

# Discretization methods for manifold-valued function spaces

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Various interesting partial differential equations involve functions that map into a non-Euclidean manifold. The numerical treatment of such equations is challenging, because the underlying functions spaces are not linear. This prevents the use of many standard tools from numerical and functional analysis. At the same time, it has lead to the development of new discretization methods that do not rely on vector space structures. We present an overview over some of these methods, and show recent theoretical and numerical results.