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Louis H. Kauffman* (kauffman@uic.edu), 5530 South Shore Drive, Apt 7C, Chicago, IL 60637-1946. *A State Summation Invariant for Knotoids*. Preliminary report.

This talk is joint work with Neslihan Gugumcu. We generalize the state summation model for the Alexander-Conway polynomial described in the book "Formal Knot Theory" by L H Kauffman to an analogous state summation for a Potential Function $\text{Nabla}(k)$ for knotoids. The Clock Theorem of Formal Knot theory is generalized to marked states for knotoids and the invariant $\text{Nabla}(k)$ is shown to be both a state summation and to be expressed as a certain matrix permanent. The invariant can often detect mirror images and reversals of orientation of the corresponding knotoids. New possibilities for this invariant will be discussed. (Received August 25, 2021)