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**John E Herr\*** ([jeherr@butler.edu](mailto:jeherr@butler.edu)). *Computation of Fourier Series with Respect to the Cantor Measure via the Kaczmarz Algorithm*. Preliminary report.

We show how the Kaczmarz algorithm can be used to construct series of the form  $\sum_{n=0}^{\infty} c_n e^{2\pi i n x}$  for functions in  $L^2(\mu)$  where  $\mu$  is any singular measure on the unit circle, even when there does not exist an orthogonal basis or frame of functions of the form  $e^{2\pi i \lambda x}$ . We explain how the coefficients of these series can be numerically approximated, and we demonstrate explicit Fourier-type series for select functions with respect to the ternary Cantor measure. (Received September 13, 2019)