### Long Run Macroeconomics

Prof. Giacomo Rondina University of California, San Diego Spring, 2023

Lecture 1 (note: this lecture will be recorded)

Welcome, and nice to meet you!

### Something about me...



#### **Education:**

BA in Economics from LUISS-Rome (2001) Ph.D. in Economics from UW-Madison (2007)

#### **Professional History:**

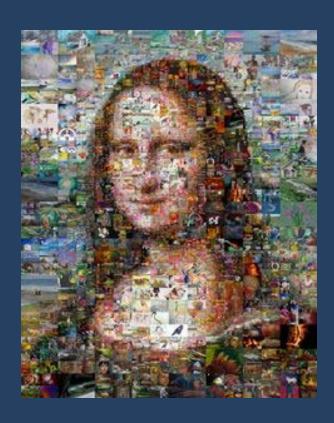
Assistant Professor at UC San Diego from 2007 to 2014 Assistant Professor at CU Boulder from 2014 to 2017 Associate Teaching Professor at UCSD since 2017

#### **Research Interests:**

Asset Price Bubbles, Macroeconomic Impact of Sustainable Investing Twitter: @giacomorondina

...now, your turn!

# Why Study Macroeconomics?



### Macroeconomics studies:

#### 1. Economic Growth





1880: \$5,000\*

2016: \$53,000\*

<sup>\*</sup>median income in 2011 dollars, source: Maddison Project Database

### Macroeconomics studies:

### 2. Economic Inequality



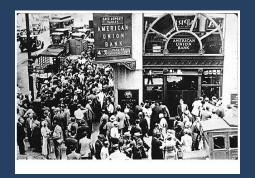
San Diego, 2023



San Diego, 2023

### Macroeconomics studies:

#### 3. Economic Cycles



1929-1933 Great Depression



2020-2021 COVID-19 Recession



2008-2010 Great Recession

## What is the "Long Run?"

<u>definition based on time:</u> any macro phenomenon that persists more than 20-25 years

<u>definition based on "adjustment</u>:" any macro phenomenon that persists once prices and quantities have had the chance to adjust

## What is the "Long Run?"



## What are our Learning Objectives in Econ 110A?

In the context of long run macroeconomic issues, we want to learn how to:

- 1. measure
- 2. model
- 3. understand/predict

## What is different from Macro Principles (Econ 3)?

- 1. measure: advanced understanding of critical issues with measurement of macroeconomic variables
- 2. model: advanced practice of how to build and analyze macroeconomic models
- 3. understand/predict:
  - a) quantitative predictions due to mathematical structure
  - b) sophisticated and nuanced analysis of economic mechanisms
  - c) advanced critical understanding of power and limits of macroeconomic analysis

## Econ 110A: Important Info

#### Lectures

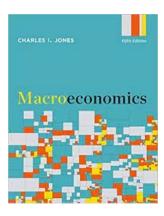
- in person on Tue and Thu, Center Hall 214
- recorded and posted on Canvas

#### Web Platforms

#### Canvas

- Videos and Slides from Lectures
- Practice Problems and Solutions
- Review Material
- Piazza Discussion Board
- Weekly Reflection Notes

#### Econ 110A: Textbook



Title: Macroeconomics

Author: Charles I. Jones

Edition: 5<sup>th</sup>

Canvas: Redshelf (opt-out system)

### **Our Instructional Team**

**Graduate Instructional Assistants:** 

Carlos, John

#### **Discussion Sessions**

- Mondays (Section A), Wednesdays (Section B)
- Review important material
- Work on problems from old exams
- Recorded and posted on Canvas

This week: review of math needed for Econ 110A (asynchronous, posted on Canvas tomorrow)

### **Important Dates**

■ Midterm: Monday, May 8, 7 pm — 8:50 pm (out-of-class)

• Final: Saturday, June 10, 3 pm to 6:00 pm

### Office Hours

■ Tue and Thu, 5:30 pm to 6:30 pm, Econ 226 and Zoom

### **Academic Integrity**

academic integrity means having the **courage** to act in ways that are honest, fair, responsible, respectful & trustworthy even when it is difficult

https://academicintegrity.ucsd.edu/forms/form-pledge.html

### Plan for the rest of Lecture 1

Math Review Quiz

How Macroeconomics studies Questions

Application: Consumption and Income

### Math Review Quiz

Not graded, but 5 bonus points for submission

Use it as feedback on what math to review for the class

Math review session posted tomorrow

### How Macroeconomics Studies Questions

Step 1: document facts motivating the questions

#### Example: Income and Consumption



Question: Why is consumption smoother than income?

### How Macroeconomics Studies Questions

Step 2: run experiments to replicate facts

### How Macroeconomics Studies Questions

Step 3: simulate policy experiments in the model

Example: Income and Consumption

Step 2: develop a model of income and consumption

#### Two-Period Neoclassical Consumption Model

- 1. The economy consists of a representative consumer who only lives for two periods: today (period 1), and the future (period 2).
- 2. The consumer earns income in both periods; can save (or borrow) and receives (or pays) some interest.

$$Y_1$$
: income in period 1

 $Y_2$ : income in period 2

S: savings (borrowing)

$$C_1$$
: consumption in period 1

 $C_2$ : consumption in period 2

1 + R: gross interest rate

$$Y_1 = C_1 + S$$

$$Y_2 + S(1+R) = C_2$$