1054-65-16
Jiu Ding*, Department of Mathematics, University of Southern Mississippi, 118 College Dr., Box 5045, Hattiesburg, MS 39406, and Noah Rhee, Department of Mathematics and Statistics, University of Missouri at Kansas City, Kansas City, MO 64110. A Least squares Method for Computing a Stationary Density of the Frobenius-Perron Operator.

We propose a piecewise linear least squares approximation method for computing stationary density functions of Frobenius-Perron operators associated with piecewise C^2 and stretching mappings of the unit interval. Using techniques from matrix analysis and difference equations, we prove the L^1 -norm and the *BV*-norm convergence of the method. (Received June 29, 2009)