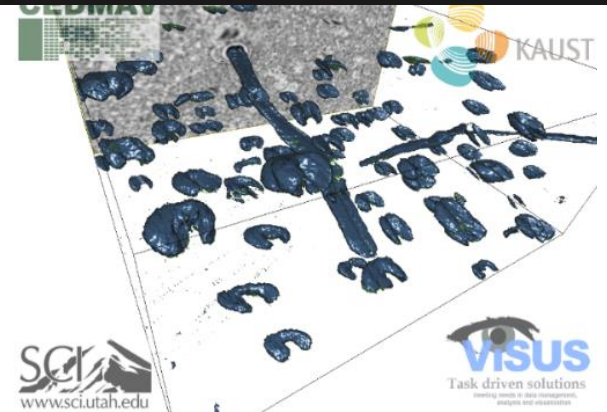
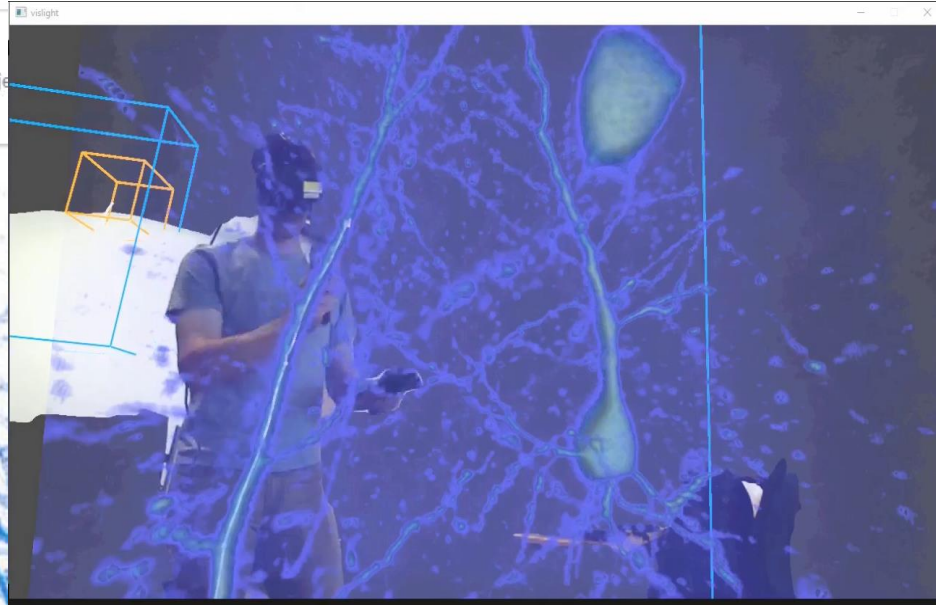


