n-Dimensional Distribution Reduction Preserving its Structure

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Abstract:

The work proposed in this paper deals with n-dimensional distribution reduction. Instead of working with only local maxima we argue that it is also important to conserve how this maxima could be joined to better understand them. The main idea is to maintain the topological structure of the distribution in order to facilitate interpretation of the data. To achieve this reduction we work with the creaseness definition and ridge extraction, as a structure descriptor of a n-dimensional surface. In this way we have obtained promising results, that could be applied into a wide range of problems.