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Doubly Interspersed Sequences, Double Interspersions and Fractal Sequences,
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Abstract

It is proved that distinct positive Fibonacci sequences eventually intersperse or else doubly intersperse. Necessary and sufficient conditions for the latter are given. A rectangular array of infinitely many rows is called a double interspersion if every pair of its row sequences doubly intersperse. The union of the odd-numbered columns of a double interspersion yield, as an order array, an interspersion, as does the union of even-numbered columns. A special example of a double interspersion whose rows are Fibonacci sequences is examined; the columns of the associated pair of interspersions all satisfy a certain 3rd-order linear recurrence.