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4 the hamiltonian formalism university of cambridge Apr 05 2020 web recall that in the lagrangian formulation we have the function $L(q, \dot{q}, t)$ where q, \dot{q}, t are generalised coordinates the equations of motion are $\frac{d}{dt} \frac{\partial L}{\partial \dot{q}_i} - \frac{\partial L}{\partial q_i} = 0$ these are n 2nd order differential equations which require $2n$ initial conditions say $q_i(t_0)$ and $\dot{q}_i(t_0)$ the basic idea of hamilton's approach is

the principle of covariance and the hamiltonian formulation of Aug 10 2020 web 10 feb 2021 this target requires necessarily a critical analysis of the conditions of validity of the hamiltonian formulation of GR available in existing literature which is realized by the well known ADM theory in relation to the variational lagrangian formulation of GR as well as the establishment of the problematic limitations of such approach in

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lagrangian vs hamiltonian mechanics the key differences Feb 21 2019 web this is the basis for both the lagrangian and the hamiltonian formulation in both formulations we describe how a system evolves in time by the energies of the system however the way in which this is done in practice will be quite different in the two formulations in lagrangian mechanics the fundamental object is the lagrangian for a

the hamiltonian formulation of optics american association of May 31 2022 web 4 jun 1998 snell's law of refraction is a conservation law of optical momentum in infinitesimal form it leads directly to the hamilton equations for geometrical optics the latter guarantee that the transformation of optical phase space produced by propagation through a medium where the index of refraction is continuously differentiable is canonical

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