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Standard and Non-Standard Lagrangians NIYOUSHA DAVACHI, University of Texas at Arlington — A concept of non-standard Lagrangians is introduced and general conditions for the existence of such Lagrangians are presented. The conditions are used to determine classes of ordinary differential equations that can be derived from non-standard Lagrangians. The obtained results are used to obtain non-standard Lagrangians for several dynamical systems of physical interest.

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