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Recursive Moving Frames

In the standard implementation of the equivariant moving frame method, differential invariants of a Lie pseudo-group action are constructed by first prolonging the action to the infinite submanifold jet space and then normalizing the pseudo-group parameters. Typically, this procedure yields unwieldy expressions that limit the method's practical scope. In the recursive approach the prolonged action is computed incrementally, and pseudo-group parameters are normalized as they appear to control, as much as possible, the expression swell. This is an ongoing project in collaboration with Peter J. Olver.