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Ivan Contreras*, Department of Mathematics and Statistics, Amherst College, and **Nicolas Martinez Alba**, Department of Mathematics, Universidad Nacional de Colombia. *Poly-Poisson geometry and field theories*.

Poly-Poisson geometry can be traced back to de-Donder and Weyl in 1930's. This approach leads to a poly-symplectic formulation of Lagrangian field theories, with several applications to mechanics. In this talk we address the problem of integration of poly-Poisson manifolds via Lagrangian field theories with boundary, which is a natural extension of the Poisson sigma model. (Received August 14, 2018)