

Research Trends on Automatic Tuning Methods for Matrix Computations

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Cost of developing well-tuned matrix computation programs for high performance computers is increasing enormously because of complexity in the computer architectures. To alleviate the cost, the AT, automatic tuning methods, for matrix computations have been researched since 1990s. The aim of this presentation is to review the automatic tuning methods. Two views of matrix software hierarchy and of software development cycle are used in order to classify the methods and to exploit the ongoing research trends. With the views, it is found that the AT research will approach the areas of higher matrix software semantics and that more data of evaluations will be necessary for software development cycle.