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Title: An extension of Chebfun to spheres and disks

Abstract:
Numerical computing on the surface of spheres and on disks arises in numerous applications. We discuss an extension of Chebfun to computing on these domains that builds upon the low-rank approximation technology of chebfun2 and new "trig" capabilities for handling periodic functions. The new software provides a simple framework for investigations of scalar- and vector-valued functions on spheres and disks.