

Generalized Double Bracket Flows

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Abstract

In this talk I will discuss aspects of the geometry and dynamics of generalized double bracket flows — these are gradient flows on the orbits of groups which are of interest for various applications including optimization. In general the flows exhibit multiple equilibria which are related to the structure of the manifold on which they flow. We consider the stability of the equilibria and the relationship of the dynamics to the geometry of the moment map. I will also consider optimality of flows.

Joint work with Arieh Iserles.