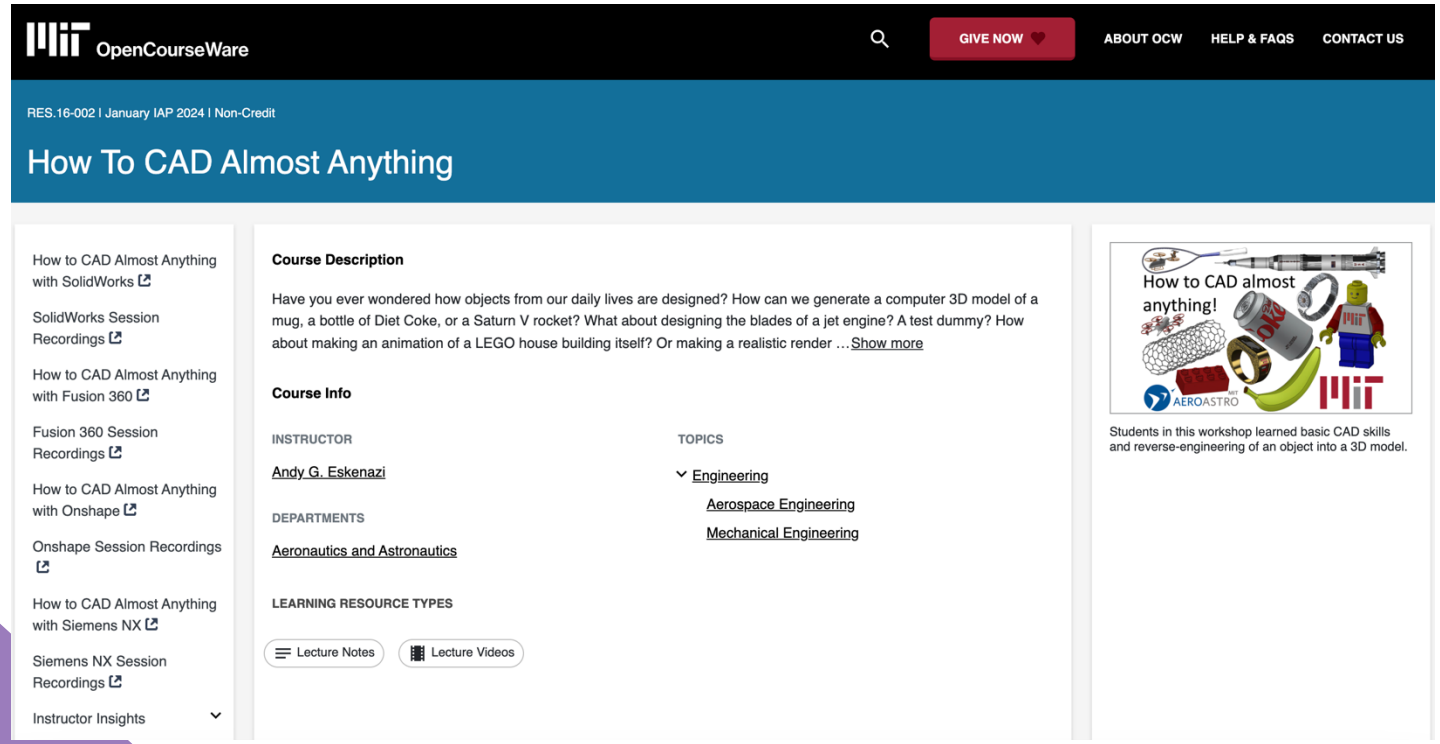
CAD Stitch

Becoming knowledgeable with the tools

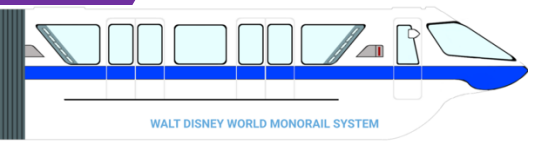
CAD the broomstick

Why Solidworks?

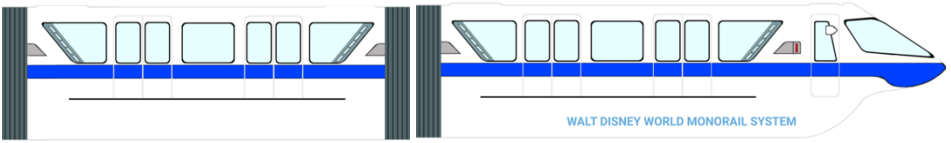
- The lingua franca of CAD software.
- Extremely robust, with lots of functionalities.
- Time to iterate back to Solidworks, after going through four different CAD software.



