

Sunday, March 18th

- 3:00 pm Check-in
- 6:00 pm Reception (Lobby)
- 7:00 pm Dinner
- 8:00 pm Keynote Talk: Terrence Sejnowski, HHMI/Salk Institute for Biological Studies**
Decade of the dendrite
- 9:00 pm Refreshments available at Bob's Pub

NOTE:

All meals are in the **Dining Room**
All talks are in the **Seminar Room**
Posters are in the **Lobby**

Monday, March 19th

- 7:30 am Breakfast (*service ends at 8:45 am*)
- 9:00 am Session 1: Connectivity / Development**
Chair: Jeff Magee
- 9:00 am **Pico Caroni**, Friedrich Miescher Institute for Biomedical Research (FMI)
A structural basis for reinforced learning in the hippocampus
- 9:25 am **Deanna Benson**, Mount Sinai Medical Center
Sema7A modulates structural and functional development of cortical sensory maps
- 9:50 am **Jinhyun Kim**, Korea Institute of Science and Technology, Seoul
mGRASP enables mapping mammalian synaptic connectivity with light microscopy
- 10:15 am **Arthur Konnerth**, Technical University Munich
State-dependent single spine calcium signaling in cortical neurons in vivo
- 10:40 am Break
- 11:10 am Session 2: Ion channels**
Chair: Gina Turrigiano
- 11:10 am **Zoltan Nusser**, Institute of Experimental Medicine, Hungary
Diversity in the subcellular distribution of ion channels
- 11:35 am **Dax Hoffman**, National Institutes of Health
Role of the Kv4 auxiliary subunit DPP6 in the regulation of dendritic excitability
- 12:00 pm **Daniel Johnston**, University of Texas at Austin
Function, plasticity, and behavioral-relevance of dendritic channels
- 12:25 pm Lunch (*service ends at 1:00 pm*)
- 2:00 pm Session 3: Processing / Computation**
Chair: Greg Stuart
- 2:00 pm **Michael Hausser**, University College London
Dendritic computation
- 2:25 pm **Jackie Schiller**, Technion - Israel Institute of Technology
Non linear dendritic processing in-vitro and in-vivo

Janelia Farm Conference: Dendrites: Substrates for Information Processing

- 2:50 pm **Fabrizio Gabbiani**, Baylor College of Medicine
Role of dendritic h-current in the processing of looming stimuli
- 3:15 pm **Samuel S.-H. Wang**, Princeton University
Dendritic synchrony as a coding principle in cerebellar processing
- 3:40 pm Break
- 4:10 pm Session 4: Modelling / Theory**
Chair: Kristen Harris
- 4:10 pm **Gordon M. Shepherd**, Yale School of Medicine
Perspectives on computational modeling of dendritic function, with comments from Wil Rall
- 4:35 pm **Wolfgang Maass**, Technische Universität Graz
Models for emergent computation in dendrites
- 5:00 pm **Máté Lengyel**, Cambridge University
Active dendrites: Adaptation to spike-based communication
- 5:25 pm Poster Reception
- 7:00 pm Dinner
- 8:00 pm Session 5: Short Talks**
Chair: Stefan Remy
- 8:00 pm **Dan Nicholson**, Rush University Medical Center
Vulnerable dendrites and synapses in the hippocampus of rodent models of aging and Alzheimer's disease
- 8:15 pm **Justin P. Little**, New York University
Subcellular synaptic connectivity in the prefrontal cortex
- 8:30 pm **Giorgio A. Ascoli**, George Mason University
Functional impact of dendritic branch point morphology
- 8:45 pm **Amanda Casale**, Yale University
Active action potential propagation but not initiation in thalamic interneuron dendrites
- 9:00 pm **Linnaea E. Ostroff**, New York University
Learning and the tripartite synapse: Changes in synaptic astrocyte contact with fear learning
- 9:15 pm Refreshments available at Bob's Pub

Tuesday, March 20th

- 7:30 am Breakfast (*service ends at 8:45 am*)
- 9:00 am Session 6: Plasticity and mechanisms**
Chair: Michael Hausser
- 9:00 am **Gina Turrigiano**, Brandeis University
How to scale synaptic strength
- 9:25 am **Steven A. Siegelbaum**, HHMI/Columbia University
Regulating long-term synaptic plasticity by convergence of hippocampal macro and micro circuits
- 9:50 am **Erin Schuman**, Max Planck Institute
Localized mRNAs and dendritic function
- 10:15 am **Lily Jan**, HHMI/University of California, San Francisco
Dynamic regulation of dendritic potassium channels
- 10:40 am Break
- 11:10 am Session 7: Spines**
Chair: Pico Caroni
- 11:10 am **Kristen Harris**, University of Texas at Austin
Dendritic spines and the developmental onset of late-phase long-term potentiation (L-LTP)
- 11:35 am **Judit K. Makara**, Institute of Experimental Medicine, Hungary
Dendritic spines promote electrical compartmentalization and cooperation of excitatory synaptic inputs
- 12:00 pm **Greg Stuart**, The Australian National University
Electrical properties of dendritic spines
- 12:25 pm Lunch (*service ends at 1:00 pm*)
- 1:00 pm Tour (*optional - meet at reception*)

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2:00 pm Session 8: Local circuits
Chair: Erin Schuman

2:00 pm **Solange P. Brown**, Johns Hopkins School of Medicine
Local intracortical circuits and cell-type identity

2:25 pm **Ken Kosik**, University of California, Santa Barbara
Exaptation of co-expression modules functionalizes the synapse

2:50 pm **Attila Losonczy**, Columbia University
Regulation of neuronal input transformations by tunable dendritic inhibition

3:15 pm Break

3:30 pm **Gabor Tamas**, University of Szeged
Unitary volume transmission by neurogliaform cells: Broadening the functional scope of single neurons

3:55 pm **Matthew Larkum**, Humboldt University
Dendritic inhibition and cortical circuits

4:20 pm Break

4:35 pm Panel Discussion

5:35 pm Poster Reception

7:00 pm Dinner

8:00 pm Refreshments available at Bob's Pub

Wednesday, March 21st

- 7:30 am Breakfast (*service ends at 8:45 am*)
- 9:00 am Session 9: Neocortex**
Chair: Samuel Wang
- 9:00 am **Stephen R. Williams**, Queensland Brain Institute
TASK-like potassium channels powerfully control dendritic electrogenesis in layer 5 pyramidal neurons
- 9:25 am **Ninglong Xu**, Janelia Farm Research Campus/HHMI
Nonlinear dendritic processing during active sensing produces an object localization signal in neocortical pyramidal neurons
- 9:50 am **Fritjof Helmchen**, Brain Research Institute, University of Zurich
In vivo activation of distal dendrites of neocortical layer 5 pyramidal neurons
- 10:15 am Break
- 10:45 am Session 10: Hippocampus**
Chair: Stephen Williams
- 10:45 am **Nelson Spruston**, Janelia Farm Research Campus/HHMI
The distribution of synaptic weights normalizes dendritic spike initiation in hippocampal pyramidal neurons
- 11:10 am **Heinz Beck**, University of Bonn Medical Center
Dendritic integration modes in hippocampal neurons
- 11:35 am **Stefan Remy**, German Center for Neurodegenerative Diseases
Inhibitory control of linear and supralinear dendritic excitation in CA1 pyramidal neurons
- 12:00 pm Closing Remarks and Discussion
- 12:15 pm Lunch and Departure (*To-go boxes available in servery for those on first shuttle*)
- 12:45 pm First shuttle to Dulles
1:30 pm Second shuttle to Dulles
2:15 pm Last shuttle to Dulles