Title and abstract of the talk on 2021-12-2

Kentaro Kameoka

Title: Discrete Schrödinger operators and Finsler metric.

Abstract: We study discrete Schrödinger operators in the semiclassical setting where semiclassical continuous Schrödinger operators are discretized with mesh size proportional to the semiclassical parameter. In this setting, we prove the Agmon estimate for the exponentially small tunneling effect. It turns out that the Agmon metric is a Finsler metric rather than a Riemannian metric. We also construct WKB solutions near a nondegenerate potential minimum. The optimal exponential decay of eigenfunctions of non-semiclassical discrete Schrödinger operators is also discussed.