

# Program

## TUESDAY, OCTOBER 3, 2017

15:00–17:00 Registration

17:10–17:15 Opening Remarks: Kenji DOYA

17:15–18:05 **Plenary Lecture 1**

Chairs: Kenji DOYA  
Hiromu TANIMOTO

**Neural correlates of learning, memory processing, expectation and stimulus selection in an insect brain** .....26

Randolf H. MENZEL  
(Free University Berlin, Germany)

18:05–18:55 **Plenary Lecture 2**

Chairs: Kenji DOYA  
Hiromu TANIMOTO

**Getting the best reward: neuronal mechanisms for utility maximisation** .....28

Wolfram SCHULTZ  
(Department of Physiology, Development & Neuroscience,  
University of Cambridge, UK)

18:55–20:30 Welcome Reception

## WEDNESDAY, OCTOBER 4, 2017

9:00–12:00 **Session A**

**Neural Circuits of Decision Making**

Chairs: Hiromu TANIMOTO  
Masanori MATSUZAKI

9:00–9:30 [A-1]  
**Unsupervised studies of male-female interactions during fruit fly courtship** .....30

Joshua W. SHAEVITZ  
(Department of Physics and the Lewis-Sigler Institute for  
Integrative Genomics, Princeton University, USA)

9:30–10:00 [A-2]  
**Segmentation of dopamine signalling in the fly brain** .....32

Hiromu TANIMOTO  
(Graduate School of Life Sciences, Tohoku University, Japan)

**10:00–10:30 [A-3]**  
**In-vivo imaging of telencephalic neural activities in adult zebrafish in the closed-loop virtual reality environment** .....34  
Hitoshi OKAMOTO  
(Lab. for Developmental Gene Regulation,  
RIKEN Brain Science Institute, Japan)

**10:30–11:00 Coffee Break**

**11:00–11:30 [A-4]**  
**Thalamocortical activity during learning and execution of voluntary movements** .....36  
Masanori MATSUZAKI  
(The University of Tokyo, Japan)

**11:30–12:00 [A-5]**  
**Weird neurons for high cognitive functions** .....38  
Stefano FUSI  
(Neuroscience, Columbia University, USA)

**12:00–12:15 Flash Talk**  
**(Poster Numbers: 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29)**

**12:15–14:30 Lunch**

**14:30–17:30 Session B**  
**Molecular Control of Decision Making**  
Chairs: Kenji DOYA  
Anatol C. KREITZER

**14:30–15:00 [B-1]**  
**Function of Basal Ganglia Circuitry in Motivation and Decision Making** .....40  
Anatol C. KREITZER  
(Gladstone Institutes/UCSF, USA)

**15:00–15:30 [B-2]**  
**Dopamine actions on dendritic spines in the nucleus accumbens for reward-related learning** .....42  
Sho YAGISHITA  
(Laboratory of Structural Physiology, Graduate School of Medicine,  
The University of Tokyo, Japan)

**15:30–16:00 [B-3]**  
**Dorsal Raphe Serotonin Neurons Encode Beneficialness: a hypothesis** .....44  
Minmin LUO  
(National Institute of Biological Sciences, China)

**16:00–16:30 Coffee Break**

16:30–17:00 [B-4]  
**Serotonin and the regulation of patience** .....46  
Kenji DOYA  
 (Neural Computation Unit, Okinawa Institute of Science and  
 Technology Graduate University, Japan)

17:00–17:30 [B-5]  
**Altered decision-making as endophenotypes to bridging the gap be-  
 tween phenomenology and neurobiology** .....48  
Hidehiko TAKAHASHI  
 (Kyoto University, Japan)

17:30–17:46 **Flash Talk**  
 (Poster Numbers: 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61)

18:00–19:30 **Dinner**

19:30–21:30 **Poster Session [I]: Odd Numbers**

## THURSDAY, OCTOBER 5, 2017

9:00–12:00 **Session C**  
**Internal Models and Prediction**  
 Chairs: Masamichi SAKAGAMI  
 Nathaniel D. DAW

