

descriptor of moments invariants 3D [20]. For each one of the chosen shape categories, we have calculated the average Recall-Precision graph by using all shapes of the test database by a query object Fig. 12.

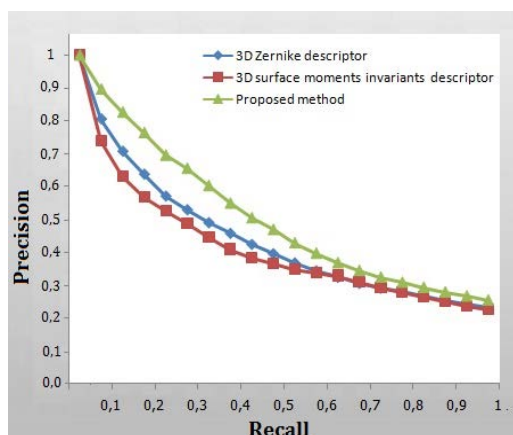


Fig. 12. Precision-Recall graph for all three descriptors

We can see that the proposed shape descriptors perform better than the 3D Zernike descriptor and surface moments invariants descriptor.

6 Conclusion

In this paper, we have presented a method based on the 2D *view-based* approach using 2D images for indexing the 3D models. We use a set of binary images called CLC extracted from the 3D model. These images are indexed with the 2D images descriptor. The similarity between models is calculated by using the Hausdorff. The obtained results show that the proposed descriptor is robust and the comparison with the two well known methods as mentioned above explain good performance. Despite this, some areas in the 3D object pose again the problems during of the extraction which also requires an improvement. The Search on 3D objects by the content of image extracted can be contour based or region based as well as, we can reconstruct the original 3D object from the set of these images extracted.

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