ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

17. Control Theory and Optimization

1991 MS Classification: 65 K 10, 65 J 15
Kummer, Bernd, Humboldt-Universität zu Berlin, Germany
Metric Regularity in Optimization: Trivial and Nontrivial Situations

Metric regularity (MR) is a lower semicontinuity property of inverse (multi-)functions, important e. g. for constraint maps and optimality conditions in optimization. Depending on properties of the inverse, certain types of MR-maps will be introduced. We show that the known sufficient conditions of MR-based on $C1$ -properties or monotonicity identify only trivial types. On the other hand, topological properties and basic examples of nontrivial types shall be presented. Reference: Kummer, B. Lipschitzian and Pseudo-Lipschitzian Inverse Funtions and Applications to Nonlinear Optimization. Lecture notes in pure and applied mathematics 195 (1997) (Math. Programming with Data Perturbations, ed. A. V. Fiacco), 201-222.