

## 2023 Quantitative Biology Bootcamp, CSHL School of Biological Sciences

### Instructors:

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**GitHub Repository:** [https://github.com/jbkinney/23e\\_qbbootcamp](https://github.com/jbkinney/23e_qbbootcamp)

**Day 1:** Tuesday, 5 September 2023, 10am - 6pm, Hershey East Room, Hershey Bldg.

- 10:00am - 10:30am: **Overview of Quantitative Biology (lecture, Justin)**
- 10:30am - 12:00pm: **The Unix command line (tutorial, Ivan)**
- 12:00pm - 1:00pm: *Lunch (provided)*
- 1:00pm - 1:30pm: **Introduction to Python and Jupyter Notebooks (tutorial, Justin)**
- 1:30pm - 3:30pm: **Python: data types (tutorial, Justin)**
- 3:30pm - 4:00pm: *Break*
- 4:00pm - 6:00pm: **Python: flow control (tutorial, Ivan)**

**Day 2:** Wednesday, 6 September 2023, 1pm - 5pm, Samet Conference Room, Koch Bldg.

- 1:00pm - 1:30pm: **NextGen sequencing and high-performance computing (lecture, Justin)**
- 1:30am - 3:00pm: **Read mapping using Elzar (tutorial, Justin)**
- 3:00pm - 3:15pm: *Break*
- 3:15pm - 3:30pm: **Introduction to dataframes (lecture, Justin)**
- 3:30pm - 5:00pm: **Pandas I, TF analysis (tutorial, Ivan)**

**Day 3:** Thursday, 7 September 2023, 10am - 6pm, Plimpton Conference Room, Beckman Bldg.

- 10:00am - 11:30am: **Pandas II, Replication origin analysis (tutorial, Justin)**
- 11:30am - 12:00pm: **Introduction to Data Visualization (lecture, Justin)**
- 12:00pm - 1:00pm: *Lunch (provided)*
- 1:00pm - 2:30pm: **Matplotlib (tutorial, Ivan)**
- 2:30pm - 3:00pm: *Break*
- 3:00pm - 4:30pm: **Advanced visualization (tutorial, Justin)**