

Research on some center selection algorithms for the meshless method solving the Poisson equation

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Abstract: This topic focuses on researching and applying center selection algorithms in meshless methods to solve the Poisson equation. The context of the topic stems from the need to improve the performance of solving the aforementioned problem by selecting appropriate positions of data points to optimize the computational process. The objective is to build and deploy a system based on these algorithms to enhance accuracy and speed in solving the Poisson equation. The research methodology includes reviewing relevant theory, conducting comparative experiments with other methods, and evaluating effectiveness through specific metrics. The significance of the topic lies in its contribution to the field of scientific and technical research, particularly in optimizing the solution of meshless problems.

Keywords: Center selection algorithm, Meshless method, Poisson equation