



Genomics Research and Technology Hub (GRT Hub) Workshop

Spatial Transcriptomic Data Analysis with an Emphasis on 10x Genomics Visium

*Attendees are encouraged to bring project data
for analysis and discussion.*

When: Thursday, September 28, 2023

Time: 9:00 a.m. to 4:00 p.m. - *Light continental breakfast and lunch provided.*

Where: Sprague Hall, Room 105

Required: Personal laptop (Mac or Windows) and HPC3 account

Instructors: Jenny Wu, PhD and Ivan Chang, PhD, GRT Hub, and Joshua Talboom, PhD, Science & Technology Advisor, 10x Genomics

Registration is required - \$100 and limited to 20 attendees

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The upcoming workshop will cover the pipeline and computational strategies for Spatial Transcriptomic data derived from 10x Visium. The topics will include an overview of wet lab workflow, data quality control, preprocessing, and visualization. Advanced topics such as integration with single cell data and cell-cell communication network identification will be covered as time permits. There will be a hands-on session with an illustrative data set provided. **Attendees are encouraged to bring their own project data for analysis and discussion.**

9:00 – 9:05 a.m.	Opening Remarks/Introduction (Jenny Wu, Director Bioinformatics, GRT Hub)
9:05 – 10:05 a.m.	Introduction to 10x Visium Spatial Platform Experimental Design and Workflow (Joshua Talboom, PhD)
10:05 - 10:20 a.m.	Break
10:20 – 11:20 a.m.	Visium Data Analysis with 10x Proprietary Software and Open-source software (Jenny Wu, PhD)
11:20 a.m. – 12:00 p.m.	Q and A
12:00 – 1:00 p.m.	Lunch
1:00 – 2:10 p.m.	Accessing Analytical Tools on HPC3 for Preprocessing (Ivan Chang, PhD)
2:10 – 2:25 p.m.	Break
2:25 – 4:00 p.m.	Hands on Session Using R-Based Tools for Visium Data Analysis (Jenny Wu, PhD and Ivan Chang, PhD)