

## Workshop on Statistical Analysis of Genome Scale Data

July 1 to 14, 2022

July 1 to 14, 2022				
Friday, July 01, 2022				
7:00 pm	Introductions			
Saturday, July 02, 2022				
9:00 am	Introductions to R			
1:00 pm	Probability and Simulation			
2:00 pm	EDA and Visualizations			
7:00 pm	Student Talks			
Sunday, July 03, 2022				
9:00 am	Introductions to R			
10:30 am	Inference, P-Values, FDR			
1:00 pm	T-Statistic			
3:00 pm	Overview of Bioconductor			
7:00 pm	Student Lightning Talks			
Monday, July 04, 2022				
9:00 am	Experimental Designs			
10:30 am	Rmarkdown			
1:00 pm	Linear Regression and GLMs			
7:00 pm	Fireworks			
Tuesday, July 05, 2022				
9:00 am	Dimensionality Reduction			
1:00 pm	Introduction to Single-Cell Analysis			
4:00 pm	Research Talks			
7:00 pm	Research Talks			

	Wednesday, July 06, 2022			
9:00 am	Research Talks			
10:30 am	Single-Cell Analysis Continued			
1:00 pm	Introduction to Spatial Transcriptomics			
2:30 pm	Multiomics Data Integration			
7:00 pm	Research Talks			
	Thursday, July 07, 2022			
9:00 am	Spatial Transcriptomics Continued			
10:30 am	Public Data			
2:00 pm	Multiomics Data Integration			
7:00 pm	Open Lab			
	Friday, July 08, 2022			
	Day Off			
Saturday, July 09, 2022				
9:00 am	GSEA			
1:00 pm	Deep Learning for Genomics			
3:30 pm	Basic Hands-on Tutorials for Training NNs and CNNs			
7:00 pm	Open Lab			
	Sunday, July 10, 2022			
9:00 am	Lecture on Interpretation of Deep Learning Models for Genomics (with BPNet as a Case Study)			
10:00 am	Hands-on Tutorials for Interpreting NNs (continued)			
1:00 pm	Hands-on Tutorials for Interpreting NNs (continued)			
3:00 pm	Fast In-Silico Saturated Mutagenesis			
4:00 pm	ChromBPNet			
7:00 pm	Variant Interpretation with ChromeBPNet			

