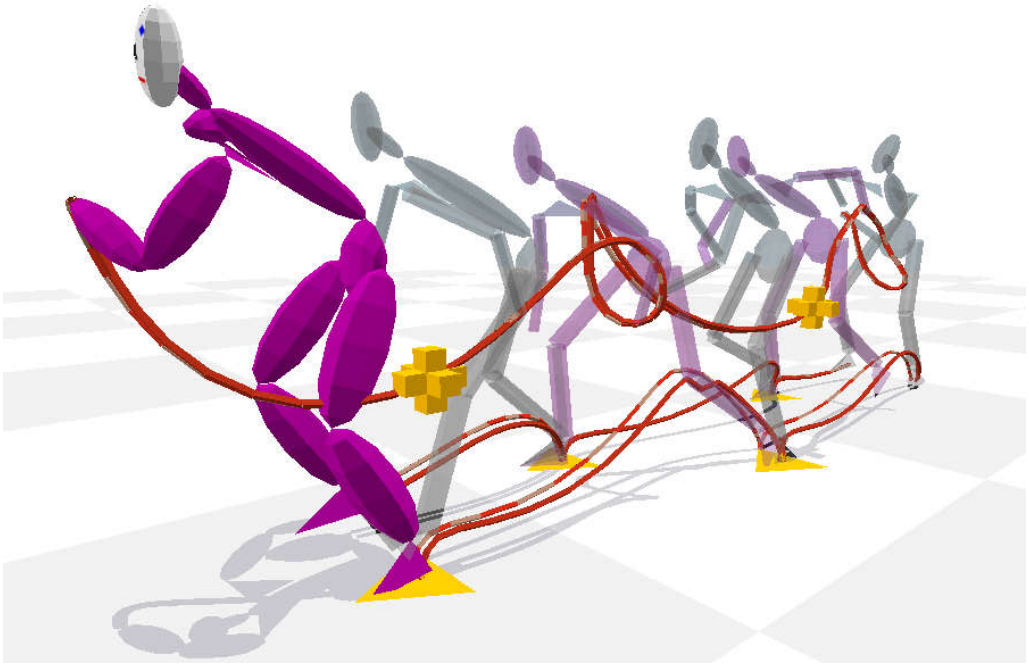
Caltech
Department of
Computer
Science

Computer Graphics Seminar Series

Wednesday,
February 25th, 4pm
Jorgensen 74



Editing and Retargetting Animated Motion with Spacetime Constraints

Michael Gleicher, PhD
Autodesk Vision Technology Center

Most motion for computer animation is single purpose: it applies to a particular character performing a particular action.

In this talk, I will describe work on making motion more reusable by providing tools that adapt previously created motions to new situations. The approach views the task of finding an adapted motion as a constrained optimization problem: compute the motion that best preserves the desirable properties of the original, subject to meeting the demands of the new situation. The approach is a variation of Spacetime Constraints as it requires a solver to consider the entire motion simultaneously. By careful choice in how we pose the problem, by judicious use of simplifications and approximations, and by careful implementation, the approach can be made practical. I will show how the approach can be used to provide direct-manipulation editing of animated motion and to retarget motions to new characters.

Hosted by: Multi-Res Modeling Group