Qeios

Peer Review

Review of: "Arithmetic on Continued Fractions"

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The article centers around constructing algorithms to do arithmetic with (classical) continued fractions, such as addition, multiplication, and solving quadratic equations. It makes use of homographic forms and represents CF coefficients through narrowing intervals. It discusses the topic of convergence and poses optimizations for the algorithms. The overall idea is clear and well-written, the algorithms are explicit, and all computations are illustrated with examples. I would implement the following corrections: on page 2, it should be stated what the coefficients \pi_i represent (it was clear from the context but it is not standard). On pages 2 and 3, there are several equalities where half of the equality is missing and had to be deduced from the text; I found this confusing. Though the ideas are all interesting and seem to be correct, I think the paper lacks a bit of reference and context (there are almost no citations), as well as some formalization (there are no results stated) and proofs.

Declarations

Potential competing interests: No potential competing interests to declare.

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