

Meeting: 1004, Bowling Green, Kentucky, SS 5A, Special Session on Advances in the Study of Wavelets and Multi-wavelets

1004-43-35 **Dorin Ervin Dutkay*** (ddutkay@math.rutgers.edu), Department of Mathematics, Hill Center-Busch Campus, Rutgers University, Piscataway, NJ 08854. *Low-pass filters and representations of the Baumslag Solitar group.*

We show how low-pass filters give rise to representations of the Baumslag Solitar group. We show that these representations are faithful, they admit wavelet bases. Their decomposition into irreducibles is related to the existence of solutions for scaling equations. (Received January 05, 2005)