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**Paul Drube\*** (paul.drube@valpo.edu). *Divisibility of the Jones-Kauffman Polynomial for Virtual Links.*

For any virtual link  $L = S \cup T$  that may be decomposed into a pair of oriented  $n$ -tangles  $S$  and  $T$ , an oriented local move of type  $T \mapsto \phi(T)$  is a replacement of  $T$  by another  $n$ -tangle  $\phi(T)$  in a way that preserves the overall orientation of  $L$ . In this talk, we analyze the Jones-Kauffman polynomials of virtual links  $L_1, L_2$  that differ via a local move of type  $T \mapsto \phi(T)$ . Divisibility conditions on the difference of polynomials  $V(L_1) - V(L_2)$  are derived for broad classes of local moves that include the  $\Delta$ -move and the double- $\Delta$ -move as special cases. One consequence of these divisibility results is a new necessary condition for any pair of classical knots to be  $S$ -equivalent. (Received February 02, 2020)