

## Functional depth based on distances: what for?

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Functional depths intend to order a set of curves. Although being quite novel, functional depths are being formulated with increasing popularity. They have appeared as an extension to the continuum of multidimensional depths and so, the aim has been to satisfy the established properties of multidimensional depth, which do not take into account the special nature of functional data. This talk proposes a functional depth based on distances that satisfies the adequate properties desirable for functional depths. The usefulness of the proposed depth will be illustrated through its performance under biomechanical and microarray data. Additionally, it is shown that the depth can be applied to multivariate datasets, i.e. datasets where each element is a vector of curves.

Key words: Data depth, functional data, biomechanic, microarray