1118-60-177 **Joe P Chen*** (joe.p.chen@uconn.edu), University of Connecticut, Storrs, CT 06269, and
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Hydrodynamic limit of the boundary-driven exclusion process on the Sierpinski gasket.

We study the symmetric simple exclusion process on the Sierpinski gasket (SG) driven by the action of particle reservoirs attached to boundary vertices of SG. In the diffusive scaling limit, we obtain the law of large number (in the form of a nonlinear heat equation) and large deviation functionals for the empirical density and current.

There are two important ingredients to our proofs.

1) An optimal estimate of transport energy in the exclusion process, based on the "octopus inequality" of Caputo, Liggett, and Richthammer.

2) The technology of differential forms (grad, div) on fractals developed by the second author and collaborators. (Received January 31, 2016)