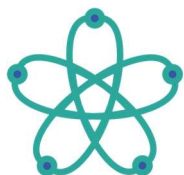


THE UNIVERSITY OF HONG KONG



HK Institute of
Quantum Science & Technology
香港量子研究院



Department of Physics
THE UNIVERSITY OF HONG KONG

A morphism between two QFTs Prof. Liang KONG

Southern University of Science and Technology

Abstract:

A morphism between two mathematical objects of the same type (e.g. groups, algebras, representations, categories, etc.), which preserves the defining structures of the objects, is one of the most important notions in mathematics. However, how to define such a morphism between two QFT's (or quantum phases) had never been considered in physics until arXiv:1502.01690. In this talk, I will give a review of this notion and discuss its applications in the study of topological orders and more general quantum liquids. I will also clarify its relation with "topological symmetry" or "SymTFT".

Biography:

Prof. Liang Kong obtained his Bachelor degree in Physics from Department of Physics at USTC in 1994, and his Ph.D. in Mathematics from Rutgers University in the United States. Afterwards, he worked in Max Planck Institute for Mathematics in Germany, IHÉS in France, Caltech, IAS at Tsinghua University, Department of Mathematics at University of New Hampshire, Center of Mathematical Sciences and Applications at Harvard University, and Yau Mathematical Sciences Center at Tsinghua University. Currently, he is a senior researcher in Shenzhen Institute for Quantum Science & Engineering at Southern University of Science and Technology. His main research interest is the mathematical theory of quantum many-body systems and phase transitions, particularly in the areas of topological order and conformal field theory.

Friday, May 31, 2024, 3:00 pm

Room 103, 1/F, Meng Wah Complex

The University of Hong Kong

HK Institute of Quantum Science & Technology,
Room525, Chong Yuet Ming Physics Building, The University of Hong Kong
Phone: 3917 1108. *Anyone interested is welcome to attend.*