

KEK Theory Workshop 2023

Wednesday, 29 November 2023

Parallel Session B: CHOU CHIEN-YU, Kohta Hatakeyama, Naoki Fukushima, Yui Hayashi, Hiromasa Watanabe,

Akira Matsumoto (14:00 - 15:30)

-Conveners: Kohtaroh Miura

| time | [id] title | presenter |
|-------|---|-----------------------|
| 14:00 | [11] Hartle-Hawking v.s. Vilenkin saddle points in quantum cosmology by the generalized Lefschetz thimble method | Mr CHIEN-YU, CHOU |
| 14:15 | [12] The effect of fermions on the emergence of (3 +1)-dimensional expanding space-time in the Lorentzian type IIB matrix model | Dr HATAKEYAMA, Kohta |
| 14:30 | [13] Color confinement due to topological defects ---restoration of residual gauge symmetries--- | Mr FUKUSHIMA, Naoki |
| 14:45 | [14] Semiclassical analysis of the bifundamental QCD with anomaly-preserving T^2 compactification | Dr HAYASHI, Yui |
| 15:00 | [15] A new perspective on thermal transition in QCD | Dr WATANABE, Hiromasa |
| 15:15 | [16] Three ways of calculating composite-particle spectra of gauge theories in the Hamiltonian formalism | Mr MATSUMOTO, Akira |

Parallel Session B: Worapat Piensuk, Naoyuki Yamamori, Ashutosh Tripathi, Yuhma Asano, Ken Kikuchi, Keisuke

Konosu (16:00 - 17:30)

-Conveners: Matsuo Sato

| time | [id] title | presenter |
|-------|--|-----------------------|
| 16:00 | [23] The phase diagram of the bosonic Lorentzian IKKT matrix model with the mass term | Mr PIENSUK, Worapat |
| 16:15 | [24] The analysis of the Lorentzian IKKT matrix model at large D | Mr YAMAMORI, Naoyuki |
| 16:30 | [25] Lefschetz-thimble analysis of the Lorentzian IKKT matrix model around saddle point configurations | Mr TRIPATHI, Ashutosh |
| 16:45 | [26] Perturbative superstring theory and the IKKT matrix model | Mr ASANO, Yuhma |
| 17:00 | [27] Ground state degeneracy and module category | Dr KIKUCHI, Ken |
| 17:15 | [28] Correlation functions from homotopy algebras and the applications | Mr KONOSU, Keisuke |

Thursday, 30 November 2023

Parallel Session B: Soichiro Shimamori, Hiroki Wada, Ryo Yokokura, Sinya Aoki, Matsuo Sato, Ryota Nasu (14:00 - 15:30)

-Conveners: Junichi Haruna

| time | [id] title | presenter |
|-------|---|------------------------|
| 14:00 | [39] Non-invertible duality defect and non-commutative fusion algebra | Mr SHIMAMORI, Soichiro |
| 14:15 | [40] Non-invertible symmetries in Maxwell theory on non-spin manifold | Mr WADA, Hiroki |
| 14:30 | [41] Generalized chiral instabilities, linking numbers, and non-invertible symmetries | Dr YOKOKURA, Ryo |
| 14:45 | [51] A recipe for a bulk construction from a scalar CFT by a conformal flow | Prof. AOKI, Sinya |
| 15:00 | [43] The effective potential for string backgrounds from string geometry theory | Prof. SATO, Matsuo |
| 15:15 | [48] Renormalization group and quantum error correction | Mr NASU, Ryota |

Parallel Session B: Hidenori Fukaya, Atis Yosprakob, Gota Tanaka, Jingjing Yang, Mingshuo Zhu (16:00 - 17:30)

-Conveners: Kazutoshi Ohta

| time | [id] title | presenter |
|-------|---|---------------------|
| 16:00 | [53] A mathematical formulation of index theorem on a lattice | Dr FUKAYA, Hidenori |
| 16:15 | [50] Grassmann tensor network study of multi-flavor gauge theory | Mr YOSPRAKOB, Atis |
| 16:30 | [49] Analysis of entanglement entropy based on tensor renormalization group | Dr TANAKA, Gota |
| 16:45 | [7] Exact WKB Analysis and TBA Equations for the Stark Effect | Dr YANG, Jingjing |
| 17:00 | [58] TBA | Mr ZHU, Mingshuo |