ROBERT THOMPSON, University of Minnesota
Invariant submanifold flows and pseudogroup reconstruction

In recent work (2008), Peter Olver used invariant variational bicomplex formalism to develop general equations for the evolution of the differential invariant signature of a submanifold under an invariant submanifold flow. We recall these ideas and explain how to use a similar method to split an invariant submanifold flow into the evolution of an invariant signature together with a set of pseudogroup reconstruction parameters which map the evolved signature back to the evolved submanifold. Interesting applications included!