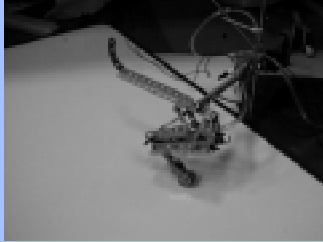


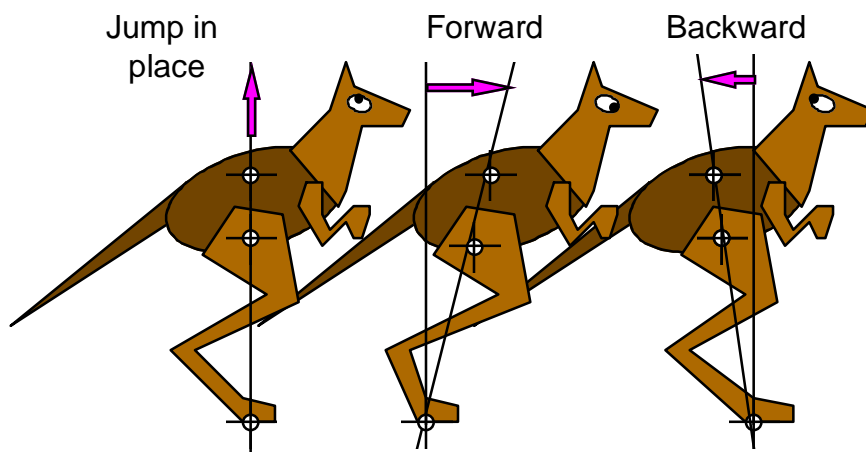
Kangaroo Leg



Umberto Costanzini
Young Cho

A simple way to jump

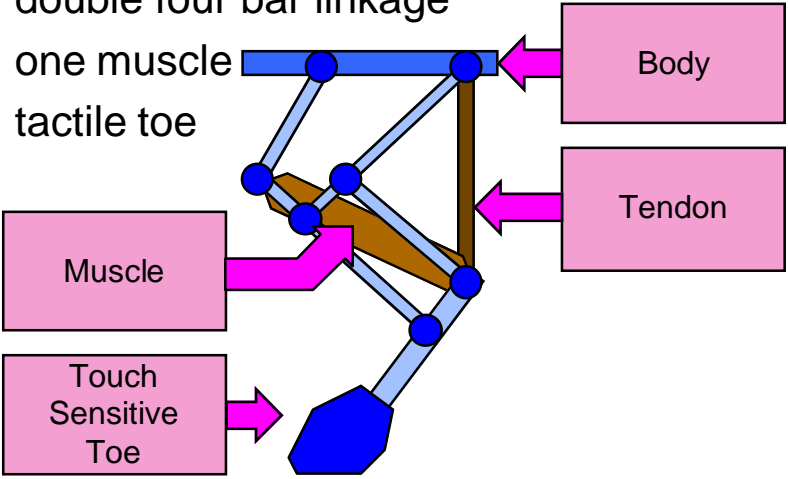
- Center of gravity, hip and toe always on the same line



Mechanical Structure



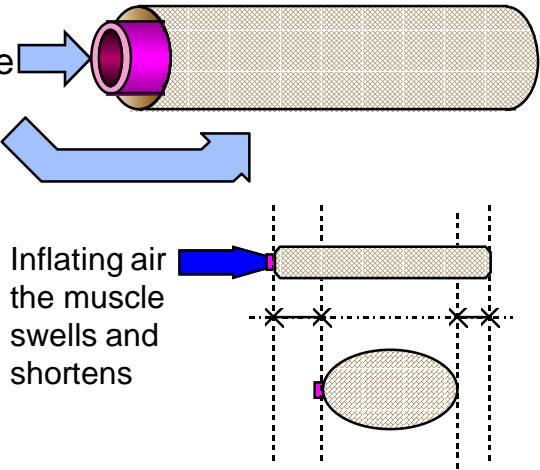
- double four bar linkage
- one muscle
- tactile toe



Muscle



- pneumatic
- rubber tubing core
- nylon fabric wrap



Muscle's Pros & Cons



- ↑ Strong and light
- ↑ High shortening ratio
- ↑ Very cheap (about 5¢ each)
- ↓ Short life (fabric scratches rubber)
- ↓ Delicate
- ↓ Compressed air supply

Control & Subsumption Arch.



- Bump sensor in the toe

