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**Matthew Creek\*** ([mc.creek@assumption.edu](mailto:mc.creek@assumption.edu)), Dept. of Mathematics and Computer Science, Assumption College, 500 Salisbury St, Worcester, MA 01609-1296. *Global Well-Posedness Results for Generalizations of the Nonlinear Sigma Model.*

The classical nonlinear sigma model of Gell-Mann and Levy, which describes interactions between nucleons and pions, has given rise to several generalizations. Among these are the Skyrme and Faddeev models, which are quasilinear generalizations that admit topological solitons. The global well-posedness of the equations of motion associated with these models has been studied intensely in recent years, in both the small- and large-data regimes. In this presentation, I shall discuss a novel technique which has been instrumental in helping to prove several large-data global well-posedness results for the Skyrme and Faddeev models. I shall also discuss current efforts in which I try to understand and apply this technique more broadly in order to unite these several results under the rubric of one more general result. (Received July 24, 2017)