

April 24, 2008

Sampling-based Footstep Planning for Humanoid Robots

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ABSTRACT OF THE TALK

To realize the humanoid locomotion in the environment of the human beings is an important goal of humanoid robotics research. Footstep planning is a sampling-based path planning method for humanoids considering global environment information, which is an effective method to resolve the locomotion planning in complex unstructured environment.

The talk focuses on (1) a deterministic footstep planning method based on compound footstep transition model and (2) a multi-node-extending RRT (Multi-RRT) footstep planning method based on non-uniform randomized sampling.