Year: 2019 | **Vol.: 94** | **Fasc.: 1-2**

Title: On a family of biquadratic fields that do not admit a unit power integral basis

Author(s): Japhet Odjoumani, Alain Togbé and Volker Ziegler

In this paper, we consider the following family of biquadratic fields:

$$\mathbb{K} = \mathbb{Q}(\sqrt{18n^2 + 17n + 4}, \sqrt{2n^2 + n}),$$

and show that provided that $18n^2 + 17n + 4$ and $2n^2 + n$ are both square-free, $\mathbb{K}$ does not admit a power integral basis consisting of units.

Address:
Japhet Odjoumani
Institut de Mathématiques
et de Sciences Physiques
Université d'Abomey-Calavi
Dangbo
Benin

Address:
Alain Togbé
Department of Mathematics
Statistics and Computer Science
Purdue University Northwest
1401 S, U.S. 421
Westville IN 46391
USA

Address:
Volker Ziegler
University of Salzburg
Hellbrunnerstrasse 34/I
A-5020 Salzburg
Austria