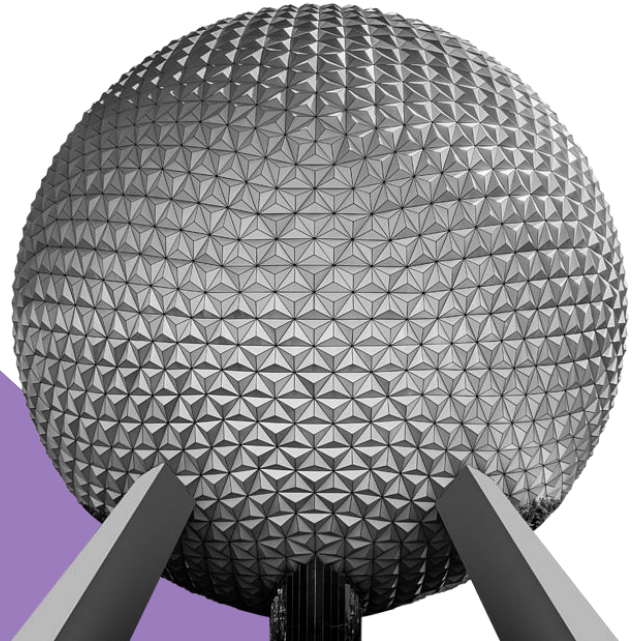
- Try more advanced modeling tools than the IAP 2024 version of the class!



Welcome!



How to CAD almost anything!



MIT Summer ‘25

Workshop logistics

Week 1		Week 2	Week 3
Session 1: June 3 (Tuesday)		**Session 3:** June 10 (Tuesday)	**Session 5:** June 17 (Thursday)
Sketches, basic feature commands, editing and defining sketches, coloring parts, splines, wrap, sketch picture	• Coin • Mug	• EPCOT's Toy Monorail • EPCOT's Toy Train Tracks	• Genie's Lamp • Mickey statue
Session 2: June 5 (Thursday)		**Session 4:** June 12 (Thursday)	**Session 6:** June 20 (Friday)
Revolve, mirror, circular pattern, planes, assemblies, drawings	• Luxo, Jr. Lamp • Scream Canister	• Magic Kingdom's Toy Locomotive • Magic Kingdom's Toy Wagons • Magic Kingdom's Toy Train Tracks	• EPCOT's Spaceship Earth • Magic Kingdom's Astro Orbiter • Theme Park

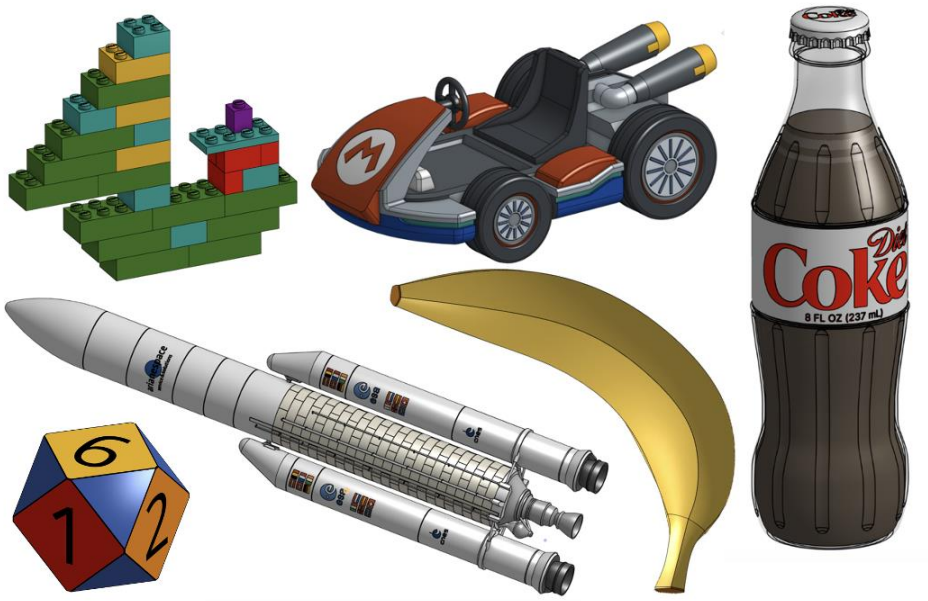
Important info

- Meeting times:
  - Tuesday: 3:00pm – 5:00pm
  - Thursday: 3:00pm – 5:00pm
- GIS & Data Lab (Rotch Library)
  - Open M – F: 10:00am – 6:00pm
  - 16 computers (all of which have Solidworks on them).
- Online resources:
  - GitHub https://github.com/andyeske/How-to-CAD-Disney.

How to CAD almost anything! – Disney Edition

Summer 2025 – AeroAstro Workshop

A companion course to the original "How to CAD almost anything!" IAP 2024 workshop, this short, 3-week edition introduces students to the parametric design software Solidworks using examples sourced from the Disney universe! Although intended for students with existing CAD (computer-aided design) experience, both beginners (no experience at all) and pro-users alike are welcomed! Come learn how to CAD (computer-aided design) essentially almost anything (Disney themed)!



