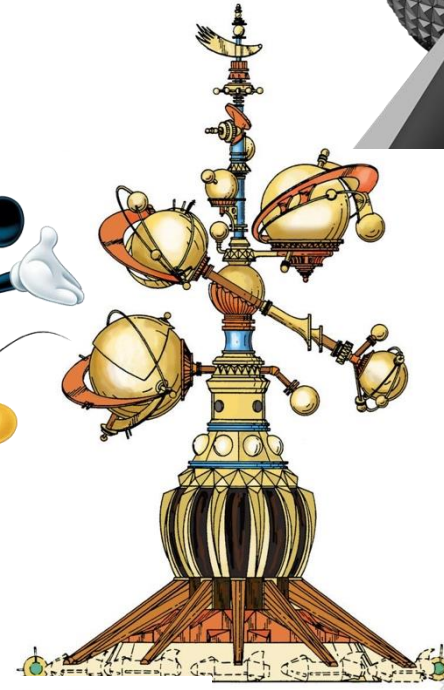


How to CAD almost anything!

MIT Summer '25

Instructor: Andy Eskenazi

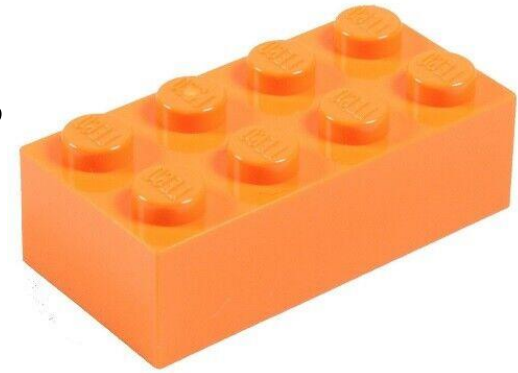


Session 1
AEROASTRO MIT



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.

The screenshot shows the MIT OpenCourseWare website for the course 'How To CAD Almost Anything' (RES.16-002 | January IAP 2024 | Non-Credit). The page features a dark blue header with the MIT logo and navigation links. The main content area is divided into three columns. The left column contains a sidebar with links to various CAD software sessions (SolidWorks, Fusion 360, Onshape, Siemens NX) and instructor insights. The middle column displays the course description, instructor information (Andy G. Eskenazi), departments (Aeronautics and Astronautics), and learning resource types (Lecture Notes, Lecture Videos). The right column features a promotional graphic for the course, showing various 3D models and the text 'How to CAD almost anything!'.

MIT OpenCourseWare

RES.16-002 | January IAP 2024 | Non-Credit

How To CAD Almost Anything

Course Description

Have you ever wondered how objects from our daily lives are designed? How can we generate a computer 3D model of a mug, a bottle of Diet Coke, or a Saturn V rocket? What about designing the blades of a jet engine? A test dummy? How about making an animation of a LEGO house building itself? Or making a realistic render ... [Show more](#)

Course Info

INSTRUCTOR

[Andy G. Eskenazi](#)

DEPARTMENTS

[Aeronautics and Astronautics](#)

LEARNING RESOURCE TYPES

[Lecture Notes](#) [Lecture Videos](#)

TOPICS

▼ [Engineering](#)

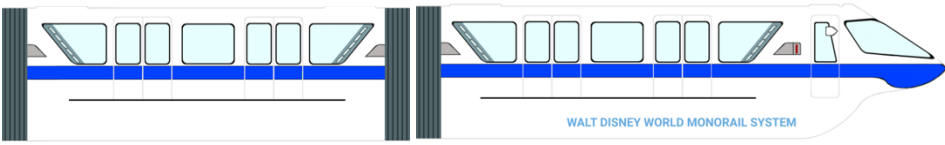
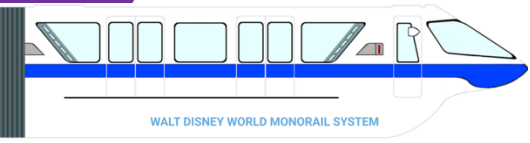
[Aerospace Engineering](#)

[Mechanical Engineering](#)

How to CAD almost anything!

Students in this workshop learned basic CAD skills and reverse-engineering of an object into a 3D model.

