Neuron Reconstruction and Applications (NRA'2018) - Schedule

Main Venue: Liuyuan Hotel Conference Center, Southeast University, Nanjing, China.

Saturday, Sept 8, 2018. Liuyuan Hotel Conference Center.

10:00am-5:00pm: Registration

10:30am-11:15am: Pre-Meeting Tour of Southeast University Campus (optional, sign-up at Registration Desk)

11:00am-12:30pm: Lunch

Session 1 (Chair: Wei Xie)

1:00pm-1:10pm Gang Wu (SEU), Wei Xie (SEU), Zhongze Gu (SEU). SEU-ALLEN welcome speech / Introduction of NRA'2018.

1:10pm-1:30pm Giorgio Ascoli (GMU), Sean Hill (U of T), Hanchuan Peng (SEU-ALLEN). Challenges and Opportunities of Neuron/Brain Big Data Science

1:30pm-2:00pm Yong Yao (NIH) "Towards 3D Brain Cell Atlases"

2:00pm-2:30pm Pavel Osten (Cold Spring Harbor Laboratory) "Mapping the cell types of the mouse brain at brain-wide cellular resolution"

2:30pm-3:00pm Julie Harris (Allen Institute) "Single neuron whole brain reconstruction reveals morphological and projection target diversity"

3:00pm-3:30pm Coffee Break

Session 2: (Chair: Pavel Osten)

3:30pm-4:00pm Huanxiang Lu (EPFL) "Terascale brain atlasing pipelines and knowledge management for brain-wide neuron reconstructions"

4:00pm-4:30pm Ludovico Silvestri (LENS) "Effective management and analysis of ultra-terabyte brain images"

4:30pm-5:00pm Yimin Wang (Shanghai Univ.) "Reconstructing full neuron morphology from terabyte-scale images using Vaa3D-VR"

5:00pm-5:30pm Francisco Clascá (Universidad Autónoma de Madrid) "Anatomy and development of multi-specific Thalamocortical axons: implications for cortical dynamics and evolution"

6:00pm-7:30pm. Reception

Sunday, Sept 9, 2018. Liuyuan Hotel Conference Center.

7:00am-8:30am Breakfast

8:00am-3:30pm: Registration

<mark>**Session 3 (Chair: Hongwei Dong)**</mark>

8:30am-9:00am Minmin Luo (NIBS) "Brain-wide reconstruction of sparsely-labeled neurons with cell type-specificity"

9:00am-9:30am Lijuan Liu (Southeast University) "High-accuracy full neuron morphology for high-throughput generation"

9:30am-10:00am XiangNing Li (HUST) "Mesoscopic projectome analysis of specific neurons via the brain-wide precision imaging"

10:00am-10:30am Guoqiang Bi (USTC) "Fast volumetric imaging at sub-cellular resolution for high-throughput brain mapping"

10:30am-11:00am Coffee Break

<mark>**Session 4 (Chair: Minmin Luo)**</mark>

11:00am-11:30am Jeremy Maitin-Shepard (Google) "Tools for volumetric data storage and visualization"

11:30am-12:00pm Peter Petersen (New York University) "Communication tools for data sharing in neuroscience"

12:00pm-12:30pm Sean Hill (Univ. Toronto, and Blue Brain Project) "The power of neuron morphologies in multiscale brain modeling"

12:30pm-1:30pm Lunch

<mark>**Session 5 (Chair: Julie Harris)**</mark>

1:30pm-2:00pm Giorgio Ascoli (George Mason University) "Axonal projections and neuronal classification"

2:00pm-2:30pm Zoli Kisvarday (University of Debrecen) "Three-dimensional mapping of synaptic coverage on subtypes of GABAergic interneurons"

2:30pm-3:00pm Hongwei Dong (University of Southern California) "Anatomical classification of neuronal cell types in the mouse brain"

3:00pm-3:30pm Hanchuan Peng (SEU-ALLEN) "Toward an industrialized production of neuron reconstructions"

3:30pm-5:00pm Tour of SEU-ALLEN Center and Demos

5:30pm–9:00pm Dinner (Shuttle Bus)

Monday, Sept 10, 2018. Liuyuan Hotel Conference Center.

7:00am-8:30am Breakfast

8:00am-11:30am: Registration

Session 6 (Chair: Guoqiang Bi)

8:30am-9:00am Yun Wang (Allen Institute) "Whole-brain reconstruction and classification of spiny claustrum neurons and L6b-PCs of Gnb4 Tg mice"

9:00am-9:30am Attila Gulyas (Hungarian Academy of Sciences) "The difficulties of proper dendrite diameter measurements during 3D neuron reconstruction"

9:30am-9:50am Dan Isacone (Columbia University) "Local balance between excitatory and inhibitory synaptic organization constrains dendritic spiking in whole-cell structural input maps of pyramidal neurons"

9:50am-10:00am Yue Guan (HUST) "Registration, segmentation and big data challenges for whole brain mesoscopic image processing"

10:00am-10:10am Coffee Break (Informal short break)

Session 7 (Chairs: Yong Yao, Hanchuan Peng, Giorgio Ascoli, and Sean Hill)

10:10am-10:30am Discussion Topic 1 "Standardize protocols and workflows for massive scale neuron reconstructions"

10:30am-10:50am Discussion Topic 2 "How to better engage imaging, data management and applications in neuron reconstructions"

10:50am-11:10am Discussion Topic 3 "Global collaboration networks for neuron reconstructions, tools, and applications"

11:10am-11:20pm Planning for future events, and closing remarks

11:30pm-1:00pm Lunch

1:30pm Team-building with continued discussion (Shuttle bus, one-way only) (optional, Sign-up at Registration Desk)