

A new book in the Springer Universitext series:

Winfried Schirotzek, *Nonsmooth Analysis*, Springer, Berlin-Heidelberg-New York, 2007; ISBN-10: 3-540-71332-8, ISBN-13: 978-3-540-71332-6.

The book treats various concepts of generalized derivatives and subdifferentials in normed spaces, their geometric counterparts (tangent and normal cones) and their application to optimization problems. It starts with the subdifferential of convex analysis, passes to corresponding concepts for locally Lipschitz continuous functions and finally presents subdifferentials for general lower semicontinuous functions. All basic tools are presented where they are needed; this concerns separation theorems, variational and extremal principles as well as relevant parts of multifunction theory. The presentation is rigorous, with detailed proofs. Each chapter ends with bibliographic notes and exercises.