

iCeMS International Symposium
Light Control in Cell Biology
June 12-13, 2014, Kyoto University iCeMS
(as of May 23, 2014)

June 12

- 10:00–10:10 Opening Remarks
Ryoichiro Kageyama (Kyoto Univ iCeMS)
Susumu Kitagawa (Director, Kyoto Univ iCeMS)
- Session 1 (Chair: Ohtan Wang)
- 10:10–10:45 **Shuhei Furukawa** (Kyoto Univ iCeMS)
Photoactive Porous Coordination Polymers Towards Gas Biology Applications
- 10:45–11:20 **Michael Lin** (Stanford Univ, USA)
*Designing Autocatalytic Light-Inducible Proteins
Using Photodissociable Fluorescent Protein Domains*
- 11:20–11:55 **Akiko Hayashi-Takagi** (Univ of Tokyo)
*Visualization of Learning-Related Memory Trace and Its Erasure
by “Synaptic Optogenetics”*
- 11:55–13:30 Group Photo, Lunch
- 13:30–13:45 Remarks
Toshio Kuroki (Program Director, WPI)
- Session 2 (Chair: Peter Carlton)
- 13:45–14:20 **Jared Toettcher** (Univ of California San Francisco, USA)
*Using Optogenetics to Dissect Information Processing
in the Ras/MAPK Signaling Network*
- 14:20–14:55 **Michiyuki Matsuda** (Kyoto Univ)
Fluctuation of Signaling Molecule Activities in the Cell: Just a Noise or More than It?
- 14:55–15:30 **Silvana Konermann** (Massachusetts Inst of Technology, USA)
Optical Control of Endogenous Mammalian Gene Expression and Epigenetic States
- 15:30–16:00 Coffee Break
- Session 3 (Chair: Kaoru Sugimura)
- 16:00–16:35 **Yi Yang** (East China Univ of Science and Technology, China)
Light Switchable Transgene Systems
- 16:35–16:55 **Ryoichiro Kageyama** (Kyoto Univ iCeMS)
Light Control of Ascl1/Mash1 Expression in Neural Stem Cells
- 16:55–17:15 **Akihiro Isomura** (Kyoto Univ)
Controlling Genetic Oscillators by Light
- 17:15–17:50 **Kevin Gardner** (City Univ of New York, USA)
*Versatile Light-Driven Control of Transcriptional Initiation:
Lessons Learned from Biophysics*
- 18:00– Banquet

June 13

- Session 4 (Chair: Mineko Kengaku)
- 9:30–9:50 **Yuta Takano** (Kyoto Univ iCeMS)
*Regulation of Cell Membrane Potential and Ion Transport
by Utilizing Photo-Induced Charge Separation in Organic Molecules*
- 9:50–10:25 **Takeharu Nagai** (Osaka Univ)
Light Control and Visualization of Cellular Function
- 10:25–11:45 Coffee break
- 10:45–11:20 **Joshua Johansen** (RIKEN Brain Science Inst)
Optogenetic Dissection of a Neural Circuit Controlling Associative Memory Strength
- 11:20–11:55 **Akihiro Yamanaka** (Nagoya Univ)
Behavior Control by Activity Manipulation of Hypothalamic Neurons Using Optogenetics
- 11:55–12:00 Closing Remarks
Shuhei Furukawa (Kyoto Univ iCeMS)