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Work Relations from Doi-Peliti Field Theory ANDREW BAISH, BENJAMIN VOLLMAYR-LEE, Bucknell University — We develop a field-theoretic description of non-equilibrium work relations, using Doi-Peliti field theory. We consider classical particles on a lattice, with pair interactions and a local potential, coupled to a thermal bath. Work protocols are imposed by varying the local potential, which drives the system out of equilibrium. In this framework, work relations appear simply as the result of a gauge-like transformation.

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