

# International Workshop on Nonlinear Energy Localization in Crystals and Related Media

December 2-3, 2016

Kyoto International Exhibition Hall "Miyako Messe", Kyoto, Japan

2016.12.2 (Fri.)

9:40-9:50    Opening

9:50-10:30    **Search of discrete breathers in unstrained graphene**

Sergey V. Dmitriev (Institute for Metals Superplasticity Problems of Russian Academy of Sciences), Ivan P. Lobzenko, Andrey A. Kistanov, Elena A. Korznikova

10:30-10:55    **Variety of discrete breathers in fcc crystals**

Elena A. Korznikova (Institute for Metals Superplasticity Problems of Russian Academy of Sciences), Andrey A. Kistanov, Sergey V. Dmitriev

10:55-11:05    break

11:05-11:30    **Properties of discrete quasibreathers and Rosenberg modes in graphene by means of classical and quantum molecular dynamics**

Ivan Lobzenko (Toyota Technological Institute), George Chechin, Alexandr Chetverikov, Sergey Dmitriev

11:30-11:55    **Role of Intrinsic Localized Modes in Atomic Structures: Trigger of Stone-Wales Defect Formation in Carbon Nanotubes**

Takahiro Shimada (Kyoto University), Takayuki Kitamura

11:55-13:20    Lunch

13:20-14:00    **Mobile breather scattering in a 2D hexagonal crystal lattice**

J. Chris Eilbeck (Heriot-Watt University)

- 14:00-14:40 **Localized nonlinear excitations in silicate layers**  
Juan F.R. Archilla (University of Sevilla)
- 14:40-15:05 **Mobile discrete breathers and symmetry of pairwise interaction in crystals**  
Yusuke Doi (Osaka University), Akihiro Nakatani
- 15:05-15:30 **Moving Intrinsic Localized Modes and Its Behavior at Junction between Two Different Lattices**  
Masayuki Kimura (Kyoto University), Ryo Tsujisaka, Yoshiharu Taniguchi, Yasuo Matsushita, and Takashi Hikihara
- 15:30-15:50 Break
- 15:50-16:15 **Defects in single-walled carbon nanotubes investigated by atomic force microscopy and its related techniques**  
Yuji Miyato (Osaka University), Kei Kobayashi, Hirofumi Yamada
- 16:15-16:40 **Existence and stability of odd and even parity discrete breathers in Fermi-Pasta-Ulam lattices**  
Kazuyuki Yoshimura (Tottori University)
- Evening Banquet

2016.12.3 (Sat.)

- 10:00-10:40 **Confining interparticle potential makes both heat transport and energy diffusion anomalous in one-dimensional phononic systems**  
Yuriy A. Kosevich (Semenov Institute of Chemical Physics, Russian Academy of Sciences), Alexander V. Savin
- 10:40-11:20 **Non-universal heat correlation functions and their anomalous scaling in one-dimensional systems**  
Daxing Xiong (Fuzhou University), Jun Zhang

- 11:20-11:45 **Contact geometric approaches to nonlinear RLC circuit lattices in contact with heat bath**  
Shin-itiro Goto (Kyoto University)
- 11:45-13:20 Lunch
- 13:20-14:00 **Wave Propagation in Origami-based Mechanical Metamaterials**  
Hiromi Yasuda (Washington University), Jinkyu Yang
- 14:00-14:25 **Making of air-levitation-type coupled oscillator array and experiments on excitation of intrinsic localized modes**  
Yosuke Watanabe (Osaka University), Mai Nishimoto, Chika Shiogama
- 14:25-14:50 **Traveling Intrinsic Localized Modes in Nonlinear Driven Damped Lattices**  
M. Sato (Kanazawa University), S. Shige, T. Mukaide and A. J. Sievers
- 14:50-15:00 Closing