Computational Mathematics Seminar Series

Partial Geometric Mapping for Data Reassembly and Reconstruction

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Associate Professor

Digital Media Center 1034
April 21, 2015 - 03:30 pm

Abstract:

To compute geometric mapping is to establish a bijective correspondence between two 3D objects/regions or images. Effective mapping computation could facilitate pattern discovery, similarity detection, and deformation tracking/prediction in geometric data analysis. I will discuss the partial geometric mapping problem between two objects and among multiple objects, which has many practical applications in data reassembly and reconstruction. A few algorithms recently developed in our group will be explained and their applications in computational forensics and medical imaging will be demonstrated.

Speaker's Bio:

Xin Li is the Oskar R. Menton associate professor at LSU, jointly in the School of Electrical Engineering and Computer Science (EECS) and the Center for Computation and Technology (CCT). He is also an adjunct faculty member at Pennington Biomedical Research Center. He got his Ph.D. in computer science from State University of New York at Stony Brook in 2008. He leads the LSU Geometric and Visual Computing (GVC) group. His research interests are on computer graphics and visualization, computer vision, spatiotemporal geometric data modeling and processing, and image processing. He also actively collaborates with domain scientists to develop efficient geometric and visual computing techniques for various scientific tasks in computer-aided design/manufacturing, robotics, computational forensics, biomedical imaging, coastal modeling and simulation, etc.

This lecture has a reception @ 03:00 pm

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