8:00 pm Open Lab  Monday, July 11, 2022  9:00 am TBD  1:00 pm 3D Genome Structure Analysis  4:00 pm 3D Genome Reorganization in Cancer and Aging  7:00 pm Research Talk  Tuesday, July 12, 2022  9:00 am Robust and Scalable Pipelines  1:00 pm Write Your Own WDL Pipeline Lab  2:00 pm Write Your Own WDL Pipeline Lab  7:00 pm Open Lab  Wednesday, July 13, 2022  9:00 am Chromatin Accessibility (ATAC and caQTL)  2:00 pm Ranges and Tiny Range Analysis  4:00 pm Cis Mendelian Randomization  7:00 pm Allelic Expression Analysis  Thursday, July 14, 2022  9:00 am Matching and Bootstrapping Null Features  1:00 pm Open Lab  Completion Ceremony  6:00 pm Banquet		I THE ETH TOO A COOK BEST ROOM WITH	•			
9:00 am 1:00 pm 3D Genome Structure Analysis 4:00 pm 3D Genome Reorganization in Cancer and Aging 7:00 pm Research Talk Tuesday, July 12, 2022 9:00 am Cloud Computing 10:00 pm Robust and Scalable Pipelines 1:00 pm Write Your Own WDL Pipeline Lab 2:00 pm Write Your Own WDL Pipeline Lab 7:00 pm Open Lab Wednesday, July 13, 2022 9:00 am Chromatin Accessibility (ATAC and caQTL) 2:00 pm Ranges and Tiny Range Analysis 4:00 pm Cis Mendelian Randomization 7:00 pm Allelic Expression Analysis Thursday, July 14, 2022 9:00 am Matching and Bootstrapping Null Features 1:00 pm Open Lab Completion Ceremony	8:00 pm	Open Lab				
1:00 pm  3D Genome Structure Analysis  4:00 pm  3D Genome Reorganization in Cancer and Aging  7:00 pm  Research Talk  Tuesday, July 12, 2022  9:00 am  Cloud Computing  10:00 am  Robust and Scalable Pipelines  1:00 pm  Write Your Own WDL Pipeline Lab  2:00 pm  Open Lab  Wednesday, July 13, 2022  9:00 am  Chromatin Accessibility (ATAC and caQTL)  2:00 pm  Ranges and Tiny Range Analysis  4:00 pm  Cis Mendelian Randomization  7:00 pm  Allelic Expression Analysis  Thursday, July 14, 2022  9:00 am  Open Lab  Completion Ceremony		Monday, July 11, 2022				
4:00 pm  4:00 pm  3D Genome Reorganization in Cancer and Aging  7:00 pm  Research Talk  Tuesday, July 12, 2022  9:00 am  Cloud Computing  10:00 pm  Robust and Scalable Pipelines  1:00 pm  Write Your Own WDL Pipeline Lab  2:00 pm  Wednesday, July 13, 2022  9:00 am  Chromatin Accessibility (ATAC and caQTL)  2:00 pm  Ranges and Tiny Range Analysis  4:00 pm  Clis Mendelian Randomization  Allelic Expression Analysis  Thursday, July 14, 2022  9:00 am  Open Lab  Open Lab  Completion Ceremony	9:00 am	TBD				
7:00 pm Research Talk  Tuesday, July 12, 2022  9:00 am Cloud Computing  10:00 am Robust and Scalable Pipelines  1:00 pm Write Your Own WDL Pipeline Lab  2:00 pm Write Your Own WDL Pipeline Lab  7:00 pm Open Lab  Wednesday, July 13, 2022  9:00 am Chromatin Accessibility (ATAC and caQTL)  2:00 pm Ranges and Tiny Range Analysis  4:00 pm Cis Mendelian Randomization  7:00 pm Allelic Expression Analysis  Thursday, July 14, 2022  9:00 am Matching and Bootstrapping Null Features  1:00 pm Open Lab  4:00 pm Completion Ceremony	1:00 pm	3D Genome Structure Analysis				
Tuesday, July 12, 2022  9:00 am Cloud Computing  10:00 am Robust and Scalable Pipelines  1:00 pm Write Your Own WDL Pipeline Lab  2:00 pm Open Lab  Wednesday, July 13, 2022  9:00 am Chromatin Accessibility (ATAC and caQTL)  2:00 pm Ranges and Tiny Range Analysis  4:00 pm Cis Mendelian Randomization  7:00 pm Allelic Expression Analysis  Thursday, July 14, 2022  9:00 am Open Lab  Completion Ceremony	4:00 pm	3D Genome Reorganization in Cancer and Aging				
9:00 am Cloud Computing 10:00 am Robust and Scalable Pipelines 1:00 pm Write Your Own WDL Pipeline Lab 2:00 pm Write Your Own WDL Pipeline Lab 7:00 pm Open Lab  Wednesday, July 13, 2022 9:00 am Chromatin Accessibility (ATAC and caQTL) 2:00 pm Ranges and Tiny Range Analysis 4:00 pm Cis Mendelian Randomization 7:00 pm Allelic Expression Analysis  Thursday, July 14, 2022 9:00 am Matching and Bootstrapping Null Features 1:00 pm Open Lab 4:00 pm Completion Ceremony	7:00 pm	Research Talk				
