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Recent Results on Symmetric Interval Systems

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***Abstract*— We consider the solution set S of real linear systems $Ax = b$ with the $n \times n$ coefficient matrix A varying between a lower bound $\underline{A}$ and an upper bound $\overline{A}$, and with b similarly varying between $\underline{b}$ and $\overline{b}$.**

- **First, we list some properties on the shape of S if all matrices A are non-singular.**
- **Then, we restrict A to be nonsingular and symmetric, and for $n = 2$, derive a complete description of the boundary of the corresponding symmetric solution set S_{sym}.**
- **Finally, we derive a new criterion for the feasibility of the Cholesky method with which one can find bounds for S_{sym}.**

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