

学术报告

Unified meshfree pseudospectral methods for solving both classical and fractional PDEs

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Abstract: In this talk, I will introduce the recently developed meshfree methods based on the radial basis function to solve both classical and fractional PDEs. The proposed methods take advantage of the analytical Laplacian of the radial basis functions so as to accommodate the discretization of the classical and fractional Laplacian in a single framework and avoid the large computational cost for numerical evaluation of the fractional derivatives. These important merits distinguish them from other numerical methods for fractional PDEs. Moreover, our methods are simple and easy to handle complex geometry and local refinement, and their computer program implementation remains the same for any dimension d . The generalization of our method to solve other fractional problems will also be discussed.

欢迎大家参加!