# Tutorial #2
# Introduction to Jupyter

## 1 Introduction

This week we are going to learn how to use Jupyter to collect data, analyze data, and present the results. This requires the installation of Anaconda and a couple of extensions. For those who would like to perform the lab on their own personal computer, Anaconda can be downloaded and installed from https://www.anaconda.com/distribution/.

Anaconda is a graphical interface for an installation manager, conda, and comes with many python and python related programs preinstalled. After you open Anaconda Navigator you will see a link to launch the program Jupyter Lab. Jupyter is a program that uses iPython notebooks (.ipynb) and can run several languages incuding Julia, Python, LaTeX and R. The name itself is an acronym of these languages. Despite being a program, Jupyter has no native graphical interface and will run in your default web browser. Note, ipynb files can't be opened directly from the finder, they must be opened from within Jupyter.

To complete today's tutorial you will also need to install the additional python extensions Qgrid and Dill. These extensions can be installed by running a single line of code either in the Terminal or directly in Jupyter. Installation should take about a minute each. To install Qgrid run: *conda install -c anaconda qgrid* and to install Dill run: *conda install -c anaconda dill*

**If you have a laptop, please bring it to lab since each student will need a computer.**

## 2 Lab Ticket

**Read this section, follow the instructions, and answer the questions before lab.**

Bring to lab a pdf printout of a ipynb showing the calculation 2+2.

We'll do the following activities in lab.

## 3 Tutorial Activities

1. Download, read, and evaluate the file Jupyter Data Entry Tutorial v2.ipynb which is on Canvas.
2. Download and read the file Jupyter Template for Lab v2.ipynb which is on Canvas.
3. Perform the lab activities described in the template.

## 4 Assignment

Your lab report based on the lab activities described in the template are due on Canvas as a pdf by 5pm on Wednesday. The template is a good starting place for your lab report, but remember to change or delete every cell. When you turn in your lab report not a single word of the template should remain.