

An elementary approach to Somos-4 sequences

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A sequence Somos-4 is defined by initial data s_0, s_1, s_2, s_3 and fourth-order recurrence

$$s_{n+2}s_{n-2} = \alpha s_{n+1}s_{n-1} + \beta s_n^2.$$

Usually properties of this sequence are studied by means of elliptic functions. The talk will be devoted to the new elementary approach to Somos-4 sequences. Hopefully it will be suitable for higher-rank Somos sequences corresponding to curves of higher genus.