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Lloyd J Kilford* (l.kilford@gmail.com). *Approximating the U_{11} operator on overconvergent modular forms.* Preliminary report.

Computing the slopes of the U_p operator acting on overconvergent modular forms gives information about certain spaces of classical modular forms. However, previous work, such as that of Buzzard-Calegari, Emerton, Loeffler, Smithline and the author, has concentrated on the cases where the modular curve $X_0(p)$ has genus 0.

We will present a method, due to Buzzard, which generalizes this to the case when $X_0(p)$ has genus 1, and allows us to approximate the action of the U_p operator on overconvergent modular forms of general weight to any desired precision. (Received July 18, 2007)