

24th pm “Protein: structure, function and design”

Chairperson: Satoshi Murakami (Tokyo Inst Tech), Atsuko Yamashita (Okayama Univ)

Keiichi Inoue (Univ Tokyo) “Fast-expanding microbial rhodopsin world”

Toru Kondo (Tohoku Univ) “Next challenge in biological photophysics: From static/isolated protein to dynamic/assembled protein network”

Hiroshi Nishimasu (Univ Tokyo) “Structure and engineering of CRISPR-Cas9”

Ken’ya Furuta (NICT) “Re-design of biomolecular motors and their systems”

Tomoshi Kameda (AIST) “Current trend of phase separation”

25th am “Biophysics of the cells”

Chairperson: Kaoru Sugimura (Kyoto Univ), Yodai Takei (Caltech)

Madoka Suzuki (Osaka Univ) “Current nanothermometry in cell biology and physiology”

Hirokazu Tanimoto (Yokohama City Univ) “Physical forces in the cell”

Kaoru Sugimura (Kyoto Univ) “The mechanics of nature behind the multicellular tissue structure”

Hidehiko Inomata (RIKEN) “Novel extracellular fluid mechanism for regulation of secreted proteins in *Xenopus laevis*”

Tony Z. Zia (Tokyo Inst Tech) 「Recent Advances in Origins of Life Research by Biophysicists」

25th pm “Crossover of physics theories and experiments”

Chairperson: Miho Yanagisawa (Univ Tokyo), Kazuhito Tabata (Univ Tokyo)

Miho Yanagisawa (Univ Tokyo) “Unique phase behavior in cell size space: Synergistic effect of molecular crowding and confinement”

Hideki Nakamura (JHU) “Dream” experiment in living cells? Synthetic biology may help in near future!

Kumiko Hayashi (Tohoku Univ) “Molecular motor counting for neuronal cargo transport”

Kyogo Kawaguchi (RIKEN) “Physical properties of homeostatic and active tissues”

Akatsuki Kimura (NIG) “Architectonics of the cell, as a crossroad of physics and genetics”

Taro Toyozumi (RIKEN) “Embedding and Predicting Neural Dynamics”

26th am “State-of-the-art measurement”

Chairperson: Eriko Nango (Kyoto Univ & RIKEN), Hiroko Bannai (RIKEN)

Eriko Nango (Kyoto Univ & RIKEN) “Molecular movies of proteins at work by X-ray free electron lasers”

Kaoru Mitsuoka (Osaka Univ) “Structural Analysis of Biological Samples by Cryogenic Electron Microscopy”

Yasufumi Takahashi (Kanazawa Univ) “Super resolution live cell functional imaging”

Sadao Ota (Univ Tokyo) Machine learning-driven high content analysis "Beyond seeing is believing"

Tsuyoshi Sekitani (Osaka Univ) “Brain-implanted flexible and stretchable integrated circuit system for comprehensively monitoring brain activities from cerebral cortex to deep brain regions”