

## EFFECTIVE TOPOLOGICAL COMPLEXITY OF SPACES WITH SYMMETRIES

ZBIGNIEW BŁASZCZYK AND MAREK KALUBA

**Abstract:** We introduce a version of Farber’s topological complexity suitable for investigating mechanical systems whose configuration spaces exhibit symmetries. Our invariant has vastly different properties to the previous approaches of Colman–Grant, Dranishnikov, and Lubawski–Marzantowicz. In particular, it is bounded from above by Farber’s topological complexity.

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**Key words:** Equivariant topological complexity, motion planning problem.