# Managing, Processing, and Visualizing Massive Datasets with the ViSUS Framework



VISUS.ORG



Valerio Pascucci

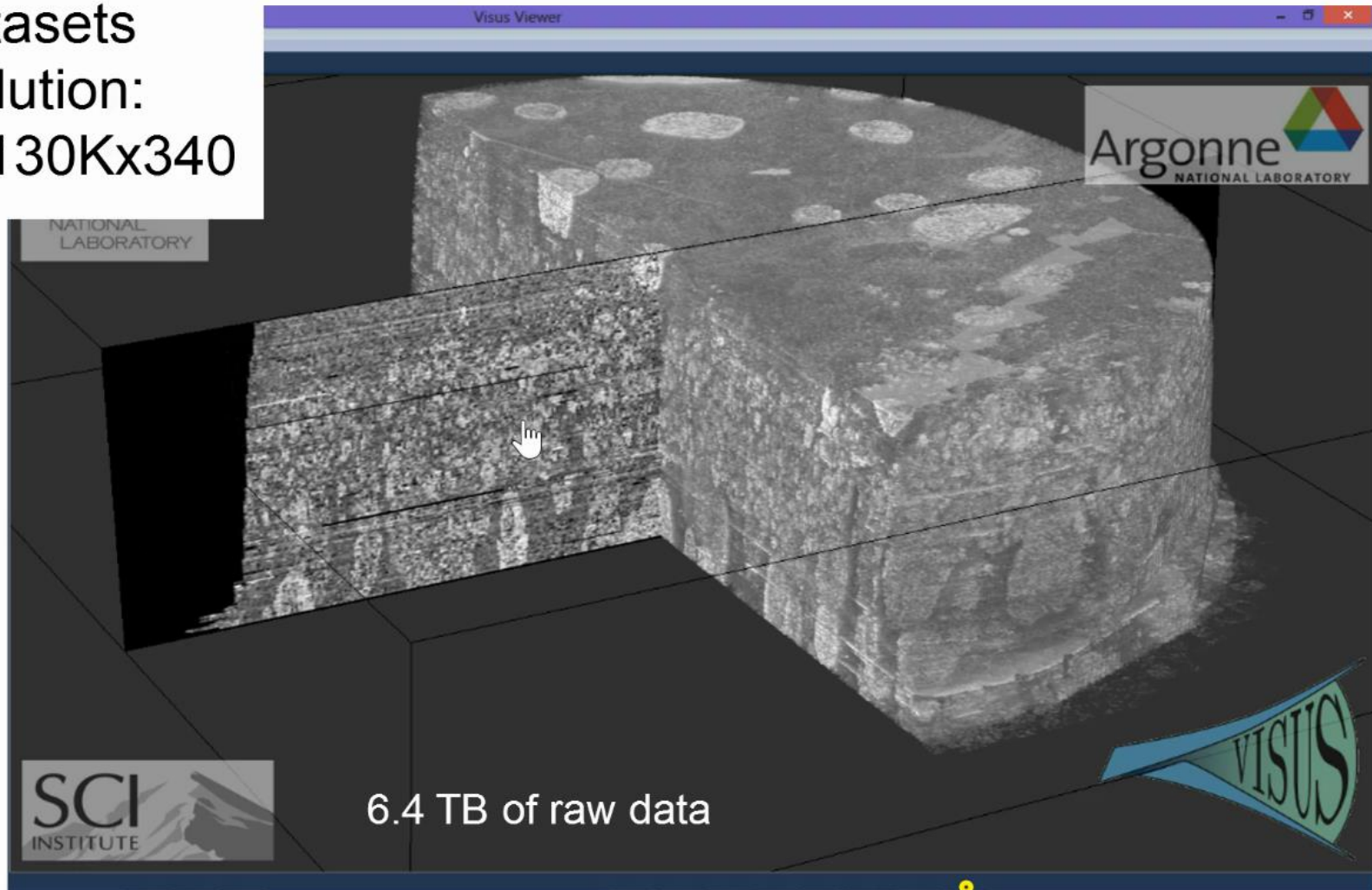
John R. Parks Inaugural Endowed Chair of the University of Utah  
Director, Center for Extreme Data Management Analysis and Visualization

