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Lower and upper bounds for positive bases of skein algebras. (English) [Zbl 07381556]

Summary: We show that if a sequence of normalized polynomials gives rise to a positive basis of the skeletal algebra of a surface, then it is sandwiched between the two types of Chebyshev polynomials. For the closed torus, we show that the normalized sequence of Chebyshev polynomials of type one ($\hat{T}_n$) is the only one that gives a positive basis.

MSC:
57K20 2-dimensional topology (including mapping class groups of surfaces, Teichmüller theory, curve complexes, etc.)

Full Text: DOI