

Abstract Submitted  
for the NES08 Meeting of  
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**Using Quaternions for Lagrangians in EM and GEM, a Unified Field Theory** DOUGLAS SWEETSER, none — Quaternions are a mathematical field like the real and complex numbers, that can be added, subtracted, multiplied or divided. I will show how to derive the gauge-invariant Maxwell field equations using quaternions. Using a variation on this approach, the gauge-invariant GEM field equations will be derived.

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none

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