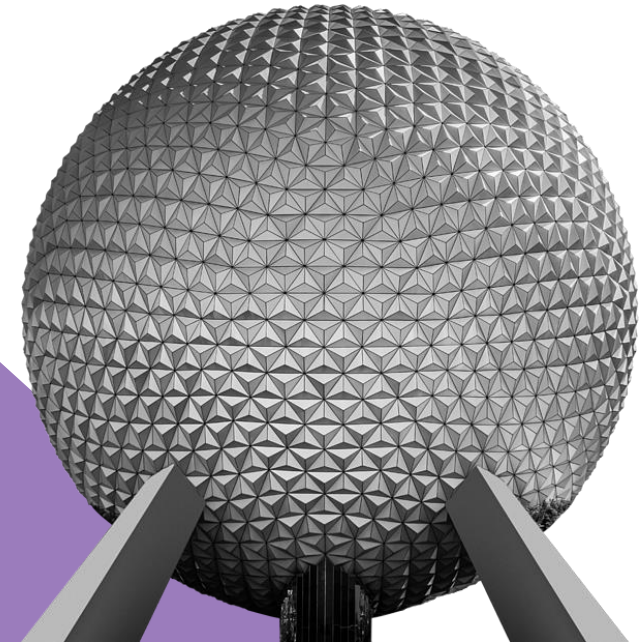
- Try more advanced modeling tools than the IAP 2024 version of the class!



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)
<p>Sketches, basic feature commands, editing and defining sketches, coloring parts, splines, wrap, sketch picture</p>	<ul style="list-style-type: none"> • Coin • Mug 	<ul style="list-style-type: none"> • EPCOT's Toy Monorail • EPCOT's Toy Train Tracks 	<ul style="list-style-type: none"> • Genie's Lamp • Mickey statue
Session 2: June 5 (Thursday)		Session 4: June 12 (Thursday)	Session 6: June 20 (Friday)
<p>Revolve, mirror, circular pattern, planes, assemblies, drawings</p>	<ul style="list-style-type: none"> • Luxo, Jr. Lamp • Scream Canister 	<ul style="list-style-type: none"> • Magic Kingdom's Toy Locomotive • Magic Kingdom's Toy Wagons • Magic Kingdom's Toy Train Tracks 	<ul style="list-style-type: none"> • EPCOT's Spaceship Earth • Magic Kingdom's Astro Orbiter • Theme Park

Important info

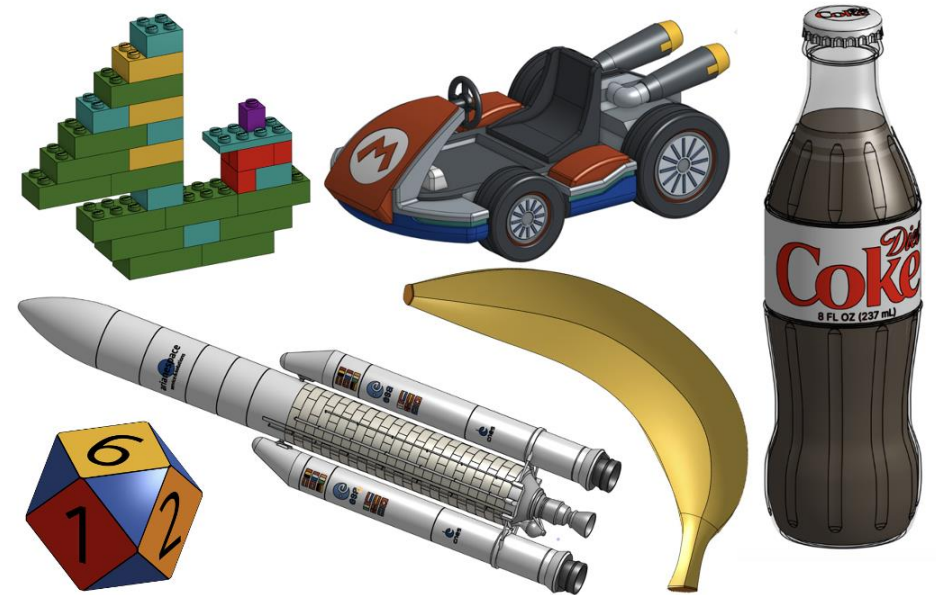
- Meeting times:
 - Tuesday: 3:00pm – 5:00pm
 - Thursday: 3:00pm – 5:00pm
- GIS & Data Lab (Rotch Library)
 - Open M – F: 10:00am – 6:00pm
 - 16 computers (all of which have Solidworks on them).
- Online resources:
 - GitHub