9:00–9:30 [C-1]  
**Dissociable functions of reward inference in the lateral prefrontal  
 cortex and the striatum** .....50  
Masamichi SAKAGAMI  
 (Brain Science Institute, Tamagawa University, Japan)

9:30–10:00 [C-2]  
**Rewards and Cognitive Control in the human prefrontal cortex** ...52  
Etienne KOEHLIN  
 (Institute National de la Sante et de la Recherche Medicale,  
 Ecole Normale Superieure, France)

10:00–10:30 [C-3]  
**Neural computations and models underlying social decision-making**  
 .....54  
Hiroyuki NAKAHARA  
 (RIKEN Brain Science Institute, Japan)

10:30–11:00 **Coffee Break**

- 11:00–11:30 [C-4]  
**Causal neuroscience: brain dynamics causes consciousness** .....56  
Mitsuo KAWATO  
 (Advanced Telecommunications Research Institute International,  
 Brain Information Communication  
 Research Laboratory Group, Japan)
- 11:30–12:00 [C-5]  
**Rational planning by prioritized experience replay** .....58  
Nathaniel D. DAW  
 (Princeton Neuroscience Institute,  
 Princeton University, USA)
- 12:00–12:15 **Flash Talk**  
 (Poster Numbers: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30)
- 12:15–14:30 **Lunch**
- 14:30–17:30 **Session D**  
**Body, Action and Self**  
 Chairs: Shinsuke SHIMOJO  
 H. Henrik EHRSSON
- 14:30–15:00 [D-1]  
**Formation of multisensory “self” and the egocentric perspective of  
 perception-implications from inverted vision and mirror-reversal of  
 cutaneous recognition/motor reproduction** .....60  
Shinsuke SHIMOJO  
 (California Institute of Technology, USA)
- 15:00–15:30 [D-2]  
**Multisensory mechanisms of body ownership** .....64  
H. Henrik EHRSSON  
 (Department of Neuroscience, Karolinska Institutet, Sweden)
- 15:30–16:00 [D-3]  
**Mentalizing Homeostasis: The Social and Embodied Origins of Intero-  
 ceptive Inference** .....66  
Aikaterini FOTOPOULOU  
 (University College London, UK)
- 16:00–16:30 **Coffee Break**
- 16:30–17:00 [D-4]  
**Brain mechanisms underlying self-other action attribution** .....68  
Hiroshi IMAMIZU  
 (Department of Psychology, The University of Tokyo, Japan/  
 Cognitive Mechanisms Laboratories,  
 Advanced Telecommunications Research International, Japan)

17:00–17:30 [D-5]  
**Neural mechanisms of consciousness and motor awareness** .....70  
Angela SIRIGU  
(Institute of Cognitive Science CNRS, France)

17:30–17:45 **Flash Talk**  
(Poster Numbers: 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60)

18:00–19:30 **Dinner**

19:30–21:30 **Poster Session [II]: Even Numbers**

**FRIDAY, OCTOBER 6, 2017**

9:00–12:00 **Session E**  
**Self and Social Behavior**

Chairs: Makiko YAMADA  
Masaki ISODA

9:00–9:30 [E-1]  
**Probing the social mind with an electrode** .....72  
Masaki ISODA  
(Department of System Neuroscience,  
National Institute for Physiological Sciences,  
National Institutes of Natural Sciences, Japan)

9:30–10:00 [E-2]  
**Body awareness and social cognitive development from the fetal pe-  
riod** .....74  
Masako MYOWA  
(Graduate School of Education, Kyoto University, Japan)

10:00–10:30 **Coffee Break**

10:30–11:00 [E-3]  
**Social cognition, the amygdala, and autism** .....76  
Ralph ADOLPHS  
(California Institute of Technology, USA)

11:00–11:30 [E-4]  
**The dopamine system in subjective reality of the self and the envi-  
ronment** .....78  
Makiko YAMADA  
(National Institute of Radiological Sciences,  
National Institutes for Quantum and Radiological Science and  
Technology, Japan)

11:30–12:00 **General discussion**

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**12:00–12:10**   **Announcement of Grant Recipients**

**12:10–12:15**   **Closing Remarks:** Randolph H. MENZEL

**12:15–13:00**   **Lunch**