

Animating Dancing Couples

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Context: The IMAGINE team at Inria, has already made significant progress on sketching character animation where a user can simply sketch a desired path for an object and the system automatically animates the character along the path [1,2,3] in contrast to the current standard, in which artists animate painstakingly by hand per frame.

Objectives : The goal of the internship will be to expand upon IMAGINE's tools by designing and constructing the capability to animate interactions between characters. The candidate will be in charge of first observing and analyzing the industry's current methods of creating character animations with interactions. By researching the newest animation methods and digital techniques, she will be able to identify what she thinks those tools lack for animating interactions between characters. Based on her findings, she will implement the necessary tools for being able to describe and reproduce the coordinated movements of two dancers during a dance step [4,5,6]. Dance will be used as an introductory example for the design and evaluation of the proposed techniques, but we expect the methods to be applicable more generally. Indeed, the internship is expected to lead to a PHD on generic sketch-based animation of character interactions.

References :

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- [6] Sommer Elizabeth Gentry. Dancing cheek to cheek: Haptic communication between partner dancers and swing as a finite state machine. PhD Thesis, MIT, 2006.