

# Geometric Control on the Engel Group

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## Abstract

Invariant control systems on Lie groups, as well as the associated optimal control problems (or rather, cost-extended systems), are considered. A primary concern is the equivalence problem, both of control systems and cost-extended systems. (Several natural equivalence relations are exhibited.) Illustratory examples—including classification results, as well as the explicit integration of extremal trajectories—are provided for the case of the (four-dimensional) Engel group.

## References

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