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**LEO GOLDMAKHER**, University of Toronto  
*Subconvexity for a family of double Dirichlet series*

In 2003, Friedberg, Hoffstein, and Liemann introduced a family of double Dirichlet series which are built out of  $n$ -th order twists of a fixed Hecke  $L$ -series (a closely related series was also studied by Diaconu and Tian). Among other nice properties, a typical member  $Z(s, w)$  of this family satisfies a functional equation taking  $(s, w)$  to  $(1 - s, 1 - w)$ . This gives rise to a 'convexity' bound for  $Z(1/2 + iu, 1/2 + it)$ , which specializes to the usual notion of convexity when either  $u$  or  $t$  is fixed. I will outline work (joint with Valentin Blomer and Benoit Louvel) in which we establish a subconvexity bound in the  $(u, t)$  aspect.