The inverse problem of the calculus of variations and applications to control theory

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The inverse problem of the calculus of variations consists in determining whether a given system of second order differential equations is equivalent to some regular Lagrangian system. I will explain some results and applications of the inverse problem to stabilization of controlled Lagrangian systems.

References

[1] Farré Puiggalí M., Mestdag, T. The inverse problem of the calculus of variations and the stabilization of controlled Lagrangian systems arXiv:1602.01673