Professor, SCL institute and School of Computing, University of Utah



# Demo: Interactive Remote Analysis and Visualization of 6TB Imaging Data

- EM datasets of resolution: 130Kx130Kx340

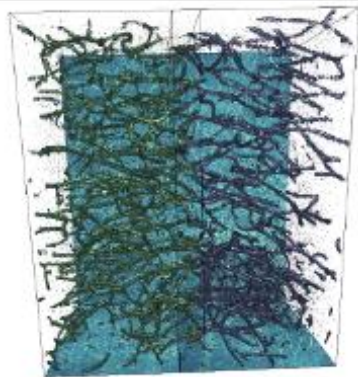


# Integrated Data Acquisition, Management and Computation for Neuroscience

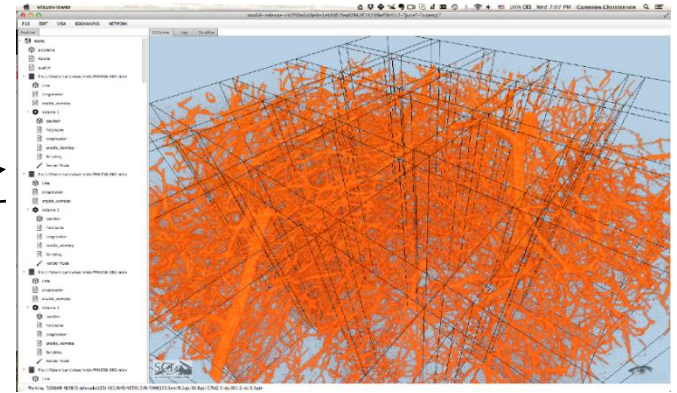
(1) Data Source



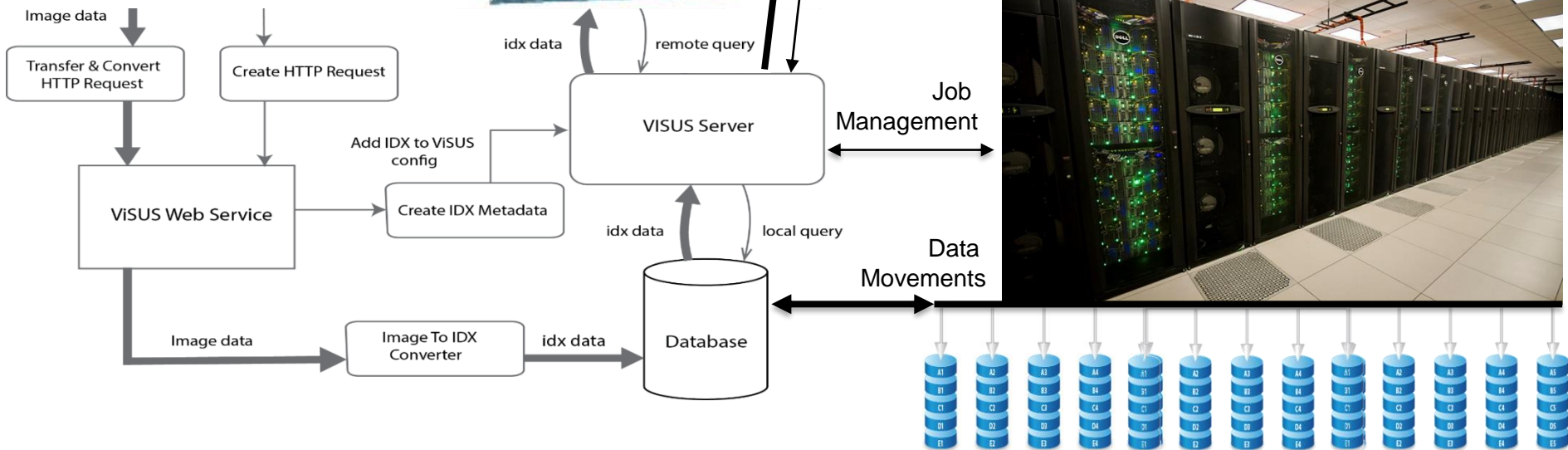
(2) Preliminary Interactive Analytics



(4) Interactive, Exploratory Assessment and Feedback



(3) Asynchronous Parallel Processing



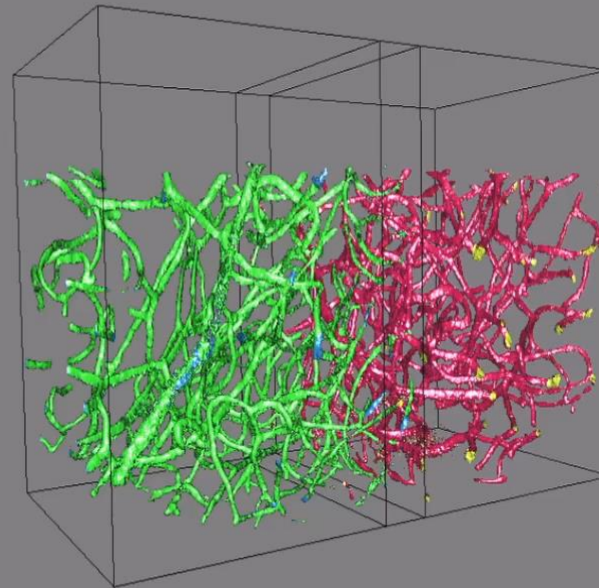
# Remote Monitoring of Data Quality During Acquisition

