

Pre-Symposium of HeKKSaGOn on Mechanobiology

**April 16,
2015**

9:00 - 11:45

Venue :

**Frontier Research Institute for Interdisciplinary Sciences (FRIS),
Tohoku University**

(<http://www.fris.tohoku.ac.jp/fris/english/index.html>)

Co-organized :

FRIS 8th seminar

9:00-9:05 Opening M. Tanaka (University of Heidelberg)

Session I Chair: M. Tanaka (University of Heidelberg)

9:05-9:25 M. Bastmeyer (Institute for Zoology, Karlsruhe Institute for Technology)
“Subcellular stretch-induced cytoskeletal response of single fibroblasts using 3D micro-scaffolds”

9:25-9:45 K. Ohashi¹, S. Fujiwara¹, T. Mashiko¹, H. Abiko¹, M. Sato², K. Mizuno¹ (Graduate School of Life Sciences, ²Frontier Research Institute for Interdisciplinary Sciences, Tohoku University)
“Functional analysis of Solo, a guanine nucleotide exchange factor for RhoA/RhoC, involved in mechanotransduction”

9:45-10:05 C. Schmidt (Drittes Physikalisches Institut, University of Göttingen)
“Active random transport in cells: High-resolution mapping of non-equilibrium cytoskeletal fluctuations using single-walled carbon nanotubes”

10:05-10:25 T. Ogura (Institute of Development, Aging and Cancer, Tohoku University)
“Hemodynamic forces are an essential regulator of heart development”

10:25-10:40 Coffee Break

Session II Chair: M. Sato (Tohoku University)

10:40-11:00 M. Tanaka (Physical Chemistry of Biosystems, University of Heidelberg)
“Adhesion strength, fluctuation dynamics, and migration of human hematopoietic stem cells and leukemia blasts on artificial bone marrow niche models”

11:00-11:20 T. Ishikawa (Graduate School of Engineering / Biomedical Engineering, Tohoku University)
“Transport phenomena in suspensions of swimming microorganisms”

11:20-11:40 C. Wöll (Institute for Functional Interfaces, Karlsruhe Institute for Technology)
“Metal-organic frameworks (MOFs) - a promising basis for the development of novel cell culture substrates”

11:40-11:45 Closing M. Sato (Tohoku University)



HeKKSaGOn
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The German-Japanese University Consortium **HeKKSaGOn** was founded in July 2010 as an association of three German and three Japanese universities. The rectors and presidents of Heidelberg University, Göttingen University and the Karlsruhe Institute of Technology and three of Japan's leading universities – Kyoto, Osaka, and Tohoku – signed a joint declaration in Heidelberg in July 2010.

HeKKSaGOn stands for the Heidelberg – Kyoto – Karlsruhe – Sendai – Göttingen – Osaka – network.



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