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The Jacobi-Perron algorithm and the fundamental system of units of a biquadratic number fields

Communication Info

Authors:

Mostafa EL GARN

Laboratoire Analyse
Mathématique, Algèbre et
Applications
Faculté des Sciences Aïn Chock
Université Hassan II de
Casablanca, Maroc
elgarnmostafa@gmail.com

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Abstract

With the unit given by the Jacobi-Perron algorithm expansion [1] and Ljunggren's method [3], we find a fundamental system of units for a family of biquadratic number fields

$$K = \mathbb{Q} \left(\sqrt{\sqrt{m^2 + 2} - 1} \right)$$

where m is an integer greater than 2 such that $m^2 + 2$ is square-free.

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