<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 Ariane 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

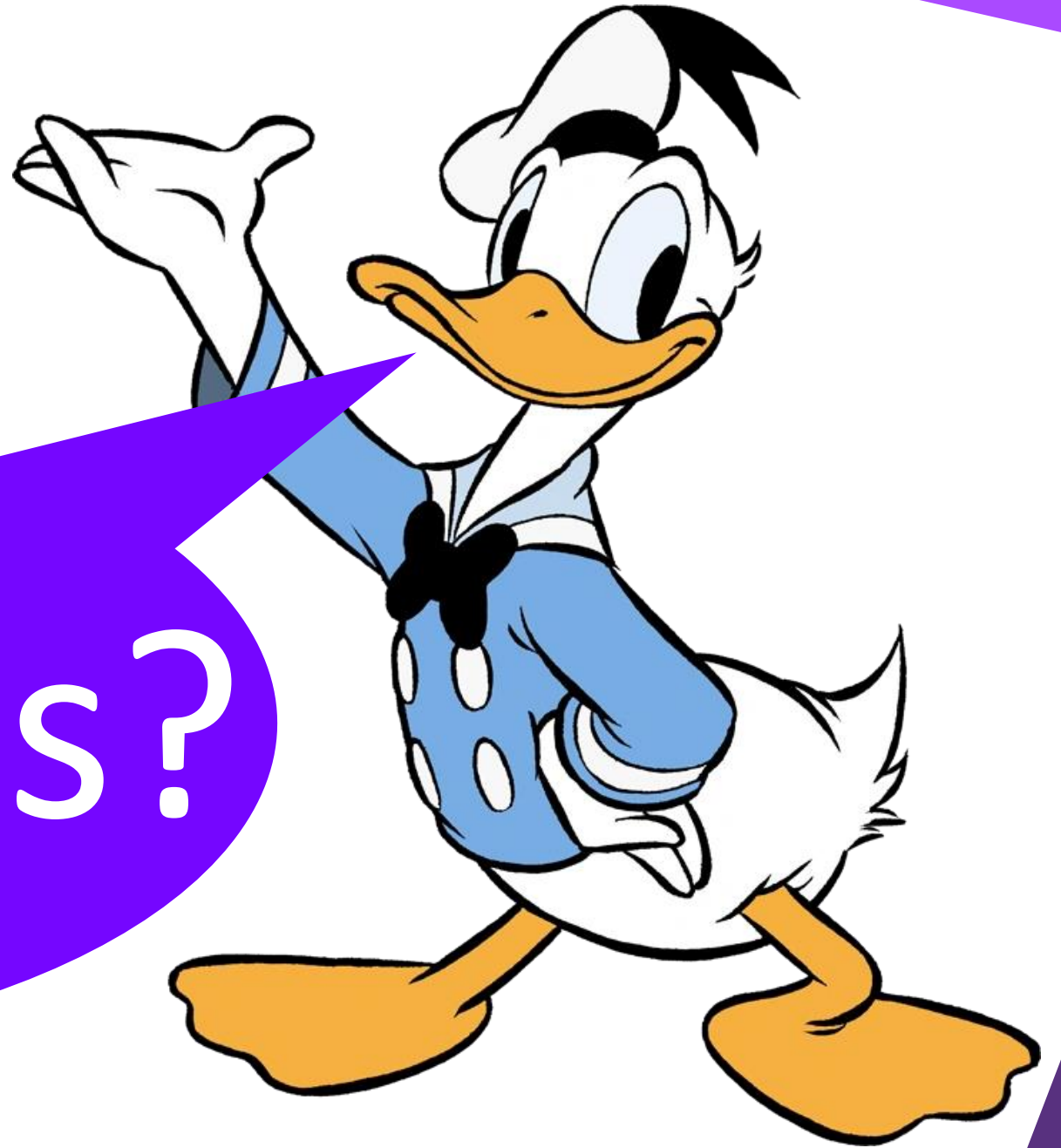
Commemorative Mickey coin



Sorcerer Mickey mug



Questions?



Preview into Session 2



Luxo Jr., Lamp



Scream Canister