

# CLOSEDNESS TYPE REGULARITY CONDITIONS IN CONVEX OPTIMIZATION AND BEYOND

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ABSTRACT. The closedness type regularity conditions have proven during the last decade to be viable alternatives to their more restrictive interiority type counterparts, in both convex optimization and different areas where it was successfully applied, for instance the theory of monotone operators. In this talk we will de- and reconstruct some general closedness type regularity conditions by means of epigraphs and subdifferentials, respectively, in order to stress that they arise naturally when dealing with optimization problems. We will specialize the results for constrained and unconstrained convex optimization problems and hint towards other classes of optimization problems where closedness type regularity conditions were successfully employed.