



Technion-Israel Institute of Technology

Computer Science Department

Center for Graphics and Geometric Computing

CGGC Seminar - Ph.D. Direct Track Seminar

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Regularized Harmonic Map Flow: a Tool for Improvement of Maps between Shapes

The problem of computing shape correspondence is a fundamental task in Computer Graphics. While recent methods produce semantically meaningful maps globally, the maps are distorted locally. The harmonic map heat flow is a tool for local minimization of the Dirichlet energy, that measures the smoothness of a map. While the discrete harmonic map flow has been used, for example, to conformally map shapes to a sphere, when the target shape is arbitrary applying this flow can have a negative effect globally.

We suggest a regularization of this flow, using geodesic directions and additional extrinsic normals information, that produces smoother maps that remain globally meaningful. This tool can be extremely beneficial for texture transfer and reducing distortion of ground-truth correspondence.

The lecture will be held on Sunday, 08.05.2016, at 13:30, Taub 337

הזמנה זו מהווה אישור כניסה עם רכב לטכניון