



15th Annual German-Japanese Colloquium

Nano-LifeScience

'Biophysics of Cells and Tissue'

February 6-9, 2019

Hosted by

Freie Universität Berlin
Kanazawa University Japan
JSPS Bonn Office

Detailed Programme

WEDNESDAY, FEBRUARY 6, 2019

19:00 **Scientific networking meeting/get together among PIs**
Harnack Haus
Innstraße 16-20, D-14195 Berlin

THURSDAY, FEBRUARY 7, 2019

08:30 **Registration**

09:00 **Welcome and opening remarks**
Prof. Dr. Petra Knaus
Prof. Dr. Joachim Heberle
Prof. Dr. Toshio Ando

09:10 **Special greetings**
Prof. Dr. Verena Blechinger-Talcott

Session I

Chair: Prof. Dr. Joachim Heberle

09:25 **Rhodopsin based optogenetics: basics, applications and chances**
Prof. Dr. Ernst Bamberg

10:10 **Optical manipulation of intracellular Ca²⁺ dynamics**
Prof. Dr. Hiromu Yawo

10:55 – 11:15 Coffee break

11:15 **Folding alpha helical membrane proteins**
Prof. Paula Booth

12:00 **Automated single-molecule imaging and its application to cell signaling**
Prof. Dr. Masahiro Ueda

12:45 – 13:45 Lunch break

13:45 – 14:45 Scientific Dahlem campus tour

Session II

Chair: Prof. Dr. Petra Knaus

- 14:45** **Studies on biomolecules using single-molecule imaging technique**
Prof. Dr. Yoshie Harada
- 15:30** **Poster Session incl. short talks and coffee break**
- 18:00** **Closing remarks day 1**
- 19:00** **Social event**
Alter Krug Dahlem
Königin-Luise-Straße 52, D-14195 Berlin

FRIDAY, FEBRUARY 8, 2019

- 10:00** **Welcome and opening remarks**

Session III

Chair: Prof. Dr. Petra Knaus

- 10:00** **High-speed AFM: directly visualizing protein molecules during their functional activity**
Prof. Dr. Toshio Ando
- 10:45** **Mechanically detecting and directing molecular and cellular processes**
Prof. Dr. Daniel Müller
- 11:30** **Coiled coils as molecular force sensors for cell biology and materials science**
Dr. Kerstin Blank

12:15 – 13:15 Lunch break

Session IV

Chair: Prof. Dr. Joachim Heberle

13:15 **Mechanisms of axonal transport investigated by high-speed and high-resolution imaging**
Prof. Dr. Yasushi Okada

14:00 **Functional protein architectures defining presynaptic active zones**
Prof. Dr. Stephan Sigrist

14:45 – 15:15 Group photo & Coffee break

15:15 **Pathogenic roles of exosomes, endogenous nano-particles**
Prof. Dr. Rikinari Hanayama

16:00 **Investigating cellular adhesion and mechanics using multiparametric atomic force microscopy**
Dr. Tanja Neumann

16:45 **Final discussion and concluding remarks**
Prof. Dr. Petra Knaus
Prof. Dr. Joachim Heberle
Prof. Dr. Masahiko Hayashi

17:15 **Introduction of JSPS programme**
Tomoko Deguchi

18:30 **Farewell and dinner meeting Japanese participants**
Restaurant Piaggio
Iltisstraße 1-9, D-14195 Berlin

SATURDAY, FEBRUARY 9, 2019 (optional)

10:00 – 11:00 **Lab tour Department of Physics; FU Berlin for those interested**

Morning – (after)noon **Departure of foreign participants**