

**Sunday, October 7**

- 3:00 pm      Check-in
- 6:00 pm      Reception (*Lobby*)
- 6:30 pm      Dinner
- 7:30 pm      Welcome / Opening Remarks (Organizers)**
- 7:35 pm      Poster Blitz (*1-minute / 1-slide each*)**
- 8:00 pm      Poster Session (*Lobby*)**
- 9:30 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 8

- 7:30 am Breakfast (*service ends at 8:45 am*)
- 9:00 am Session 1: Fluorescent Proteins I**  
**Chair: Jin Zhang**
- 9:00 am **Amy E. Palmer**, University of Colorado at Boulder  
*A new strategy for engineering fluorescent protein photo physics*
- 9:20 am **Nathan C. Shaner**, Scintillon Institute  
*New fluorescent proteins from unexpected sources*
- 9:40 am **Thomas E. Hughes**, Montana State University  
*A new instrument to screen for better 2- photon fluorescent proteins*
- 10:00 am **Jiayi Dou**, University of Washington  
*De novo design of a fluorescence-activating beta barrel*
- 10:20 am Break
- 11:00 am Session 2: Fluorescent Proteins II**  
**Chair: Adam Cohen**
- 11:00 am **Atsushi Miyawaki**, RIKEN Center for Brain Science & Center for Advanced Photonics  
*Luminescent protein applications in research, medicine, and bioengineering*
- 11:20 am **Erik A. Rodriguez**, The George Washington University  
*Tools to image single molecules to human disease*
- 11:40 am **Vladislav Verkhusha**, Albert Einstein College of Medicine  
*Small monomeric near-infrared fluorescent protein engineered from cyanobacteriochrome*
- 12:00 pm **Timothy J. Stasevich**, Colorado State University  
*Imaging protein translation dynamics in living cells with antibody-based probes*
- 12:20 pm Lunch (*service ends at 1:00 pm*)

**2:00 pm      Session 3: Calcium Sensors**

**Chair: Na Ji**

2:00 pm      **Haruhiko Bito**, University of Tokyo  
*Probing Ca<sup>2+</sup> and Ca<sup>2+</sup>-dependent gene expression in vivo to decipher information processing underlying cognitive behavior*

2:20 pm      **Takeharu Nagai**, Osaka University  
*A bimodal fluorescent and bioluminescent Ca<sup>2+</sup> indicator toward spatiotemporally-scalable imaging*

2:40 pm      **Yusuke Nasu**, The University of Tokyo  
*Development of a genetically-encoded Ca<sup>2+</sup> indicator optimized for two-photon microscopy*

3:00 pm      **Sheel Dodani**, University of Texas at Dallas  
*Genetically encoded fluorescent sensors to illuminate cellular chloride signaling*

3:20 pm      Break

**4:00 pm      Session 4: Sensors I**

**Chair: Nathan Shaner**

4:00 pm      **Ryohei Yasuda**, Max Planck Florida Institute for Neuroscience  
*Probing signal transduction in single dendritic spines*

4:20 pm      **Adam Cohen**, HHMI/Harvard University  
*Mapping E-I balance in vivo with all-optical electrophysiology*

**4:40 pm      Group Discussion**

**5:25 pm      Poster Reception**

7:00 pm      Dinner

8:00 pm      Refreshments available at Bob's Pub

## Tuesday, October 9

- 7:30 am Breakfast (*service ends at 8:45 am*)
- 9:00 am Session 5: Sensors II**  
**Chair: Gary Yellen**
- 9:00 am **Jin Zhang**, University of California, San Diego  
*Fluorescent biosensors for illuminating biochemical activity architecture of the cell*
- 9:20 am **Thomas Knöpfel**, Imperial College London  
*Near-infrared genetically encoded voltage indicators for all-optical electrophysiology*
- 9:40 am **Vincent A. Pieribone**, Yale School of Medicine & The John B. Pierce Laboratory  
*TBD*
- 10:00 am **Eric R. Schreiter**, Janelia Research Campus/HHMI  
*Chemigenetic indicators of neuronal activity*
- 10:20 am Break
- 11:00 am Session 6: Imaging I**  
**Chair: Loren Looger**
- 11:00 am **Francois St-Pierre**, Baylor College of Medicine  
*Designing, developing, and deploying novel genetically encoded indicators of voltage*
- 11:20 am **Na Ji**, University of California, Berkeley  
*High-resolution and high-speed in vivo imaging of the brain*
- 11:40 am **Philipp J. Keller**, Janelia Research Campus/HHMI  
*Whole-animal imaging with high spatiotemporal resolution*
- 12:00 pm **Tim Murphy**, University of British Columbia  
*High-throughput electrophysiological, behavioral, or social event triggered imaging of mouse mesoscale brain activity*
- 12:20 pm Lunch (*service ends at 1:00 pm*)
- 1:15 pm Building Tour (*optional - meet at reception*)

- 2:15 pm**      **Session 7: Transmitters/modulators I**  
**Chair: Atsushi Miyawaki**
- 2:15 pm      **Katalin Török**, St. George's, University of London  
*Novel iGluSnFR variants optimised for rapid glutamate imaging*
- 2:35 pm      **Loren Looger**, Janelia Research Campus/HHMI  
*Sensors for neurotransmitters & neuromodulators*
- 2:55 pm      **Yulong Li**, Peking University  
*Spying on neuromodulation by constructing new genetically-encoded sensors based on GPCRs*
- 3:15 pm      **Lin Tian**, University of California, Davis  
*Ultrafast neuronal imaging of dopamine dynamics with designed genetically encoded sensors*
- 3:35 pm      Break
- 4:05 pm**      **Session 8: Transmitters/modulators II**  
**Chair: Thomas Hughes**
- 4:05 pm      **Vincent Mirabella**, Rutgers University  
*A genetically-encoded detector for neuropeptide release*
- 4:25 pm      **Jennifer Prescher**, University of California, Irvine  
*Bioluminescent tools for spying on cellular communication*
- 4:45 pm**      **Group Discussion**
- 5:30 pm      Reception
- 7:00 pm      Dinner
- 8:00 pm      Refreshments available at Bob's Pub

## **Wednesday, October 10**

- 7:30 am Breakfast (*service ends at 8:45 am*)
- 9:00 am Session 9: Imaging II**  
**Chair: Ryohei Yasuda**
- 9:00 am **Gary Yellen**, Harvard Medical School  
*High-throughput, high-content screening for optimization of fluorescent biosensors*
- 9:20 am **Elke de Zitter**, KU Leuven  
*Novel insights in the relation between molecular structure and macroscopic function of EGFP-derived reversible photoswitchable fluorescent proteins*
- 9:40 am **Julien Hiblot**, Max Planck Institute for Medical Research  
*Luciferases with tunable emission wavelengths*
- 10:00 am **Periklis Pantazis**, Imperial College London  
*GenEPi: Piezo1-based fluorescent reporter for visualising mechanical stimuli with high spatiotemporal resolution*
- 10:20 am **Darcy S. Peterka**, Columbia University  
*Computational imaging strategies for understanding circuits*
- 10:40 am Break
- 11:15 am Closing Discussion & Final Remarks**
- 12:00 pm Lunch and Departure
- 12:30 pm First shuttle to Dulles  
1:30 pm Second shuttle to Dulles  
2:30 pm Last shuttle to Dulles