Stability radii and pseudospectra of (structured) dynamical systems  
  
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An important concept in the analysis of dynamical systems is to study  
whether the mathematical model is close to an unstable system, i.e.  
whether small perturbations can make the system unstable. There are  
numerous approaches to solve this important problem using eigenvalue  
perturbation theory, pseudospectra or other stability regions including  
Lyapunov, Bohl or Sacker-Sell spectra. We will review these concepts and  
their properties and then move to the important question whether these  
resulst stay the same under structured perturbations. In particular, we  
will discuss the stability and robust stability of Hamiltonian systems  
and more general, dissipative and descriptor systems. This leads to the  
analysis of structured pseudospectra and stability radii.