

## MODELING AND CONTROL OF A COMPLIANT LEG MECHANISM

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Compliant mechanisms are designed with flexible members as opposed to rigid members and provide several advantages over rigid mechanisms. This research considers a compliant linkage for use in a leg mechanism that will allow for adjustment to different walking condition. Different control systems will be applied to the mechanism to allow stabilization of the leg as it walks and will be tested through simulation and experimentation. A design for the compliant mechanism has been constructed and is currently being pilot tested with implementation of several control systems. The control systems will be designed for potential implementation in biped walking robots with compliant leg mechanisms.

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