1127-60-83 **Dan Pirjol*** (dpirjol@gmail.com), 225 St Pauls Avenue, apt 17H, Jersey City, NJ 07306, and **Lingjiong Zhu** (ling@cims.nyu.edu), Department of Mathematics, Florida State University, Tallahassee, FL. *Infinite sums of the geometric Brownian motion and generalizations.*

The infinite sum of a geometric Brownian motion (gBM) sampled on a sequence of uniformly spaced times appears in problems of theoretical probability, actuarial science and mathematical finance. For example this appears when considering the present value of a perpetuity: a fixed recurring payment made in perpetuity from an initial deposit of stock, assumed to follow a geometric Brownian motion. The talk studies the distributional properties of the infinite sum of the gBM. This can be characterized as the stationary distribution of a linear stochastic recursion. Tail asymptotics are derived, and the distribution is found numerically by solving an integral equation. Similar results are obtained for the sum of the gBM with a geometrically distributed stopping time. The results can be generalized further by replacing the gBM with an exponential Levy process. (Received January 23, 2017)