



Spring 2020 Syllabus
18.418/HST.504: Topics in Computational Molecular Biology

Instructor: Bonnie Berger

TA: Ashwin Narayan

Time & Location:

Monday & Wednesday 11:30 AM - 1:00 PM

The location for the class is 2-132 unless otherwise specified.

Course Website: <http://topicsincompbio.mit.edu/>

This is seminar-based course which covers recent research topics in computational molecular biology. The focus will be on a single-cell sequencing theme in Spring 2020, including algorithms for processing, analyzing, and interpreting this cutting-edge data. The course will consist of Lectures on Mondays and Guest Lectures on Wednesdays:

Feb 3	Lecture		Mar 9	Lecture
Feb 5	Bonnie Berger		Mar 11	Peter Karchenko, Harvard
Feb 10	Lecture		Mar 16	Lecture
Feb 12	TBA		Mar 18	Steven Saltzberg, John's Hopkins
Feb 19	Lior Pachter, Caltech		Mar 23	Spring Break
Feb 24	Lecture		Mar 30	Lecture
Feb 26	Joshua Welch, Univ of Mich		Apr 1	Yuval Kluger, Yale
Mar 2	Lecture		Apr 6	Lecture
Mar 4	Marinka Zitnik, Harvard		Apr 8	Simon Kasif, Boston University

Coursework:

- **Weekly reading assignments:** The primary purpose of the reading assignments is to enable students to gather understanding of the subject matter of the talks of the weekly guest speakers. One/two papers of the guest speaker will be assigned per week before the actual talk. Students will be required to write a one-page (both-sides allowed) review/summary for each paper. The summary will be due at midnight on the day before the talk (usually Tuesdays).
- **Class presentations:** Each student will sign up to give a 40-minute presentation, typically on a Monday, on a topic related to one of the talks. We will help guide the student.
- No exams.