

Abstract Submitted
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Treating Boundary Terms in the Hamiltonian Formulation of Gauge Theories JERRY SCHIRMER, RICHARD MATZNER, University of Texas-Austin — In this paper, the behavior of boundary terms in the Hamiltonians derived from gauge theories is investigated. While the typical treatment of these boundary terms is to omit them, declaring that the rules for the variation leaves these variables fixed on the boundary, a few simple examples shows that this is, in fact, an unsatisfactory approach for even simple examples in gauge theory. Using examples derived from Maxwell theory and from General Relativity, we show that it is in fact necessary to modify the original Hamiltonian by adding terms that normalize the values of these boundary terms.

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