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Summary: In January 2013 the National standard of the Russian Federation GOST R 34.11-94 defining the algorithm and computational procedure for hash function was replaced by GOST R 34.11-2012. A family of hash functions Streebog was approved as a new standard. We analyse the family Streebog from the mathematical cryptography viewpoint and prove that it is secure against preimage and collision attacks.

MSC:
94A60 Cryptography
68P25 Data encryption (aspects in computer science)
11T71 Algebraic coding theory; cryptography (number-theoretic aspects)

Keywords:
hash functions; mathematical cryptography; streebog; GOST R 34.11-2012

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