Christian Berg and Antonio J. Durán
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Abstract

We prove that certain sequences of finite continued fractions associated with a 2-periodic continued fraction with period $a, b > 0$ are moment sequences of discrete signed measures supported in the interval $[-1, 1]$, and we give necessary and sufficient conditions in order that these measures are positive. For $a = b = 1$ this proves that the sequence of ratios F_{n+1}/F_{n+2}, $n \geq 0$, of consecutive Fibonacci numbers is a moment sequence.