A multi-dimensional continued fraction algorithm is presented, related to the modified Jacobi–Perron algorithm studied by Podsypanin and Schweiger. Many desirable properties of this algorithm are established. It is shown that the underlying transformation has a coordinate system in which the natural extension is readily constructed, from which the invariant measure may be explicitly constructed. Some ergodic properties of the invariant measure are discussed (roughly speaking, it is shown to have completely positive entropy). A feature of this work is that it has some justification in claiming to be rather natural: for example, the invariant measure found is a generalization of the invariant measure for the classical Gauss map.

References


Note: This list reflects references listed in the original paper as accurately as possible with no attempt to correct errors.