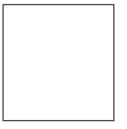
Hyper-twist

Jian Chang; Xiaosong Yang; Jian J. Zhang



The National Centre for Computer Animation Bournemouth Media School

Bournemouth University
Talbot Campus,
Poole, Dorset BH12 5BB
United Kingdom

2009

|Technical Report TR-NCCA-2009-XX

|ISBN: 1-85899-123-4 |Title: Hyper-twist

|Authors: Jian Chang; Xiaosong Yang; Jian J. Zhang

| Key words and Phrases: digital arts; deformation; computer graphics

Abstract:

In this paper, we introduce 'hyper-twist', a distortion technique for the production of abstract artistic forms (see Figure 1). It is developed via exploiting the theoretical feature of deforming an infinite space filled with a hyper-elastic media. Any object placed within this space can change its shape as a result of the distortion of the space. Based on this developed theoretic insight, we have produced a computer program where point sources are used to control the form and extent of distortion. These sources perform a similar function to forces exerting on a soft body. By qualifying them with a distortion tensor, they define the patterns of the resultant distortions. Linking this representation with time, temporal effects can be produced. Our work, incorporating physics into a digital creation, presents a new form of algorithmic art.

Report date: Mar, 2009

|Web site to download from: http://eprints.bournemouth.ac.uk/

|The authors' e-mail addresses: {jchang;xyang;jzhang}@bournemouth.ac.uk

|Supplementary Notes:

 $\mid \texttt{To}$ cite this Article Chang, Jian, Yang, Xiaosong and Zhang, Jian

J.(2009)'Hyper-twist',Digital Creativity,20:1,47 - 58

|To link to this Article: DOI: 10.1080/14626260902867956

|URL: http://dx.doi.org/10.1080/14626260902867956

The National Centre for Computer Animation Bournemouth Media School

Bournemouth University
Talbot Campus,
Poole, Dorset BH12 5BB
United Kingdom