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Can Information Retrieval aid Iterative Methods?

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Recently, Computational Linear Algebra techniques have started playing an important role in Information Retrieval (IR) research. Indeed, the Vector Space Model and its derivatives, such as Latent Semantic Indexing, are heavily used and investigated. In this presentation we consider the problem in "reverse mode", namely using IR techniques to help in linear algebra and iterative methods in particular. The candidate problem is the solution of large linear systems with multiple right hand sides. The efficiency of solvers is known to depend on the amount of information shared amongst the right hand sides. We specifically investigate the combination of clustering algorithms and schemes from the existing literature to solve such problems.

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