EDIT VIEW BOOKMARKS NETWORK

GLCanvas Log Dataflow

world

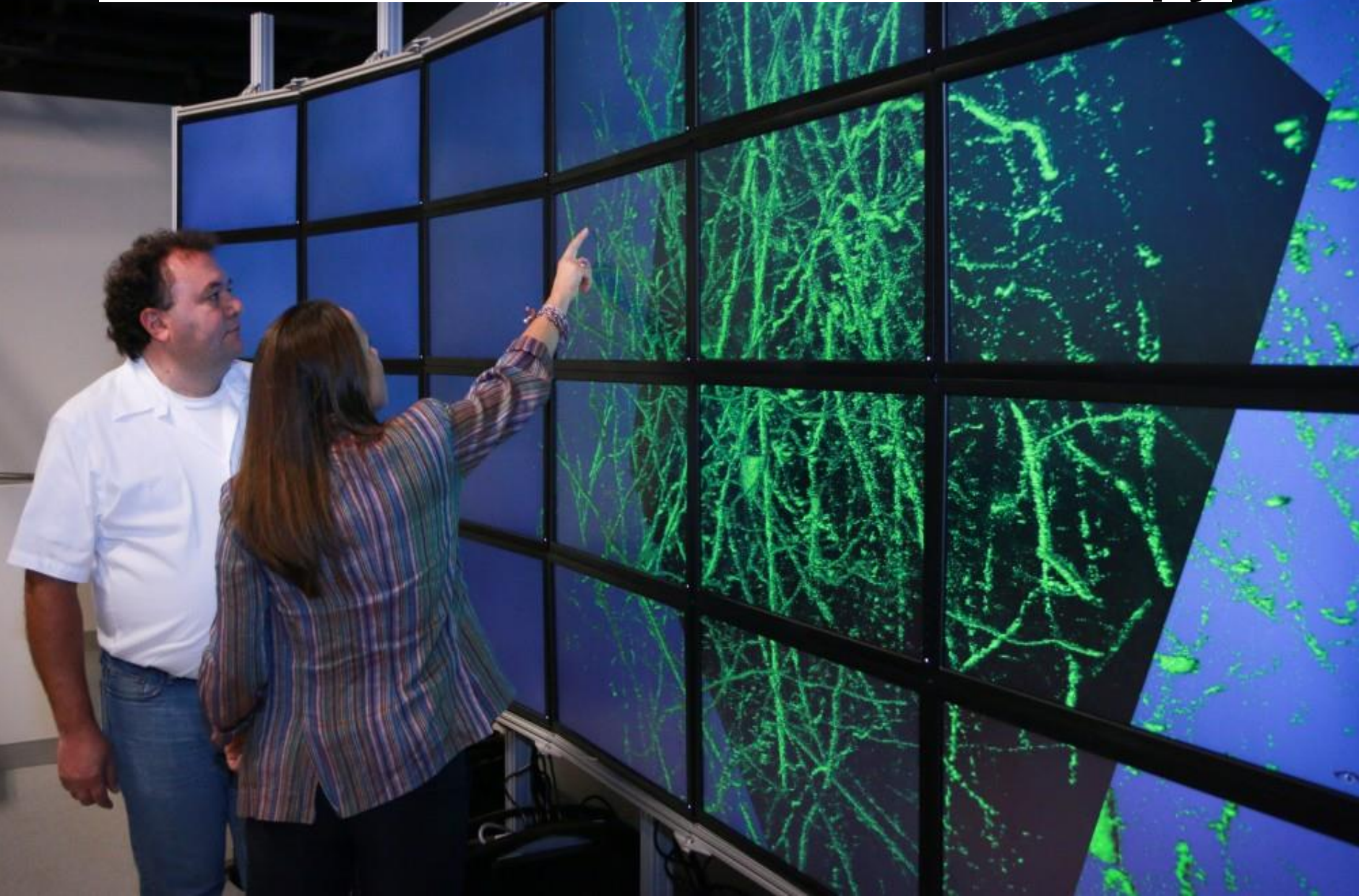
- enable\_viewdep
- progression
- quality
- glcamera
- file:///D:/research/idx/MM360\_March\_4\_2/MM360\_March\_4\_2\_0...
- time
- Volume 1
  - position
  - fieldname
  - quality
  - progression
  - enable\_viewdep
- Scripting
  - Marching cube
  - Palette
  - Mesh Render
  - Palette
- file:///D:/research/idx/MM360\_March\_4\_2/MM360\_March\_4\_2\_0...
- time
- Volume 1
  - position
  - fieldname
  - quality
  - progression
  - enable\_viewdep
- Scripting
  - Marching cube
  - Palette
  - Mesh Render
  - Palette



ing. TJOB(4) NJOB(0) nthreads(12) IO(0/0/0) NET(0/0/0) RAM(1.3gb/7.2gb/63.9gb) GPU(7.9mb/0/4.0gb)

