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Jeffrey C. Lagarias* (lagarias@umich.edu), Dept. of Michigan, University of Michigan, 530 Church Street, Ann Arbor, MI 48109-1043, and **Robert Rhoades**. *Polyharmonic Maass forms on $PSL(2, Z)$* .

An m -polyharmonic Maass form of weight k on the full modular group $PSL(2, Z)$ is a real analytic weight k modular form annihilated by the m -th power of the hyperbolic Laplacian. This talk reports on the question of the finite dimensionality of the vector space of such functions having moderate growth at the cusp, and on finding forms giving bases for such spaces. This is work in progress. (Received August 12, 2013)