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Marta Farré Puiggalí* (mfarrepu@umich.edu), 2074 East Hall, 530 Church Street, Ann Arbor, MI 48109. *Applications of the inverse problem to the stabilization of controlled Lagrangian systems.*

The inverse problem of the calculus of variations consists in determining whether or not a given system of second order differential equations is equivalent to some regular Lagrangian system. I will explain how to apply some results of the inverse problem to the stabilization of controlled Lagrangian systems. (Received August 20, 2018)