

# Vehicle-Terrain Interaction Models for Analysis and Performance Evaluation of Wheeled Rovers

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- A modeling approach aimed towards performance analysis of mobile robots is introduced.
- The approach is based on force – motion duality, and is not dependent on soil parameters.
- The effect of changes of design parameters in soil reaction forces is captured. Trends of change instead of exact values are provided.
- The proposed model is useful for parametric studies, rover design and control strategies.



Verification of the proposed model with results of experiments on a rover prototype