

RBF-based single-point method for solving Poisson's equation in domains with complex geometry

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Abstract: This topic focuses on developing and applying a single-point method based on Radial Basis Function (RBF) neural networks to solve the Poisson equation problem in complex geometric regions, meeting the demand for fast and accurate computation in practice. The objective is to build an efficient RBF model to optimize the problem-solving process, while comparing its performance with traditional methods. The expected results from this topic will provide a useful tool for applications in the field of simulation and technical analysis.

Keywords: RBF method, Poisson equation, Complex geometry, Engineering modeling, Simulation applications