Preliminaries

• Seminar talks: 35 minutes + 10 minutes questions
• English or German
  • If you give the talk in English, I will judge language quality mildly
• Reports: 8 pages in English or German
  • If you write the report in English, I will judge language quality mildly
  • Use Latex template (Springer LNCS) indicated on course web-page
• Criteria: Structure, Clarity, Precision of presentation
  → Use figures and drawings
  → Writing & Presentation skills very important if you consider a scientific career
  → check general writing tips and links on the course web page
• Grade: ½ talk + ½ report
• Grades: In the seminar my grading is very strict regarding language and presentation quality in the report & the presentation
Preliminaries II

• Don't underestimate the seminar 3 ECTS = 90 hours per semester

• No plagiarism
  → I am likely to notice!

• Start working on the seminar on time!

• Know the background of the paper, that is, any algorithms/theories cited therein!
Topic Assignments

- To be determined
Deadlines

• Topic selection: **May 3** → via email

• Supervisor assignment by Alexis via email after all topics are set

• Meet with supervisor **at least twice** before your presentation!

• Talk slots: times to be determined, presentation block on **July 23** from 08:00 – 19:00 in SR010

• Meet with supervisor **at least once** before handing in report

• Report Deadline – reports via email to me: **September 27** any time zone
Presentation Slots

- One block toward end of the semester
- Will set the exact times and duration later-on → make sure you have been included in the email list
Schedule

• Today → how to give a scientific talk and write a report (Alexis)
• Presentations: To be announced
Topic selection

• I'd like to give you as much freedom as possible
• This will allow you to chose a topic you like
• If you like a topic, you will give a better presentation and write a better report

• Topic selection
  • Pick any of the papers mentioned in the course
  • Pick any topic of the course and ask me for a paper
  • Contact one of my lab members that taught last semester (Lukas, Benoit, Alexey) and ask them for a paper on *their* topic
  • Pick any interesting COVID-19 paper
  • Pick any interesting ancient DNA paper
Course Topics

- Sequence Analysis
  - Indexing techniques & suffix trees
  - Operations on strings
  - Sequence alignment
- Phylogenetics
  - Parsimony
  - Likelihood
  - Parallel computing in phylogenetics
- Population Genetics
  - Coalescent models/method
  - Mixed phylogenetic & pop. gen. approaches
Topic Selection II

- Chose a recent paper you find interesting from the following journals
  - *Bioinformatics*
  - *BMC Bioinformatics*
  - *IEEE Transactions on Comp. Biol. & Bioinformatics*
  - *Systematic Biology*
  - *Molecular Biology and Evolution*
  - *BMC Algorithms for Molecular Biology*
  - *Nucleic Acids Research*
Topic Selection III

• You may also present a Bioinformatics topic that was not presented in the winter class (e.g., coalescent simulations in population genetics or protein structure prediction) in a more teaching like manner

• Do you think that it will work like this?
Reports

- Examples of good reports and nice slides from summer 2015, 2016, 2021 are available on the course web page

http://sco.h-its.org/exelixis/web/teaching/BioinformaticsModule.html
Supervision

• To talk to your supervisors make an appointment via email

• Don't wait until the very last minute before your presentation to make an appointment → make them straight after the topic assignment

• You will be assigned one of my lab members to help you with preparing the talk, the presentation & the report

• They can come to KIT to meet you, except if you want to visit our fancy institute in Heidelberg one day, you can also meet virtually depending on the pandemic

• Meetings with supervisors must take place
Your tasks

• Think about, search and select a topic by May 3
• Contact your supervisors (once assigned) immediately to schedule meetings! A total of at least three meetings are required!