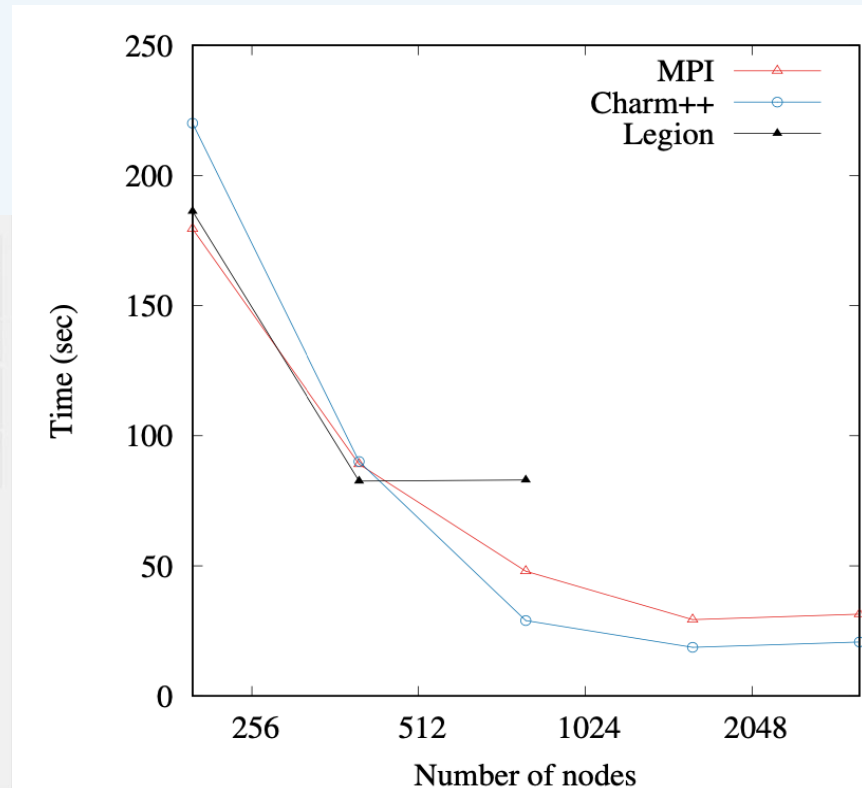
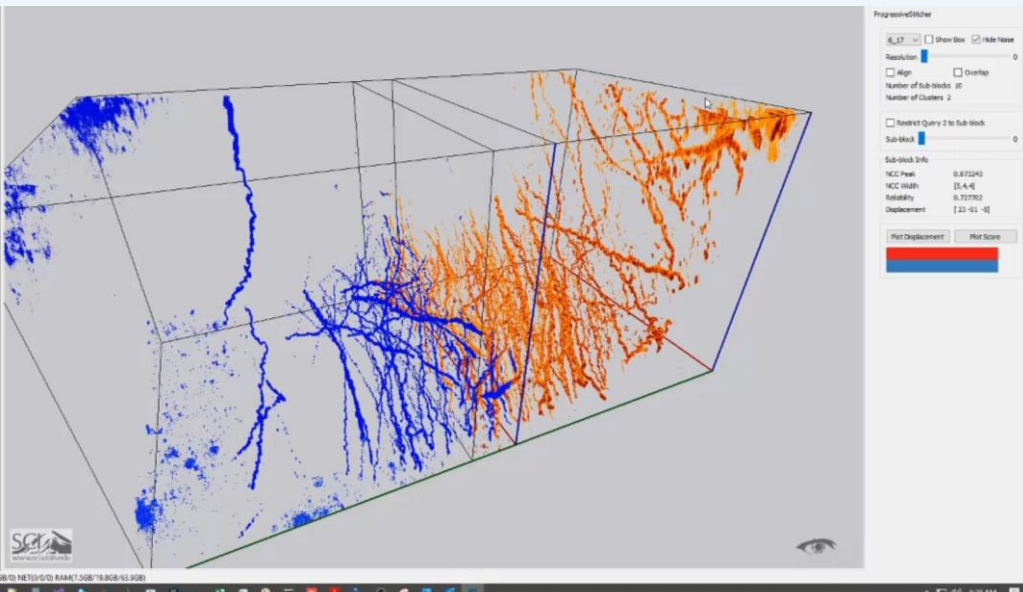
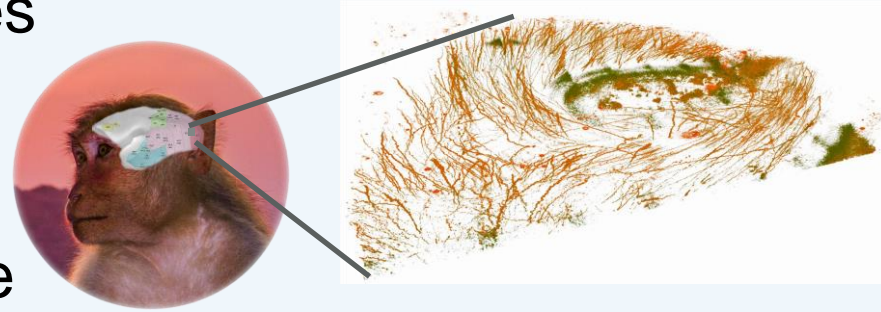


# Online Acquisition and Interactive Visualization of Terascale Microscopy



# Improving the efficiency of aligning large-scale 3D Microscopy Data with progressive computations?

- Assumption: Modern microscopes acquire 3d image stacks as tiles with at least 15% overlap.
- Instrument provides only a coarse registration, which needs to be improved for further analysis/



# Try the ViSUS framework, we will be glad to help!



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