Multivariate fakes nodes approach

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The concept of mapped bases has been widely studied, but all the proposed methods show convergence provided that the function is resampled at the mapped nodes. In applications, this is often physically unfeasible. We discuss the extention of the so-called *mapped bases without resampling* interpolation, also known as *Fake Nodes Approach* (FNA) [1, 2], to *any* basis and dimension. The univariate case has been discussed in [1] and some of its applications have been collected in the recent paper [2].

It is a common practice in multimodal medical imaging to undersample the anatomically-derived segmentation images to measure the mean activity of a co-acquired functional image. The applicarion to medical image resampling is then presented, showing that the FNA is an effective way to reduce the Gibbs effect when oversampling the functional image [4].

References

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