MAE Praxair Seminar

Some Mechanics Perspectives on Robot and Animal Terrestrial Locomotion "Walking Robots"

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Although the common approach to both observing and artificially generating terrestrial locomotion of animals and robots, the approach we consider is to emphasize the mechanics. The over-riding theme is that some aspects of animal motion may be well understood by considering ways to minimize energy use and, similarly, more effective robots may be built if energy use minimization is considered in both the architecture and the actuation. Something to think about before the talk: what muscles do you use to walk at what points in the walking cycle? Why? Additional recent theoretical/simulation results include ideas about how to walk and brachiate (swing from branches) with (in principle) zero energy cost; analogous to the rolling of a rigid wheel.

206 Furnas Hall
Thursday, March 10, 2005
Refreshments - 3:00 pm
Seminar 3:30 pm - 4:30 pm