A pseudospectrum of a square matrix $A$ is defined as the set of eigenvalues of all matrices of the form $A+E$, where the norm of the perturbation $E$ is bounded by some constant and $E$ is an element of a given matrix set. Pseudospectra are a well established tool in Systems Theory and Numerical Analysis. After a short introduction to the general theory we discuss pseudospectra for real and Hamiltonian perturbations as well as for coupled linear systems. Another topic will be the relationship between pseudospectra and structured eigenvalue condition numbers. Pseudospectra are a tool for investigating the sensitivity of the eigenvalues of a matrix to perturbations which is used in mechanics, fluid dynamics, Markov chains, and control theory.

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