On the Fourier coefficients of elliptic modular forms of half-integral weight

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Abstract It is known that if the Fourier coefficients $a(n)\,(n \geq 1)$ of an elliptic modular form of even integral weight $k \geq 2$ on the Hecke congruence subgroup $\Gamma_0(N)\,(N \in \mathbf{N})$ satisfy the bound $a(n) \ll_f n^c$ for all $n \geq 1$, where $c > 0$ is any number strictly less than $k - 1$, then f must be cuspidal. Here we investigate the case of half-integral weight modular forms. This is a joint work with W. Kohnen.