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*Applying the Bracket Polynomial to Multi-Crossing Projections.*

The recently defined  $n$ -crossing is a singular point in a projection at which  $n$  strands cross so that each strand bisects the crossing. We generalize to  $n$ -crossing number the classic result of Kauffman, Murasugi, and Thistlethwaite, which relates the span of the bracket polynomial to the double-crossing number of a link,  $\text{span}\langle K \rangle \leq 4c_2$ . In this paper we find the following lower bound on the  $n$ -crossing number in terms of the span of the bracket polynomial for any  $n$ :

$$\text{Span}\langle K \rangle \leq \left( \left\lfloor \frac{n^2}{2} \right\rfloor + 4n - 8 \right) c_n(K).$$

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