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Rebecca Bellovin, Sharon Anne Garthwaite and Ekin Ozman*, ozman@math.utexas.edu,
and **Rachel Pries, Cassandra Williams and Hui June Zhu**. *Newton and Hodge Polygons for
a Variant of the Kloosterman Family*

In this talk we investigate the behavior of Hodge polygons for the L -functions of a family of exponential sums of Laurent polynomial f in $\mathbb{F}_q[x_1, \dots, x_n, (x_1 \cdots x_n)^{-1}]$, where f deforms the diagonal polynomial $f_0 = x_1^m + \cdots + x_n^m$. We explicitly compute the Hodge numbers for such deformations in lower dimensions. Using these computations, one can determine the corresponding Hodge polygon which is a lower bound for the Newton polygon. (Received September 15, 2012)