
GLENN STEVENS, Boston University

The Hodge-Tate sequence and overconvergent p -adic modular sheaves

Using Faltings' theory of the Hodge-Tate sequence of an abelian scheme we give a functorial construction of "modular sheaves" Ω^κ , where κ is a not-necessarily integral weight, attached to abelian schemes on which the canonical subgroup exists. These sheaves generalize the integral powers, ω^k , of the sheaf ω of relative differentials on a modular curve. Global sections of Ω^κ provide geometric realizations of overconvergent automorphic forms of non-integral weight. Applications of this approach to the theory of p -adic Hilbert modular forms will be described. This is joint work with Fabrizio Andreotti and Adrian Iovita.