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Abstract—To solve linear systems is ubiquitous since it is one of the basic and significant tasks in scientific computing. When solving a linear system by the use of floating-point arithmetic, rounding errors are included in the computed solution. In order to verify the quality of the computed solution, there are so-called verified numerical computations. In this talk we discuss several methods of calculating error bounds of computed solutions of large sparse linear systems whose coefficient matrices have special structures such as M-matrix, H-matrix, positive definite and so forth. Numerical results are also presented.

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