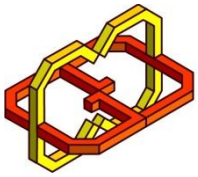

Technion-Israel Institute of Technology

Computer Science Department

Center for Graphics and Geometric Computing

CGGC Seminar

Edward Chien

Department of Mathematics - Hill Center, Rutgers University

Bounded Distortion Harmonic Shape Interpolation

Planar shape interpolation is a classic problem in computer graphics. We present a novel shape interpolation method that blends C∞ planar harmonic mappings represented in closed-form. The intermediate mappings in the blending are guaranteed to be locally injective C∞ harmonic mappings, with conformal and isometric distortion bounded by that of the input mappings. The key to the success of our method is the fact that the blended differentials of our interpolated mapping have a simple closed-form expression, so they can be evaluated with unprecedented efficiency and accuracy. Moreover, in contrast to previous approaches, these differentials are integrable, and result in an actual mapping without further modification. Our algorithm is embarrassingly parallel and is orders of magnitude faster than state-of-the-art methods due to its simplicity, yet it still produces mappings that are superior to those of existing techniques due to its guaranteed bounds on geometric distortion.

The lecture will be held on Tuesday, 07.06.2016, at 14:30, Taub 337

הזמנה זו מהווה אישור כניסה עם רכב לטכניון