



TokyoTech and IIT Guwahati Joint Workshop Condensed Matter and High-Energy Physics

Program

Nov. 11th (Mon)

09:00-09:30 Workshop Registration

Chair: Prof. Katsushi Ito

09:30-10:00 (25+5) Prof. Akihisa Koga

Ferromagnetic instability for the single-band Hubbard model in the strong-coupling regime

10:00-10:30 (25+5) Dr. Tapan Mishra

Quantum walk of multi-body interacting bosons

10:30-10:50 (15+5) Msc. Keisuke Fujii

Hydrodynamics with spacetime-dependent scattering length

Coffee Break (10:50-11:05)

Chair: Prof. Katsushi Ito

11:05-11:35 (25+5) Dr. M.C.Kumar

Resummed predictions for the graviton production at the LHC

11:35-12:05 (25+5) Prof. Daisuke Jido

Mesons in nuclei and partial restoration of chiral symmetry

Lunch Break (12:05-13:45)

13:45-14:00 (15) Dean Prof. Kotaro Yamada

Welcome address

Chair: Prof. Osamu Jinnouchi

14:00-14:30 (25+5) Prof. Masahiro Kuze

Neutrino physics

14:30-15:00 (25+5) Dr. Debasish Borah

Common Origin of Neutrino Mass, Dark Matter and Baryon Asymmetry of the Universe

15:00-15:20 (15+5) Msc. Atsumi Saito

Exploration of extremely neutron-rich nuclei with rare-isotope beam experiments

Chair: Prof. Saurabh Basu

15:50-16:20 (25+5) Prof. Tomohiro Sasamoto

Exact current fluctuations for 1D non-equilibrium many-body systems

16:20-16:50 (25+5) Dr. Pankaj Mishra

Statistics and Dynamics of the Large Scale Circulation in Turbulent Rayleigh-Benard Convection

Coffee Break & Workshop Photo (16:50-17:05)

Chair: Prof. Saurabh Basu

17:05-17:35 (25+5) Prof. Hidetoshi Nishimori

Quantum computing by quantum annealing

18:00- Banquet at Royal Blue Seiyoken

Nov. 12th (Tue)

Chair: Prof. Yusuke Nishida

09:00-09:30 (25+5) Prof. Masahide Yamaguchi

Invertible field transformations with derivatives: necessary and sufficient conditions

09:30-10:00 (25+5) Dr. Debaprasad Maity

Conneting CMB and dark matter phenomenology via reheating

10:00-10:20 (15+5) Msc. Reona Arai

Finite N Corrections of AdS/CFT Correspondence

Coffee Break (10:20-10:35)

Chair: Prof. Yusuke Nishida

10:35-11:05 (25+5) Prof. Saurabh Basu

Evolution of Superconductivity by orbital selective confinement in intercalated Bismuth Selenide

11:05-11:35 (25+5) Prof. Shuichi Murakami

New Horizons of Topological Material Science

Lunch Break (11:35-13:30)

Chair: Prof. Takuya Satoh

13:30-14:00 (25+5) Prof. Toshimasa Fujisawa

Non-equilibrium dynamics in quantum-Hall Tomonaga-Luttinger liquids

14:00-14:30 (25+5) Prof. Girish Setlur

Chiral and Non-chiral bosonization of Luttinger Liquids

14:30-14:50 (15+5) Msc. Kentaro Nagase

Structure and Growth of Bi(110) ultra thin film

Coffee Break (14:50-15:20)

Chair: Prof. Takuya Satoh

15:20-15:50 (25+5) Prof. Subhradip Ghosh

New materials for magneto-caloric applications

15:50-16:20 (25+5) Prof. Susumu Saito

Isotope effect on the electronic structure of light-element semiconductors

Coffee Break (16:20-16:35)

Chair: Prof. Subhradip Ghosh

16:35-17:05 (25+5) Dr. Santabrata Das

Role of pseudo-potentials in studying the accretion flow around black holes

17:05-17:35 (25+5) Prof. Nobuyuki Kawai

X-ray and optical/NIR observations of black hole X-ray binaries

17:35 Prof. Subhradip Ghosh

Closing address

