

Artificial Animals and Humans: From Physics to Intelligence

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Abstract

The confluence of virtual reality and artificial life, an emerging discipline that spans the computational and biological sciences, has yielded synthetic worlds inhabited by realistic, artificial flora and fauna. Artificial animals are complex synthetic organisms that possess functional biomechanical bodies, sensors, and brains with locomotion, perception, behavior, learning, and cognition centers. Artificial humans and other animals are of interest in computer graphics because they are self-animating characters that dramatically advance the state of the art of production animation and interactive game technologies. More broadly, these biomimetic autonomous agents in their realistic virtual worlds also foster deeper, computationally oriented insights into natural living systems.
