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Title: Computing the diameter and width of the numerical range
Abstract: The diameter(resp. width) of the numerical range of a matrix is defined to be the largest(resp. smallest) distance of two parallel lines tangent to its boundary. The boundary curve of a numerical range is called a curve of constant width if its diameter and width are equal. In this talk, we provide an algorithm for computing the diameter and width of the numerical range, formulate the diameter of the numerical range of some unitary bordering matrices, and determine the condition for the boundary of the numerical range of certain Toeplitz matrices to be a curve of constant width.

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