

1092-65-99

J Ding* (jiudin@gmail.com), Department of Mathematics, University of Southern Mississippi, 118 College Dr., Box 5045, Hattiesburg, MS 39406, **N Rhee** (rheen@umkc.edu), Department of Mathematics and Statistics, University of Missouri at Kansas City, Kansas City, MO 64110, and **C. Zhang** (chenhua.zhang@usm.edu), Department of Mathematics, University of Southern Mississippi, 118 College Dr, Box 5045, Hattiesburg, MS 39406. *Solving Moment Problems using Maximum Entropy Method with Orthogonal Polynomials.*

The classic Hausdorff moment problem is hard to solve numerically due to the ill-conditioning. We propose to use orthogonal polynomials as the moment functions. The system of nonlinear equations for the Lagrange multipliers can be modified so that it is much simpler to solve. Numerical experiments have shown some advantages of the approach. (Received August 14, 2013)