1038-37-235   **Ilie D Ugarcovici*** (`iugarcov@depaul,edu`), Department of Mathematical Sciences, DePaul University, Chicago, IL 60614. *Continued fractions, natural extension maps and their geometric structure.* Preliminary report.

We discuss new types of continued fractions and geometric realizations of their natural extension maps. The domain of such a two-dimensional extension map coincides with a canonically associated attracting set. The geometric structure of these attracting sets will be analyzed and some generalizations to other Fuchsian groups will be presented. This is work in progress with S. Katok and D. Zagier. (Received February 11, 2008)