Sunday, October 28th

3:00 pm Check-in

6:00 pm *Reception (Lobby)*

7:00 pm Dinner

8:00 pm Refreshments available at Bob's Pub

NOTE:
Meals are in the **Dining Room**
Talks are in the **Seminar Room**
Posters are in the **Lobby**

Monday, October 29th

7:30 am Breakfast *(service ends at 8:45am)*

9:00 am Session 1: Bioimage Informatics I
Chair: Erik Meijering

9:00 am **Kevin W. Eliceiri**, University of Wisconsin-Madison
Open source bioimage informatics: Tools for interoperability

9:30 am **Fuhui Long**, Janelia Farm Research Campus/HHMI
High-throughput annotation and analysis of Drosophila brains

10:00 am **B. S. Manjunath**, University of California, Santa Barbara
High-throughput image analysis and data management using BISQUE

10:30 am Break

11:00 am Session 2: Bioimage Informatics II
Chair: Gene Myers

11:00 am **Hanchuan Peng**, Janelia Farm Research Campus/HHMI
Bioimage informatics: Build a better engine for your car, or just make you car look nicer?

11:30 am **Anne L. Plant**, National Institute of Standards and Technology
Time-lapse image data for predictive modeling of cell fate

12:00 pm **Michael Hawrylycz**, Allen Institute for Brain Science
Allen Mouse Brain Connectivity Atlas

12:30 pm Lunch

2:00 pm Session 3: Multiscale Image Computing I
Chair: Yue Wang

2:00 pm **Stephen Lockett**, National Cancer Institute-Frederick
Web-centric software for studying tissue across multiple spatial / hierarchical scales

2:30 pm **Satish Viswanath**, Case Western Reserve University
Quantitative convergence of multi-scale, multi-modal imaging and non-imaging biological data

3:00 pm General Discussion

3:45 pm Break

4:15 pm **Session 4: Poster Teasers (5 minutes each, plus 2 min Q&A)**
Chair: Hanchuan Peng

John Edwards (UT Austin) - *High quality 3D geometric models of hippocampal neuropil for electrophysiological simulation*

Miriam Friedel (Mouse Imaging Centre) - *MR image registration and analysis of genetically altered mice*

Arnim Jenett (Janelia Farm) - *Big data, small tools: Image analysis and annotation using modular data analysis tools*

Raphaël Marée (Univ. of Liège) - *A rich internet application for remote visualization, collaborative annotation, and automated analysis of large-scale biomages*

George McNamara (Univ. of Miami)
Turning biologists into single molecule counters

Kaustav Nandy (NCI-Frederick) - *Web-centric software for studying tissue across multiple spatial / hierarchical scales*

Matthew Swulius (Caltech) - *3-D electron cryotomograms of bacterial cells: content, annotation, storage, and delivery*

Johnathon Walls (Regeneron Pharmaceuticals)- *Volumetric analysis of mouse embryo organs as part of a proposed high-throughput phenotyping screen*

Alex Yu (NICHD) - *Single cell analysis of endothelial cell morphogenesis during vascular development*

Jie Zhou (Northern Illinois Univ.) - *An extensible framework for pattern recognition based biological image annotation*

5:25 pm Poster Reception

7:00 pm Dinner

8:00 pm **Session 5: Biomedical Imaging I**
Chair: Jianbo Shi

8:00 pm **James S. Duncan**, Yale University
Model based biomedical image analysis: A basis for biomarker development

8:30 pm **Dimitris N. Metaxas**, Rutgers University
Large scale image search from visual features

9:00 pm Refreshments available at Bob's Pub

Tuesday, October 30th

7:30 am Breakfast *(service ends at 8:45am)*

9:00 am **Session 6: Segmentation and Tracking I**
Chair: Yihong Yang

9:00 am **Jianbo Shi**, University of Pennsylvania
Two granularity tracking: Mediating trajectory and detection graphs for tracking under occlusions

9:30 am **Dimitrios Vavylonis**, Lehigh University
Segmentation and tracking of cytoskeletal structures

10:00 am **Eugene W. Myers**, Max Planck Institute of Molecular Cell Biology and Genetics
Segmentation via progressive merging

10:30 am Break

11:00 am **Session 7: Segmentation and Tracking II**
Chair: James S. Duncan

11:00 am **Erik Meijering**, Erasmus MC - University Medical Center Rotterdam
Turning images into trajectories: State of the art in multiple particle tracking

11:30 pm **William Ryu**, University of Toronto
High-content behavioral measurement and modeling of C. elegans

12:00 pm Lunch

1:00 pm Tour *(optional – meet at reception)*

2:00 pm **Session 8: Brain Imaging and Modeling**
Chair: Manfred Auer

2:00 pm **Chandrajit L. Bajaj**, University of Texas at Austin
Images to function: Multi-scale modeling of electrophysiology in the hippocampus

2:30 pm **Tianzi Jiang**, Institute of Automation, the Chinese Academy of Sciences
Brainnetome based on multimodal magnetic resonance imaging

3:00 pm **Yihong Yang**, National Institute on Drug Abuse/NIH
Intrinsic resting-state brain activity: Mechanisms, characteristics and potential clinical applications

3:30 pm Break

4:00 pm Session 9: Multiscale Image Computing II
Chair: Michael Hawrylycz

4:00 pm **Gaudenz Danuser**, Harvard Medical School
Linking endothelial branch morphogenesis to local molecular processes in 3D

4:30 pm **Manfred Auer**, Lawrence Berkeley National Lab
Imaging biological function across scales: From macromolecules to cells to tissues and microbial communities

5:00 pm General Discussion

5:30 pm Poster Reception

7:00 pm Dinner

8:00 pm Refreshments available at Bob's Pub

Wednesday, October 31st

7:30 am Breakfast *(service ends at 8:45am)*

9:00 am Session 10: Developmental and Preclinical Imaging
Chair: Stephen Lockett

9:00 am **Zhirong Bao**, Sloan-Kettering Institute
Cell lineage-based systematic single-cell analysis of development

9:30 am **Robert Waterston**, University of Washington
Embryonic gene expression patterns in the C. elegans

10:00 am **Boudewijn PF Lelieveldt**, Leiden University Medical Center
Integrated analysis of multi-model pre-clinical imaging studies

10:30 am Break

11:00 am Session 11: Biomedical Imaging II
Chair: Dimitris N. Metaxas

11:00 am **Tanveer Syeda-Mahmood**, IBM Almaden Research Center
Automatic annotation of coronary angiography images

11:30 am **Yue Wang**, Virginia Tech Research Center - Arlington
Mathematical modeling of dynamic imaging reveals intratumor heterogeneity of vascular compartments

12:00 pm Lunch and Departure *(To-go boxes available in servery for those on first shuttle)*

12:30 pm First shuttle to Dulles
1:30 pm Second shuttle to Dulles
2:30 pm Last shuttle to Dulles