Uncertainty in Centre of Mass and Transformation Frames Applied to Physically-Based Character Animation Systems

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Abstract

We present a

1 Related Work

1.1 Physically-Based Animation Systems

Traditional character animation systems used in film & games rely artist-driven keyframing techniques. While proven to be effective, keyframing is known to be time-consuming and highly dependent on the skill of the artist.

1.2 Human Sensory Awareness

Significant study has been done in the field of neuroscience on the brain's representation of the human body. This topic has been coined various names self-attribution [1], the brain-body model [], and ... . However, there has not been a call to quantify this work into representations that can recreate convincing human motor error; integration into physically-based character animation systems may be a unique use-case in this instance.

Locomotion in the field or robotics

References

[1] Stelian Coros, Philippe Beaudoin, and Michiel van de Panne. Generalized biped walking control. *ACM Transctions on Graphics*, 29(4):Article 130, 2010.