Wintersemester 2022/23

Dresdner Mathematisches Seminar

Prof. Dr. Andrea Walther

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On optimality conditions for nonsmooth functions

Numerous optimization tasks exhibit a nonsmooth behavior. In contrast to the classical smooth case, where optimality conditions are well studied and understood, criteria to determine whether a given point is optimal or even just stationary are still the subject of ongoing research for nonsmooth functions to be minimized. In this presentation, first we present already established optimality conditions based on generalized derivative concepts for unconstrained nonsmooth problems. Subsequently, we discuss new optimality conditions for a large class of piecewise smooth functions using so-called kink qualifications. Here, also the computational complexity to verify the new criteria is covered. Finally, we show the connections of the kink qualifications to the constraint qualifications for MPECs.

Freitag, 20.01.2023, 13:00 Uhr – Willers-Bau, Raum C 129

Leitung: Prof. Dr. Oliver Sander

Nach dem Vortrag findet **ab ca. 14:00 Uhr** ein gemeinsames **Kaffee-/Teetrinken** vor Hörsaal **WIL C 307 (!)** statt.

Bereich Mathematik und Naturwissenschaften
Fakultät Mathematik