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Shape Dynamics

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Shape Dynamics is a reformulation of General Relativity where refoliation invariance is traded for local spatial conformal invariance. This is an example of the concept of equivalence of Hamiltonian gauge theories, where two theories are called equivalent if and only if each can be gauged such that in these two particular gauges the two theories admit identical initial value problems and identical equations of motion. The BRST formulation of this duality suggests a novel definition of gravity theories, in particular in the effective field theory framework.