The Radius of Good Behavior

A. L. Dontchev[1]

Abstract: There is a basic paradigm, the so-called "radius of good behavior," which can be extended to a vast variety of problems and which links in one general picture the developments in measuring the effect of perturbations and approximations of a problem on its solutions as well as with estimation of convergence rate of algorithms. In numerical linear algebra this paradigm is connected with the concept of conditioning but it covers much larger territory. The "good behavior" of a problem is usually understood as a regularity property which describes desirable features of the solutions. This talk is centered around estimations of the radius of metric regularity in its various forms, which play mayor roles in developments in variational analysis and optimization.

---

[1] Mathematical Reviews, AMS
and The University of Michigan
416 Fourth Street, Ann Arbor, MI, USA
dontchev@umich.edu