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**Ian Anderson\*** ([ian.anderson@usu.edu](mailto:ian.anderson@usu.edu)), Dept. of Math. and Stat., Utah State University, Logan, UT 84322, and **Mark Fels.** *Bäcklund Transformations via Symmetry Reduction.* Preliminary report.

We shall present some new group theoretic methods for constructing Bäcklund transformations based upon the notion of symmetry reduction for exterior differential systems. We then use the Vessiot group associated to a Darboux integrable system to construct various Bäcklund transformations for such systems. (Received February 05, 2009)