

DETERMINATION OF MODULAR FORMS BY FUNDAMENTAL FOURIER COEFFICIENTS

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ABSTRACT

It is an interesting question when a natural subset of the Fourier coefficients is sufficient to uniquely determine a modular form. I will talk about a special case of this question for two types of forms: classical holomorphic cusp forms of half-integral weight, and Siegel cusp forms of genus 2. These two apparently very different scenarios turn out to be closely related, and have important consequences for the L-functions and Bessel models related to Siegel cusp forms. In particular, an application to the case of Yoshida lifts leads to a simultaneous non-vanishing theorem for two Rankin-Selberg L-functions. Part of this is joint work with Ralf Schmidt.