CSHLData2023

The course is being held in the Biondi-Nichols hall (right below the driveway into campus).

Links

- [Join Slack](#)
- [Code of Conduct](#)

Schedule

Every evening after 7pm are "open lab" in Nichols Biondi. One of more of the TAs or instructors will be available during this time for discussion. Participants can use this time to work on material that they didn't get to or to work with instructors, each other, or TAs on their own data or projects.

Date	Start	End	Topic	Format	Speaker
6/29/2023	12:00	19:00	Students arriving		
6/29/2023	19:00	20:30	Introductions	informal discussion	
6/30/2023	9:00	12:00	Introduction to R	lecture/lab	Sean
6/30/2023	13:00	14:00	Probability and simulation	lecture	Vince
6/30/2023	14:00	17:00	EDA and visualization	lecture/lab	Vince
6/30/2023	19:00	21:00	Student talks	chalk talk or 3 slides	Students
7/1/2023	9:00	10:30	Introduction to R	lecture/lab	Sean
7/1/2023	10:30	12:00	Inference, p-values, FDR	lecture	Vince
7/1/2023	13:00	15:00	t-statistic and basic power calculations	lecture/lab	Sean
7/1/2023	15:00	17:00	Overview of Bioconductor		Vince
7/1/2023	19:00	21:00	Student talks		Students
7/2/2023	9:00	10:30	Public Data and Data Access	Lecture	Sean
7/2/2023	10:30	12:00	Rmarkdown	Lecture/lab	Sean
7/2/2023	13:00	14:30	Linear regression and GLMs	Lecture/lab	Vince
7/2/2023	14:30	17:00	Summarized Experiment	Lecture/lab	Sean
7/3/2023	9:00	11:00	SummarizedExperiment objects in the real world lcolladotor.github.io/cshl_rstats_genome_scale_2023/	Lecture/lab	Leo, Daianna, Renee (aka, Leo's team)
7/3/2023	11:00	12:00	Interactive SummarizedExperiment visualizations	Lecture/lab	Leo

7/3/2023	13:00	14:00	Overview of smokingMouse plots (colData + some genes) + hands-on exercise overview	Lecture/lab	Daianna (lead), Leo (support)
7/3/2023	14:00	17:00	Hands-on exercise in reproducing smokingMouse plots with iSEE & R	lab	Team Leo
7/3/2023	19:00	20:00	biocthis: making your R/Bioconductor package	demo	Leo
7/4/2023	9:00	11:00	SummarizedExperiment objects built with recount3	Lecture/lab	Leo
7/4/2023	11:00	12:00	Statistical models with ExploreModelMatrix	Lecture/lab	Leo
7/4/2023	13:00	14:00	Differential expression analysis introductory code with limma using smokingMouse / recount3 data + hands-on exercise overview	Lecture/lab	Leo
7/4/2023	14:00	17:00	hands-on exercise using recount3 data	lab	Team Leo
7/4/2023	19:00	23:59	Off for fireworks		NA
7/5/2023	9:00	10:30	Choosing variables for your DE analysis with variancePartition	Lecture/lab	Daianna (lead), Leo (support)
7/5/2023	10:30	12:00	Expression heatmaps	Lecture/lab	Renee (lead), Leo (support)
7/5/2023	13:00	14:30	Bayes Theorem		Tomas
7/5/2023	15:00	17:00	hands-on portion of variancePartition + ComplexHeatmap with smokingMouse / recount3 / their data	lab	Daianna and Renee (Leo's team)
7/5/2023	19:00	20:00	TBD	demo	Leo
7/6/2023	9:00	10:00	Visium spatial overview	Lecture	Leo
7/6/2023	10:00	12:00	spatialLIBD overview	Lecture/lab	Leo
7/6/2023	13:00	14:30	Dimensional Reduction		Tomas
7/6/2023	14:30	15:00	spatialLIBD functions for pseudo bulking & DE	Lecture/lab	Leo
7/6/2023	15:00	17:00	Hands-on with making plots with pseudobulked spatial data (3 LIBD projects to choose from)	lab	Team Leo
7/6/2023	19:00	19:30	Connor's Single Cell (not hand-drawn this time)		
7/7/2023	0:00	23:59	Day off		NA
7/8/2023	9:00	12:00	Introduction to GWAS	Lecture	Min
7/8/2023	13:00	16:00	GSEA	Lecture/lab	Ludwig
7/8/2023	16:00	19:00	Picnic at Beach (or Blackford with rain)	FOOD	
7/9/2023	9:00	12:00	GWAS continued, Hands-on	Lecture/lab	Min
7/9/2023	10:30	11:00	Course photo	NBH patio	

7/9/2023	13:00	17:00	eQTL and Causal Networks	Lecture/lab	Min
7/9.2023	19:00	21:00	Gender, Sex and Genomics: Breaking the Cycles of Bias, Error, and Ignorance	Minisymposium in Grace Auditorium	Joe Zein and Dawn DeMeo
7/10/2023	9:00	12:00	Representations of DNA binding specificity	Lecture	Harmen
7/10/2023	13:00	15:45	Motif discovery lab ("REDUCE" exercise)	Lab	Harmen+ Shaoxun
7/10/2023	16:00	17:00	Research Talk: Dissecting cis-regulatory logic with deep sequencing and biophysically interpretable machine learning		Tomas
7/10/2023	19:00	20:00	Open Lab		NA
7/11/2023	9:00	11:00	ATAC-Seq		Sean
7/11/2023	11:00	12:00	Machine Learning		Sean
7/11/2023	13:00	14:00	Machine Learning		Sean
7/11/2023	14:00	17:00	ML or ATAC lab		Sean
7/12/2023	9:00	12:00	Lecture/Lab: Inferred transcription factor activity as a quantitative genetic trait		Harmen
7/12/2023	13:00	16:00	Open Lab		NA
7/12/2023	18:00	21:00	BANQUET		
7/13/2023			DEPARTURE		