Predict the Physics-Informed Terrain Properties over Deformable Soils using Sensorized Foot for Quadruped Robots

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- We develop a planar sensorized foot with a compliant ankle joint and foot sole for legged robots.
- We formula a unified foot-terrain interaction model that prioritizes motion features to select design considerations.
- We verify the proposed design on granular terrains using single-foot and dynamic quadruped motions.