

Field Theories: Reduction, constraints and variational integrators

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Abstract:

The recent developments in the geometric formulation of Field Theories concerning reduction of variational principles show an interesting variety of possible applications with the aid of variational integrators. The goal of this talk will be the presentation of the formulation of Euler-Poincaré and Poincaré-Lagrange reduction with special emphasis on the constrained nature of the reduced principle as well as some initial variational integrators associated to them.