

## ABSTRACTS

**Akishu Ikeda** (IPMU, University of Tokyo)

Title: Spaces of stability conditions on the Calabi-Yau categories associated with quivers

Abstract: The aim of this lecture is to introduce the spaces of Bridgeland stability conditions on the Calabi-Yau categories associated with quivers. In the first part, we introduce the space of Bridgeland stability conditions on a triangulated category and review its basic properties. We also see examples of stability conditions. In the second part, we see known results about the spaces of stability conditions on the derived categories of Calabi-Yau algebras of quivers in terms of root systems and period integrals.

**Tatsuki Kuwagaki** (University of Tokyo)

Title: An introduction to the coherent-constructible correspondence

**Viktor Ostrik** (University of Oregon)

Title: Affine branching laws and tensor categories

Abstract: In these talks we will describe an approach to branching laws for highest weight integrable representations of affine Lie algebras based on fusion product and modular tensor categories. Our main emphasis will be on branching laws related with level rank duality.

**Vivek Shende** (University of California, Berkeley)

Title: Liouville sectors and mirror symmetry

**Andrey Smirnov** (University of California, Berkeley)

Title: Integrable systems and quantum geometry

Abstract: In my talk I will overview new classes of integrable systems associated with Nakajima quiver varieties. I will explain the geometric construction of quantum R-matrices, commuting families of Hamiltonians and corresponding Bethe equations. I will discuss relations of these systems with quantum cohomology and quantum K-theory of Nakajima varieties.

**Kazushi Ueda** (University of Tokyo)

Title: Dimer models and homological mirror symmetry

Abstract: A dimer model is a bicolored graph on a real 2-torus encoding the information of a quiver with potential. It originates from statistical mechanics, and is related to various branches of mathematics. In the talk, we will give an introduction to the theory of dimer models and its application to homological mirror symmetry.

**Masahito Yamazaki** (IPMU, University of Tokyo)

Title: Integrability lattice models from four-dimensional gauge theory

Abstract: I will describe my recent work with Kevin Costello and Edward Witten, on explaining integrable models from a four-dimensional gauge theory.