Matrix Stories

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Abstract

The study of particular matrices has often opened up fruitful research directions in numerical linear algebra and matrix analysis. I will give a variety of examples of such matrices, describing their properties, their applications, and stories behind them. I will also describe the Anymatrix project, which makes these and many other matrices available and easily searchable by properties in MATLAB.

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References

 N. J. Higham and M. Mikaitis. Anymatrix: An extensible MATLAB matrix collection. *Numer. Algorithms*, 90(3):1175–1196, 2021.