1139-37-445 **Anton Lukyanenko*** (`alukyane@gmu.edu`) and **Joseph Vandehey**. *Ergodicity of Iwasawa continued fractions.* Preliminary report.

Rational Carnot groups retain sufficient similarity to the real numbers to study analogs of number-theoretic constructions. In particular, $\mathbb{R}^n$ and certain H-type Carnot groups admit a continued fraction algorithm that is related to both Diophantine properties of the space and the geometry of an associated hyperbolic space. We use the latter to study the dynamical properties of the Gauss map associated to these *Iwasawa continued fractions*, proving ergodicity in the geometrically complete case, which includes multiple variants of real continued fractions as well as new variants of complex continued fractions and Heisenberg continued fractions. (Received February 18, 2018)