

Janelia Junior Scientist Workshop on Machine Learning and Computer Vision | October 2-7, 2016
Organized by Kristin Branson, Srinu Turaga, Jeremy Freeman and Stephan Saalfeld
AXON / DENDRITE ROOM

Sunday, October 2

- 3:00 pm Check-in
5:15 pm Reception (*Bob's Stone Room*)
6:00 pm Dinner (*Bob's Quiet Room*)
7:30 pm Refreshments available at Bob's Pub

Monday, October 3

- 7:30 am Breakfast (*Dining Room - service ends at 8:45am*)
9:00 am **Research Talk: Forough Arabshahi**, UC Irvine
Beyond LDA: A unified framework for learning latent normalized infinitely divisible topic models through spectral methods
9:30 am **Research Talk: Yuncong Chen**, University of California, San Diego
Building an active digital atlas for the mouse brainstem
10:00 am **Research Talk: Callie Federer**, University of Colorado Denver
A self-tuning memory network
10:30 am Break
11:00 am **Janelia Science Tutorial: Jason Wittenbach**
Neuroscience
12:00 pm Lunch (*Dining Room - service ends at 1pm*)
1:30 pm **Research Talk: Felix Gonda**, Harvard University
A distributed interactive framework for automatic segmentation of neuronal structures using deep neural networks
2:00 pm **Research Talk: Shu Kong**, UC Irvine
Automated biological image analysis using computer vision and machine learning
2:30 pm **Research Talk: Ksenia Konyushko**, EPFL
Active learning for biomedical image segmentation
3:00 pm Break
3:15 pm **Tutorial: Callie Federer**, University of Colorado Denver
TensorFlow: An open source software library for machine intelligence
4:15 pm Break
4:30 pm **Janelia Science Tutorial: Karel Svoboda**
Two-photon microscopy
5:30 pm Break
6:00 pm Dinner (*Dining Room*)
7:30 pm Refreshments available at Bob's Pub

Tuesday, October 4

- 7:30 am Breakfast (*Dining Room - service ends at 8:45am*)
9:00 am **Research Talk: Michal Lisicki**, University of Guelph
Learning multi-modal structures with Bayesian optimization

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- 9:30 am **Research Talk: Lane McIntosh**, Stanford University
Understanding uncertainty in sensory systems using deep learning
- 10:00 am **Research Talk: Manjari Narayan**, Stanford University
Statistical causal inference in the era of interventional neuroimaging
- 10:30 am Break
- 11:00 am **Janelia Science Tutorial: Eric Schreiter**
Neural activity markers and sensors
- 12:00 pm Lunch (*Dining Room - service ends at 1pm*)
- 1:30 pm **Research Talk: Agata Mosinska-Domanska**, EPFL
Interactive learning for biomedical image analysis
- 2:00 pm **Tutorial: Lane McIntosh**, Stanford University
- 3:00 pm Break
- 3:15 pm **Tutorial: Manjari Narayan**, Stanford University
Statistical tools to detect differences in populations of networks
- 4:15 pm Break
- 4:30 pm **Janelia Science Tutorial: Roian Egnor**
Behavior
- 5:30 pm Break
- 6:00 pm Dinner (*Dining Room*)
- 7:30 pm Refreshments available at Bob's Pub

Wednesday, October 5

- 7:30 am Breakfast (*Dining Room - service ends at 8:45am*)
- 9:00 am **Research Talk: Marcel Nonnenmacher**, Resesarch Center Caesar
Learning large-scale models of population dynamics from partial observations
- 9:30 am **Research Talk: Maithra Raghu**, Cornell University
On the expressive power of deep neural networks
- 10:00 am **Research Talk: Maja Rudolph**, Columbia University
Exponential family embeddings
- 10:30 am Break
- 11:00 am **Janelia Lab Head Talk: Jeremy Freeman**
- 11:30 am **Janelia Lab Head Talk: Kristin Branson**
- 12:00 pm Lunch (*Dining Room - service ends at 1pm*)
- 2:00 pm **Research Talk: Nikhil Sapru**, University of Guelph
Accelerating training with Theano-MPI using binary reduction
- 2:30 pm **Tutorial: Marcel Nonnenmacher**, Research Center Caesar
- 3:30 pm Break
- 4:00 pm **Tutorial: Maja Rudolph**, Columbia University
Applied probabilistic modeling in Stan and Edward

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- 5:00 pm Break
7:30 pm Movie at the Alamo! (*Those who do not go to the movie can have dinner at their leisure in Bob's Pub*)

Thursday, October 6

- 7:30 am Breakfast (*Dining Room - service ends at 8:45am*)
9:00 am **Research Talk: Shuang Song**, University of California, San Diego
Privacy-preserving data analysis
9:30 am **Research Talk: Artur Speiser**, Research Center Ceasar
Stochastic variational inference for spike prediction
10:00 am **Research Talk: Fariba Yousefi**, University of Sheffield
Unsupervised learning with imbalanced data via structure consolidation latent variable model
10:30 am Break
11:00 am **Janelia Lab Head Talk: Stephan Saalfeld**
11:30 am **Janelia Lab Head Talk: Srini Turaga**
12:00 pm Lunch (*Dining Room - service ends at 1pm*)
1:00 pm Tour (*optional - meet at reception*)
2:00 pm **Research Talk: Xiang Zhang**, New York University
Character-level convolutional networks for text classification
2:30 pm Break
3:00 pm **Tutorial: Artur Speiser**, Research Center Ceasar
Algorithms for stochastic variational autoencoders
4:00 pm **Group Discussion**
5:30 pm Break
6:00 pm Dinner (*Dining Room*)
7:30 pm Refreshments available at Bob's Pub

Friday, October 7

- 7:30 am Breakfast (*Dining Room - service ends at 8:45am*)
9:30 am **Janelia Lab Head Talk: Philipp Keller**
10:00 am **Janelia Lab Head Talk: Marta Zlatic**
10:30 am Break
11:00 am **Wrap-up Discussion**
12:00 pm Lunch / Departure
12:30 pm First shuttle departs for Dulles
1:30 pm Second shuttle departs for Dulles
2:30 pm Last shuttle departs for Dulles