MR1960306 (2004a:11067) 11J70 11K50 34A45

Hardcastle, D. M. (4-HWAT); Khanin, K. [Khanin, Konstantin M.] (4-HWAT)
The $d$-dimensional Gauss transformation: strong convergence and Lyapunov
exponents. (English summary)


A detailed strategy for finding computer-assisted proofs of almost everywhere strong
convergence for the $d$-dimensional Gauss algorithm is presented. Here it is shown how
to reduce the problem to a finite number of calculations. In another paper [Experiment.
Math. 11 (2002), no. 1, 131–141 MR1960307] the first author carries out this procedure
for the 3-dimensional case.

References

MR12511147

2. A. Broise-Alamichel and Y. Guivarc’h. "Exposants caracteristiques de l’algorithmhe
de Jacobi-Perron et de la transformation associe," Annales de l’Institut Fourier 51
(2001), 565–686. MR1838461

Math. Scand., Helsinki (1957), 45–64. MR0111735

4. T. Fujita, S. Ito, M. Keane and M. Ohtsuki. "On almost everywhere exponential
and Dyn. Sys. 16 (1996), 1345–1352. MR1424403

5. D. M. Hardcastle and K. Khanin, "On almost everywhere strong convergence of
multidimensional continued fraction algorithms," Ergod. Th. and Dyn. Sys. 20
(2000), 1711–1733. MR1804954


7. D. M. Hardcastle. "The three-dimensional Gauss algorithm is strongly convergent

8. S. Ito, M. Keane and M. Ohtsuki. "Almost everywhere exponential co+vergence
319–334. MR1235475

9. C. G. J. Jacobi. "Allgemeine theorie der ketten-bruchhnlichen algorithmen, in
69 (1868), 29–64. MR1579408

10. K. Khanin. Talk at the International Workshop on Dynamical Systems, Porto,


12. J. C. Lagarias. "The quality of the Diophantine approximations found by the
MR1230366

13. R. Meester. "A simple proof of the exponential convergence of the modified Jacobi-

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