

Hong Kong Geometry Colloquium

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Room 517, Meng Wah Complex, HKU

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Hilbert schemes, Equivariant cohomology and Jack polynomials

Abstract

The Hilbert scheme of points on a complex surface can be regarded as a desingularization of the symmetric product of the surface. Jack polynomials are one kind of symmetric functions. We consider quasi-projective surfaces with a torus action. The action induces a torus action on the Hilbert scheme. One can study the equivariant cohomology ring of the Hilbert scheme. We will present the key role played by Jack polynomials in the cohomology ring of the Hilbert scheme.