Yes, this could be YOU at the end of the workshop! You'll be equipped with the tools to design cool looking things such as a LEGO boat, a Mario Kart, a bottle of Coke, a banana, an Arianne V rocket, and even a 12-sided dice!

Workshop Details

Subject Title:	How to CAD almost anything!
Prerequisites:	Willingness to have fun and think outside the box!
Enrollment:	20.

Check out the syllabus if you have more questions!

Session 1

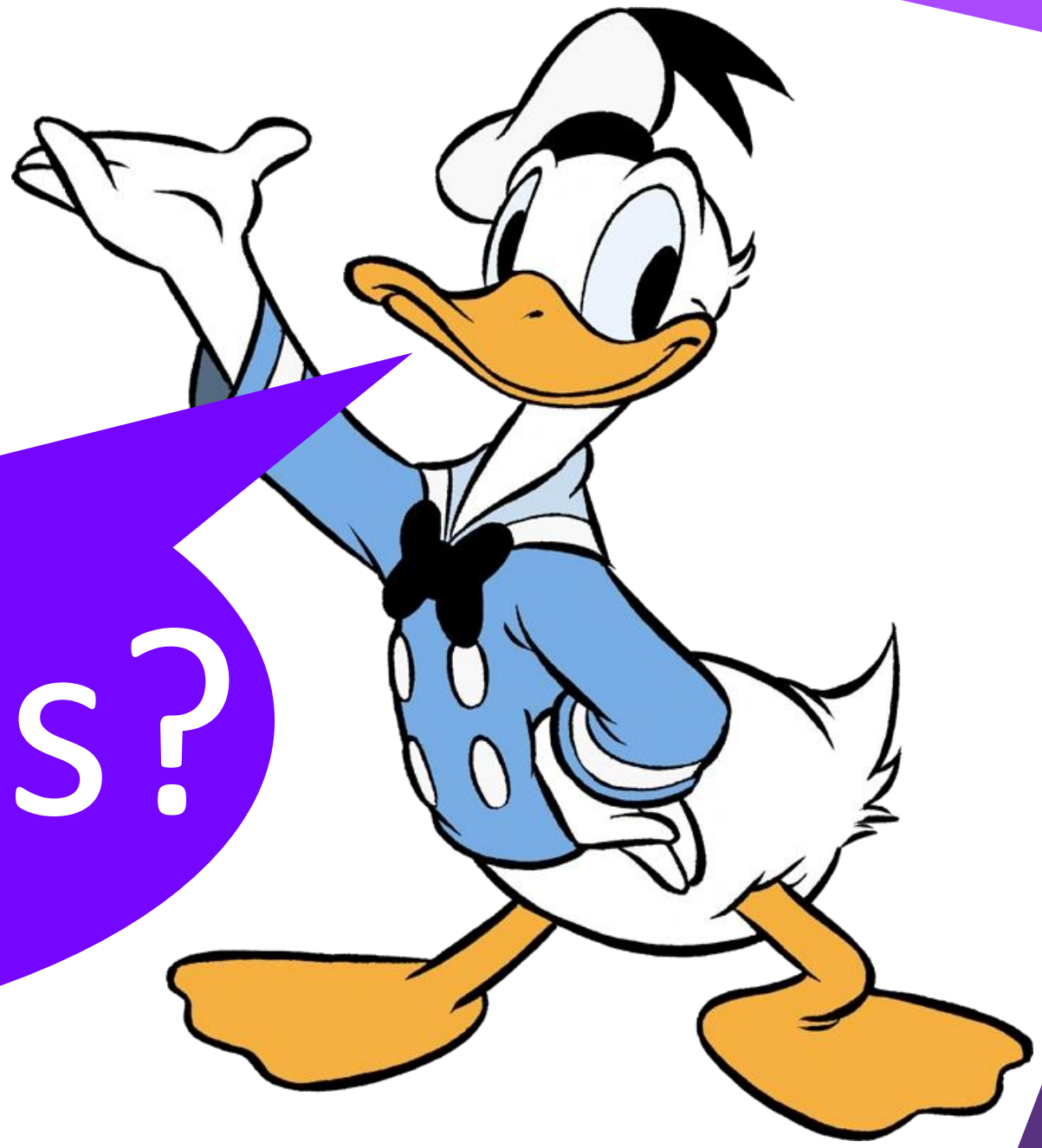
A commemorative Mickey coin for Disneyland Paris

A Sorcerer Mickey mug

Commemorative Mickey coin

Sorcerer Mickey mug

Questions?



Preview into Session 2

Luxo Jr., Lamp

Scream Canister