

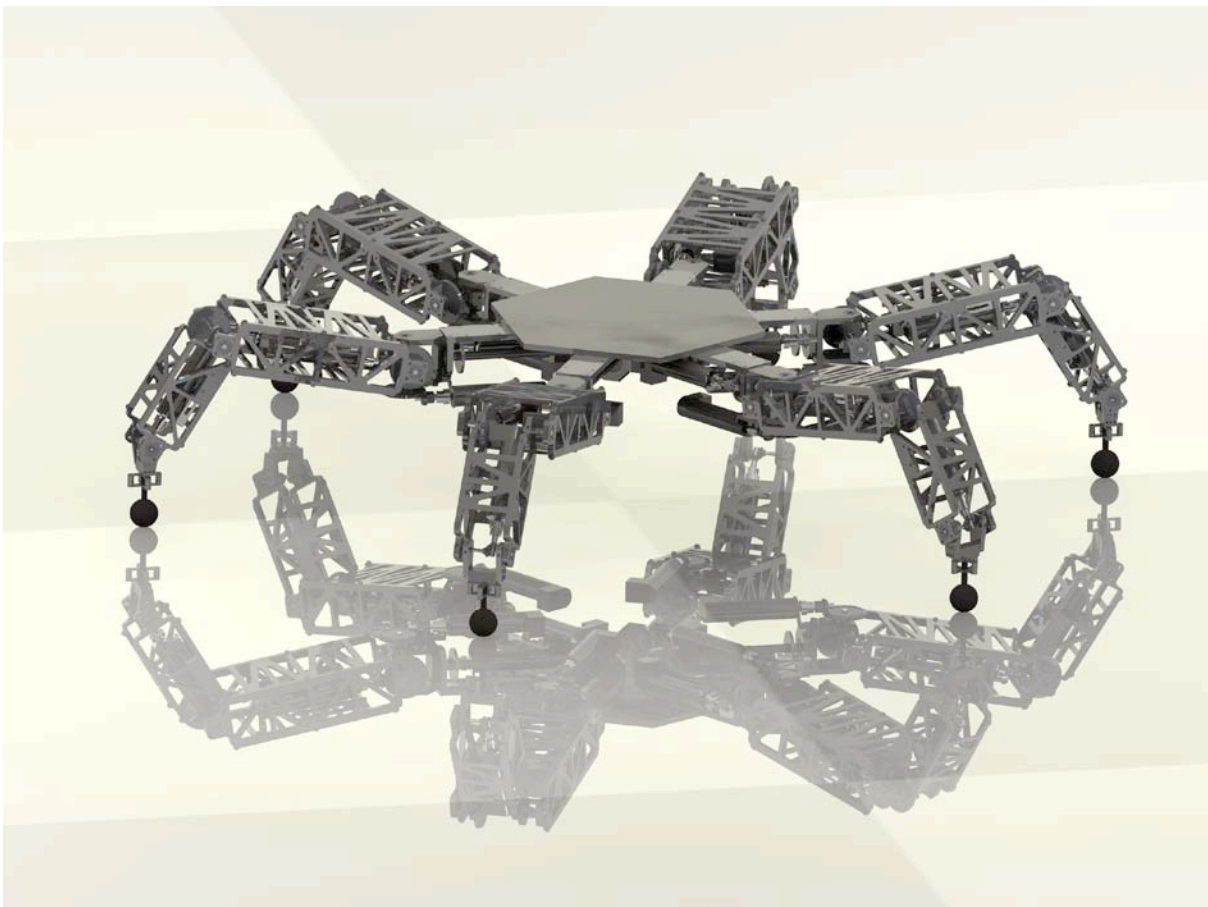
Hexapod Robot: PHASE II

Leg Designs and Performance Evaluation

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Background:

Robots are becoming an integral part of everyday life and are used extensively for research and exploration. This project centers on developing a hexapod robot for the Faculty as a research platform and for engineering recruitment initiatives. It also is a beacon project that will showcase the Faculty's engineering students, their talent and ingenuity.



Phase I Hexapod Robot Conceptual design.

Developing a hexapod walking robot will require a multi-stage approach that will consist of cross-disciplinary engineering teams spanning many Term 8 project initiatives. Phase I of this project has been completed. Phase II will continue this progress with emphasis being placed on advancing the pre-production leg prototype design and building on the successes of the previous work

Hexapod Robot: PHASE II

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Through engineering process design and development the Phase II team will envision, evaluate, finalize, build and test this robot leg unit.

Engineering Team:

This project is targeted towards a team of Electrical and Computer Engineers who would like to be part of the Hexapod Robot Project and apply their skills to realize a state of the art pre-production robotic leg prototype/robot. Their main focus will be designing the electronics of the robot leg and the electronics/software for the whole robot control system. This team will have the skills necessary to design and fabricate a multi degree of freedom robotic leg that is outfitted with appropriate sensors in conjunction with an appropriate micro-controller and software. The final deliverables will include the leg prototype outfitted with sensors; the leg prototype mount test apparatus for evaluating the leg performance, system level control interface electronics and software, and associated documentation.



Phase I Hexapod Robot Pre-Production Leg Conceptual design

This project will also be presented as an opportunity for the next Term 8 Mechanical Design project so that some minor design changes in the leg prototype can be implemented. If time permits, the complete robot assembly will be fabricated and tested.