



Technion-Israel Institute of Technology
Computer Science Department
Center for Graphics and Geometric Computing



CGGC Seminar – M.Sc. Talk

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Robust Shape Collection Matching and Correspondence from Shape Differences

We propose a method to automatically match two shape collections with a similar shape space structure, e.g. two characters in similar poses, and compute the inter-maps between the collections. Given the intra-maps in each collection, we extract the corresponding shape difference operators, and use them to construct an embedding of the shape space of each collection. We then align the two shape spaces, and use the knowledge gained from the alignment to compute the inter-maps.

Unlike existing approaches for collection alignment, our method is applicable to small and large collections alike, and requires no parameter tuning. Furthermore, unlike most approaches for non-isometric correspondence, our method uses solely the variation within the collection to extract the inter-maps, and therefore does not require landmarks, descriptors or any additional input. We demonstrate that we achieve high matching accuracy rates, and compute high quality maps on non-isometric shapes, which compare favorably with automatic state-of-the-art methods for non-isometric shape correspondence.

The lecture will be held on Monday, 20.01.2020, at 16:00, Taub 401

הזמנה זו מהווה אישור כניסה עם רכב לטכניון