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# Automatic control by horizontal movement of helicopter

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*The article deals with the differential geometric approaches to the problem of terminal control of the helicopter during straight horizontal movement from one equilibrium point to another. The paper considers a simple but non-planar dynamic system. Due to the method of symmetries it is possible to reduce the number of boundary conditions of the problem. Thus, the simplified problem is solved by the method of coverings. The control in this case is found in discontinuous time functions. The results of numerical simulations demonstrate the effectiveness of both approaches.*

**Keywords:** *finite symmetries, non-planar dynamic systems, problem of terminal control, method of coverings.*

## REFERENCES

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