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Symbol	Description
$\mathbb{N}$	Set of natural numbers
$\mathbb{R}$	Set of real numbers
$\mathbb{R}^m_+$	Nonnegative orthant in $\mathbb{R}^m$ (components ≥ 0)
$\mathbb{R}^m_{++}$	Strictly positive orthant in $\mathbb{R}^m$ (components > 0)
$\mathbb{R}^n$	Euclidean space of dimension n
$\mathscr{B}(x)$	The Hessian approximation matrix at x
$I_{n\times n}$	Identity matrix of dimension n
$y_1 \succeq y_2$ or $y_2 \preceq y_1$	$y_1 - y_2$ consist of nonnegative components i.e., $y_1 - y_2 \in \mathbb{R}^m_+$
$y_1 \succ y_2$ or $y_2 \prec y_1$	$y_1 - y_2$ consist of positive components, i.e., $y_1 - y_2 \in \mathbb{R}^m_{++}$
$JF(x)$	Jacobian of F at x
Image$JF(x)$	Image set of Jacobian of F at x
$A \underset{\infty}{\subset} B$	A is an infinite subset of B
$\\|\cdot\\|_2$	2-norm (Euclidean norm)

Abbreviations

Abbreviation	Description
MOP	Multiobjective Optimization Problem
BFGS	Broyden-Fletcher-Goldfarb-Shanno
NMPRP	Nonmonotone Polak-Ribière-Polyak
NMCG	Nonmonotone Conditional Gradient Method
HSDY	Hestenes-Stiefel Dai-Yuan
HSPRP	Hestenes-Stiefel Polak-Ribière-Polyak
DYPRP	Dai-Yuan Polak-Ribière-Polyak
ALM	Augmneted Lagrangian Method