10:00 am Robust and Scalable Pipelines  1:00 pm Write Your Own WDL Pipeline Lab  2:00 pm Write Your Own WDL Pipeline Lab  7:00 pm Open Lab  Wednesday, July 13, 2022  9:00 am Chromatin Accessibility (ATAC and caQTL)  2:00 pm Ranges and Tiny Range Analysis  4:00 pm Cis Mendelian Randomization  7:00 pm Allelic Expression Analysis  Thursday, July 14, 2022  9:00 am Matching and Bootstrapping Null Features  1:00 pm Open Lab  4:00 pm Completion Ceremony		Tuesday, July 12, 2022				
1:00 pm Write Your Own WDL Pipeline Lab  2:00 pm Write Your Own WDL Pipeline Lab  7:00 pm Open Lab  Wednesday, July 13, 2022  9:00 am Chromatin Accessibility (ATAC and caQTL)  2:00 pm Ranges and Tiny Range Analysis  4:00 pm Cis Mendelian Randomization  7:00 pm Allelic Expression Analysis  Thursday, July 14, 2022  9:00 am Matching and Bootstrapping Null Features  1:00 pm Open Lab  4:00 pm Completion Ceremony	9:00 am	Cloud Computing				
2:00 pm Write Your Own WDL Pipeline Lab  7:00 pm Open Lab  Wednesday, July 13, 2022  9:00 am Chromatin Accessibility (ATAC and caQTL)  2:00 pm Ranges and Tiny Range Analysis  4:00 pm Cis Mendelian Randomization  7:00 pm Allelic Expression Analysis  Thursday, July 14, 2022  9:00 am Matching and Bootstrapping Null Features  1:00 pm Open Lab  4:00 pm Completion Ceremony	10:00 am	Robust and Scalable Pipelines				
7:00 pm Open Lab  Wednesday, July 13, 2022  9:00 am Chromatin Accessibility (ATAC and caQTL)  2:00 pm Ranges and Tiny Range Analysis  4:00 pm Cis Mendelian Randomization  7:00 pm Allelic Expression Analysis  Thursday, July 14, 2022  9:00 am Matching and Bootstrapping Null Features  1:00 pm Open Lab  4:00 pm Completion Ceremony	1:00 pm	Write Your Own WDL Pipeline Lab				
Wednesday, July 13, 2022  9:00 am Chromatin Accessibility (ATAC and caQTL)  2:00 pm Ranges and Tiny Range Analysis  4:00 pm Cis Mendelian Randomization  7:00 pm Allelic Expression Analysis  Thursday, July 14, 2022  9:00 am Matching and Bootstrapping Null Features  1:00 pm Open Lab  4:00 pm Completion Ceremony	2:00 pm	Write Your Own WDL Pipeline Lab				
9:00 am Chromatin Accessibility (ATAC and caQTL)  2:00 pm Ranges and Tiny Range Analysis  4:00 pm Cis Mendelian Randomization  7:00 pm Allelic Expression Analysis  Thursday, July 14, 2022  9:00 am Matching and Bootstrapping Null Features  1:00 pm Open Lab  4:00 pm Completion Ceremony	7:00 pm	Open Lab				
2:00 pm Ranges and Tiny Range Analysis 4:00 pm Cis Mendelian Randomization 7:00 pm Allelic Expression Analysis  Thursday, July 14, 2022 9:00 am Matching and Bootstrapping Null Features 1:00 pm Open Lab 4:00 pm Completion Ceremony	Wednesday, July 13, 2022					
4:00 pm Cis Mendelian Randomization 7:00 pm Allelic Expression Analysis  Thursday, July 14, 2022  9:00 am Matching and Bootstrapping Null Features  1:00 pm Open Lab  4:00 pm Completion Ceremony	9:00 am	Chromatin Accessibility (ATAC and caQTL)				
7:00 pm Allelic Expression Analysis  Thursday, July 14, 2022  9:00 am Matching and Bootstrapping Null Features  1:00 pm Open Lab  4:00 pm Completion Ceremony	2:00 pm	Ranges and Tiny Range Analysis				
9:00 am Matching and Bootstrapping Null Features 1:00 pm Open Lab 4:00 pm Completion Ceremony	4:00 pm	Cis Mendelian Randomization				
9:00 am Matching and Bootstrapping Null Features  1:00 pm Open Lab  4:00 pm Completion Ceremony	7:00 pm	Allelic Expression Analysis				
9:00 am Matching and Bootstrapping Null Features  1:00 pm Open Lab  4:00 pm Completion Ceremony						
1:00 pm Open Lab 4:00 pm Completion Ceremony		Thursday, July 14, 2022				
4:00 pm Completion Ceremony	9:00 am	Matching and Bootstrapping Null Features				
	1:00 pm	Open Lab				
6:00 pm Banquet	4:00 pm	Completion Ceremony				
ı	6:00 pm	Banquet				