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Stability benefits of body undulation and compliance for snakes and snake robots traversing large, smooth obstacles

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3. Snake Robot Development and Experiments Snake Robot Design

One-way wheel with suspension







Anisotropic friction test setup

Moving

direction

 $\theta = 90^{\circ}$





Snake robot features:

- 3-D deformation ability
- Anisotropic friction property
- Body compliance

Traversal Results The snake robot uses partitioned gait to traverse a high step





Rigid

g

Weight

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