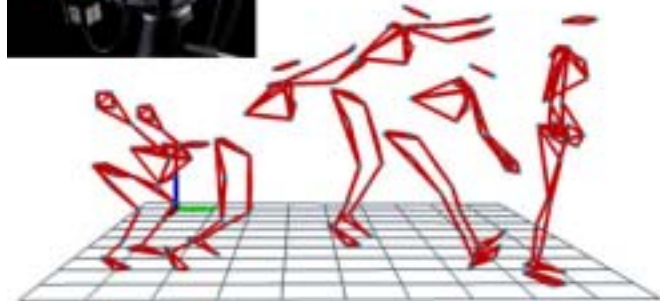# Project Overview

Simple and Low-Dimensional Motion Models

- – Analysis
- – Synthesis
- – Optimization

Applications

- – Computer Animation
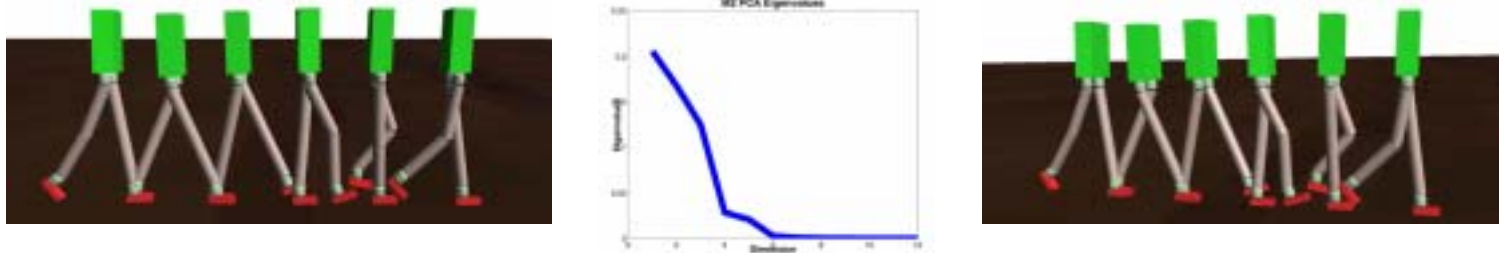- – Robot Control
- – Medicine

Progress Through December 2001
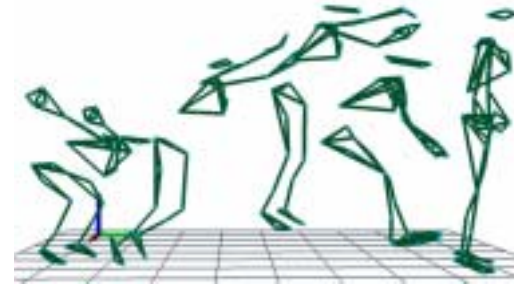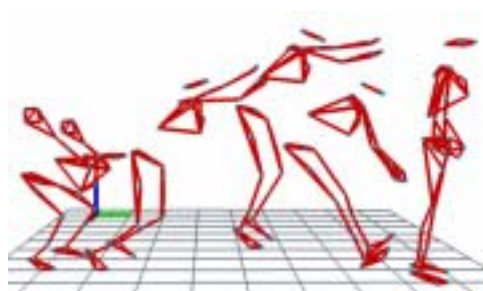
Installed Motion Capture

Statistical Analysis

– Physical Simulation of the M2 walk

– Captured Data of a Human Broad Jump

Original   **Reduced**

Research Plan for the Next Six Months

Build a motion database for human activities

- walking, running, skipping, ...

Statistical analysis with a priori constraints

- rigidity, interpenetration...

Develop dynamics on the reduced space

- model reduction, Galerkin projection...

Application Tools

- motion synthesis, robot control, retargeting