## Workload-adaptive Vertical Hopping of A Singlelegged Robot using Model-based Optimization

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- Explored workload adaptive vertical hopping using a single-legged robot.
- Fast gait generation given system workloads using SLIP based models and advanced Nonlinear Programming tools.
- Experimental verification on physical platform with  $\pm 4\%$  accuracy under up to 190% robot's weight.

