

BPS INVARIANTS OF THE PROJECTIVE PLANE AND MODULAR FORMS

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ABSTRACT

BPS invariants capture topological invariants of moduli spaces of sheaves. After a brief review of BPS invariants of vector bundles on curves, I'll discuss generating functions of BPS invariants of semi-stable sheaves on the projective plane and its blow-up. These generating functions transform as (mock) modular forms, which is a manifestation of the physical electric-magnetic duality.