
Cross-Country Ski Prosthesis

Curling through breathing

Jon Bertolaso

The action incorporated in cross-country skiing is a complex motion which requires both rotation and dorsiflexion at the ankle. The aim of this project was to create a prosthesis for above-knee amputees which would enable the user to compete in the cross-country or biathlon events. The design focuses on the movement of the ankle joint required to produce the sliding/skiing action. The final prototype system uses torsional springs to provide a mechanical resistance to the motion and provide a return mechanism.

