

Plenary Talk

PV V Tue 9:45 AudiMax

Invariants of Topological Order: An Operator-Algebraic Approach — •YOSHIKO OGATA — Research Institute for Mathematical Sciences, Kyoto University, Kyoto 606-8502 JAPAN

Recently, topological phases of matter have attracted significant attention in physics and mathematics. In this talk, I will explain the

operator-algebraic approach to this subject. This approach allows us to treat infinite systems directly. A key benefit of considering infinite systems is that it provides a stable theory. In particular, this framework enables us to describe quasi-particle excitations, known as anyons, as invariants in the classification of topological order, in a mathematically rigorous way. I will also present recent developments within this framework.