SELECTED READINGS IN 3-D ANIMATION

Rémi Ronfard, Computer Graphics, M2R MOSIG, 2016
1. Flocks, Herds, and Schools: A Distributed Behavioral Model (1987)
2. Space-time constraints (1988)

Andrew Witkin, Michael Kass

Alex Pentland and John Williams
4. Evolving Virtual Creatures (1994)

Karl Sims

Ken Perlin / Athomas Goldberg

David Baraff Andrew Witkin
7. Representing Animations by Principal Components (2000)

Marc Alexa and Wolfgang Müller
8. Motion graphs (2002)

Motion Graphs

Lucas Kovar
University of Wisconsin-Madison

Michael Gleicher
University of Wisconsin-Madison

Frédéric Pighin
University of Southern California
Institute for Creative Technologies

Mira Dontcheva, Gary Yngve, and Zoran Popović.

Keith Grochow    Steven L. Martin    Aaron Hertzmann    Zoran Popovic
12. As-Rigid-As-Possible Shape Manipulation (2005)

Takeo Igarashi, Tomer Moscovich, John F. Hughes

Character Animation from 2D Pictures and 3D Motion Data

ALEXANDER HORNUNG, ELLEN DEKKERS, and LEIF KOBBELT
RWTH-Aachen University

Sergey Levine Philipp Krahenbuhl Sebastian Thrun Vladlen Koltun
16. Intuitive Interactive Human Character Posing with Millions of Example Poses (2011)

Wei and Chai
Figure 1: Catching a thrown ball. The movement depends on visual estimates of the ball’s motion, which trigger shared motor programs for eye, head, arm, and torso movement. The gaze sets the goal for the hand. Initially the movements are reactive, but as visual estimates improve predictive movements are generated to the final catching position.

Martin Guay, Remi Ronfard, Michael Gleicher, Marie-Paule Cani
Figure 1: Our motion grammar reconstructs a structurally-valid 3D animated scene from a sketch of the basketball tactics board.
20. SketchiMo: Sketch-based Motion Editing for Articulated Characters (2016)

Figure 1: Left: SketchiMo offers different visualizations that accentuate different aspects of a motion: a joint path in world space (top left), the relationship between a joint and its parent (top middle), between two coordinated body parts (top right), or the temporal character of the movement (bottom). All the highlighted lines are editable via sketch input. Right: An edited dunk motion performed with SketchiMo compared with the original motion. (Malcolm character courtesy of AnimSchool.com)