

Animatronic Stick Figurines

This project requires the design and prototyping of an animatronic stick figure. The project will involve working with both hardware and software. The software will allow a user to define animations for the figurine, and this will then be transferred to the figurine controller. Two modes for pre-processing will be considered - the first will not consider physical constraints and will transfer the motions exactly as defined. The underlying assumption here is that the figure is suspended and fully supported to execute the motions defined. The second mode will include accounting for physical constraints including balance and speed. Preprocessing will redefine the motions created by the user to feasible actions executed by the figure.

The project will need one electrical engineer and a computer engineer. Facilities including 3D printing and a variety of microcontrollers, a workspace and access to a machine shop. The final product will be a prototype software and hardware platform.

For more information, contact:

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