

Department of Mathematical Sciences Charles V. Schaefer Jr. School of Engineering & Sciences

Shu Lu

Department of Statistics and Operations Research University of North Carolina at Chapel Hill

Implications of the constant rank constraint qualification

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Abstract:

We consider a parametric set defined by finitely many equality and inequality constraints under the constant rank constraint qualification (CRCQ). The CRCQ generalizes both the linear independence constraint qualification (LICQ) and the polyhedral case, and is also related to the Mangasarian-Fromovitz constraint qualification (MFCQ) in a certain way. It induces some nice properties of the set when the parameter is fixed, and some nice behavior of the set-valued map when the parameter varies. Such properties are useful in analysis of Euclidean projectors onto the set and variational conditions defined over the set.

Dr. Shu Lu received a B.S. and M.S. from Tsinghua University, Beijing, and an MS and Ph.D. from the University of Wisconsin-Madison. She is an assistant professor at the University of North Carolina. Her research interests are in the area of mathematical programming, especially variational inequalities and variational analysis.