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Eleni Panagiotou*, 415 EMCS Building Dept 6956, 615 McCallie Ave, Chattanooga, TN 37403,
and **Louis H. Kauffman**. *The bracket polynomial of a polygonal curve in 3-space.*

We introduce a method to measure entanglement of chains in 3-space that extends the notion of knot and link polynomials to open chains in 3-space. We define the bracket polynomial of curves in 3-space and show that it has real coefficients and is a continuous function of the chain coordinates. This is used to define the Jones polynomial of curves in 3-space in a way that it is applicable to both open and closed chains in 3-space. For open chains, it has real coefficients and it is a continuous function of the chain coordinates and as the endpoints of the chain tend to coincide, the Jones polynomial of the open chain tends to that of the resulting knot. For closed chains, it is a topological invariant, as the classical Jones polynomial. We show how these measures attain a simpler expression for polygonal chains. (Received September 13, 2019)