Komatsu, Takao

On inhomogeneous diophantine approximation and the Nishioka-Shiokawa-Tamura algorithm. (English) Zbl 0930.11049

Acta Arith. 86, No. 4, 305-324 (1998).

Given a real φ and an irrational ϑ such that $q\vartheta - \varphi$ is not integral for any integer q, let $\mathcal{M}(\vartheta, \varphi) = \liminf_{|q|\to\infty}(q\|q\vartheta - \varphi\|)$ be the inhomogeneous approximation constant for the pair ϑ, φ. The author uses an algorithm by *K. Nishioka*, *I. Shiokawa* and *J. Tamura* [J. Number Theory 42, 61-87 (1992; Zbl 0770.11039)] which represents φ in terms of the continued fraction expansion of ϑ to evaluate $\mathcal{M}(\vartheta, \varphi)$ for certain classes of pairs such as $\vartheta = (\sqrt{ab(ab+4)} - ab)/(2a)$ and $\varphi = 1/a$ or $\varphi = 1/\sqrt{ab(ab+4)}$. (For earlier work by the author on the same subject see [J. Number Theory 62, 192-212 (1997; Zbl 0878.11029)]).

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11J20 Inhomogeneous linear forms
11J70 Continued fractions and generalizations

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